

**BOARD AND COMMITTEE MEETINGS SCHEDULE**

**June 8, 2023**

**President's Room 215B, Emerson Alumni Hall**

**University of Florida, Gainesville, FL**

**Virtual Viewing link:**

<https://mediasite.video.ufl.edu/Mediasite/Play/53c652822df348d6a35b891a7ceaf7cb1d>

**Thursday, June 8, 2023**

|                           |  |
|---------------------------|--|
| 7:30 a.m. to 8:25 a.m.    | Breakfast  |
| 8:30 a.m. to 8:45 a.m.    | Chairman Meeting Remarks   |
| ~8:45 a.m. to 9:05 a.m.   | <a href="#">Committee on Advancement</a><br>(Zucker (Chair), Cole, Corr, Heavener, Powers, Wright, Zalupski)   |
| ~9:05 a.m. to 9:30 a.m.   | <a href="#">Committee on Audit and Compliance</a><br>(O'Keefe (Chair), Brandon, Cole, Green, Hosseini, Patel, Powers)  |
| ~9:30 a.m. to 9:55 a.m.   | <a href="#">Committee on Governance, Government Relations and Internal Affairs</a><br>(Hosseini (Chair), Brandon, Cole, Corr, Heavener, Patel, Ridley, Zalupski)                     |
| ~9:55 a.m. to 10:10 a.m.  | Break  |
| ~10:10 a.m. to 11:10 a.m. | <a href="#">Committee on Academic, Faculty and Student Success, Public Relations and Strategic Communications</a><br>(Patel (Chair), Cole, Green, Heavener, O'Keefe, Wright, Zucker) |
| ~11:10 a.m. to 12:10 p.m. | <a href="#">Committee on Finance, Strategic Planning and Performance Metrics</a><br>(Powers (Chair), Brandon, Corr, Hosseini, O'Keefe, Patel, Ridley, Zalupski)                      |
| ~12:10 p.m. to 1:10 p.m.  | Lunch  |
| ~1:10 p.m. to 2:10 p.m.   | <a href="#">Committee on Facilities and Capital Investments</a><br>(Brandon (Chair), Corr, Hosseini, O'Keefe, Ridley, Zalupski, Zucker)  |
| ~2:10 p.m. to 2:20 p.m.   | Artificial Intelligence Update<br>Provost Joe Glover   |
| ~2:20 p.m. to 2:35 p.m.   | Break  |
| ~2:35 p.m. to 3:35 p.m.   | <a href="#">Board of Trustees' Meeting</a><br>(Full Board)   |
| 4:00 p.m. to 5:00 p.m.    | Student Health Care Center Ceremonial Ribbon Cutting Ceremony and Tour<br>2140 Stadium Road, Gainesville FL 32611  |
| 6:30 p.m. to 8:00 p.m.    | Board Dinner and Tour at Malachowsky Hall for Data Science & Information Technology<br>1889 Museum Road, Gainesville FL 32603  |

**BOARD RETREAT SCHEDULE**

**June 9, 2023**

**UF Austin Cary Forest**

**10625 NE Waldo Rd, Gainesville, FL 32609**

**Friday, June 9, 2023**

|                          |  |
|--------------------------|--|
| 8:00 a.m. to 8:55 a.m.   | Breakfast  |
| 9:00 a.m. to 10:00 a.m.  | UF Health and Scripps Financial Update<br>Senior Vice President Chris Cowen and Senior Vice President David Nelson |
| 10:00 a.m. to 10:30 a.m. | P.K. Yonge School Update<br>Director Brian Marchman  |
| 10:30 a.m. to 11:30 a.m. | IFAS Update<br>Senior Vice President Scott Angle   |
| 11:30 a.m. to 11:45 a.m. | Break  |
| 11:45 a.m. to 1:15 p.m.  | Finance Update<br>Senior Vice President Chris Cowen  |
| 1:15 p.m. to 2:00 p.m.   | Chairman Update Working Lunch  |



**COMMITTEE ON ADVANCEMENT  
AGENDA**

**Thursday, June 8, 2023  
~8:45 a.m.**

**President’s Room 215B, Emerson Alumni Hall  
University of Florida, Gainesville, FL**

**Committee Members:**

Anita G. Zucker (Chair), Richard P. Cole, Christopher T. Corr, James W. Heavener, Marsha D. Powers, Danaya C. Wright, Patrick O. Zalupski

- 1.0 Call to Order and Welcome ..... Anita G. Zucker, Chair
- 2.0 Verification of Quorum ..... Vice President Liaison
- 3.0 Review and Approval of Minutes..... Anita G. Zucker, Chair  
[March 16, 2023](#)  
[May 10, 2023](#)
- 4.0 Discussion Item..... Anita G. Zucker, Chair
  - 4.1 Jacksonville Graduate Center.....Anita G. Zucker, Chair and Maria Gutierrez Martin, Interim Vice President for Advancement
- 5.0 New Business ..... Anita G. Zucker, Chair
- 6.0 Adjourn ..... Anita G. Zucker, Chair



## **COMMITTEE ON ADVANCEMENT**

### **Meeting Minutes**

**March 16, 2023**

**President's Room 215B, Emerson Alumni Hall**

**University of Florida, Gainesville, Florida**

**Time Convened: 9:08 a.m.**

**Time Adjourned: 9:13 a.m.**

#### **Committee and Board members present:**

Anita G. Zucker (Committee Chair), David L. Brandon, Richard P. Cole, Christopher T. Corr, , Morteza "Mori" Hosseini (Board Chair), Lauren D. Lemasters, Daniel T. O'Keefe, Rahul Patel, Amanda J. Phalin, Marsha D. Powers, and Patrick O. Zalupski.

#### **Others present:**

Ben Sasse, President; Joseph Glover, Provost and Senior Vice President for Academic Affairs; J. Scott Angle, Vice President for Agriculture and Natural Resources; Chris Cowen, Senior Vice President and Chief Financial Officer; Elias Eldayrie, Vice President and Chief Information Officer; Amy Hass, Vice President and General Counsel; Mark Kaplan, Vice President for Government and Community Relations and University Secretary; Jim Kelly, Interim Chief Executive Officer for UF Health Shands; Charlie Lane, Senior Vice President and Chief Operating Officer; Maria Gutierrez Martin, Interim Vice President for Advancement; Marsha McGriff, Chief Diversity Officer and Senior Advisor to the President; David Nelson, Senior Vice President for Health Affairs and President of UF Health; David Norton, Vice President for Research; Steve Orlando, Interim, Vice President for Strategic Communications and Marketing; Mary Parker, Vice President for Enrollment Management and Associate Provost; Curtis Reynolds, Vice President for Business Affairs; Scott Stricklin, Director of Athletics; Heather White, Vice President for Student Life; members of the University of Florida community, and the public.

#### **1.0 Call to Order and Welcome**

Committee Chair Anita G. Zucker welcomed everyone in attendance and called the meeting to order at 9:08 a.m. She introduced Interim Vice President Maria Gutierrez Martin and asked her to verify the quorum.

#### **2.0 Verification of Quorum**

Interim Vice President Maria Gutierrez Martin verified a quorum with all members present except for Trustee Heavener and Trustee Ridley.

### **3.0 Review and Approval of Minutes**

Committee Chair Zucker asked for a motion to approve the minutes of the December 8, 2022, committee meeting and the February 14, 2023, committee pre-meeting, which was made by Trustee Cole, and a second, which was made by Trustee Corr. She asked for further discussion, and then asked for all in favor of the motion and any opposed and the motion was approved unanimously.

### **4.0 Discussion Item**

Committee Chair Zucker called on Interim Vice President Martin to share brief remarks.

#### **4.1 UF Foundation Update**

Interim Vice President Martin opened by stating that she was honored to be joining today's meeting and looks forward to deepening her relationships with everyone and getting to know the newest members of our Board of Trustees during this interim phase. She noted that a national search is being launched for the next Vice President of UF Advancement and then shared a brief overview of organizational priorities and things we will be doing in this interim phase.

The Go Greater Campaign engaged nearly 300,000 donors and over 2,000 volunteers. It is critical that we continue to steward and develop our relationships with those individuals as we prepare for next, so we will be spending a lot of time in that space.

UF Advancement has also posted strong employee retention rates, and we will continue to focus on providing our staff with the tools and resources they need to professionally grow in their positions.

Our efforts in Advancement will continue to focus on our current momentum, and we will be positioning the organization for the leadership transition. She, Interim Vice President Martin, will be focusing externally on our donors and volunteers, and her colleague, Karen Sprague, will be focusing internally to ensure our organization maintains the highest level of compliance and works effectively and efficiently.

Interim Vice President Martin thanked the Board and reiterated that she looks forward to working with everyone as we move forward during this interim phase.

Committee Chair Zucker thanked Interim Vice President Martin and then turned the meeting over to President Sasse.

President Sasse thanked Committee Chair Zucker for her leadership during this transition phase and stated that Interim Vice President Martin and Karen Sprague have been a delight to work with as he has been getting up to speed and building relationships that have been built at this special place over many years, especially over the Go Greater campaign, and he is grateful for them. It makes sense to go through a transition moment like this as we get to hit reset and talk about the next big menu of opportunities for people to partner with us.

## **5.0 New Business**

Committee Chair Zucker thanked President Sasse and noted that tremendous progress has been made to date, and we look forward to all that the future holds and what he will bring under his leadership. She then asked if anyone had any new business that they would like to share.

## **6.0 Adjourn**

There being no further discussion, Committee Chair Zucker adjourned the meeting at 9:13 a.m.

DRAFT

**COMMITTEE ON ADVANCEMENT**

**Pre-Meeting Minutes**

**Virtual Meeting**

**May 10, 2023**

**Time Convened: 9:57 a.m.**

**Time Adjourned: 10:07 a.m.**

**Committee and Board members present:**

Anita G. Zucker (Committee Chair), David L. Brandon, Richard P. Cole, Olivia E. Green, James W. Heavener, Morteza “Mori” Hosseini (Board Chair), Daniel T. O’Keefe, Rahul Patel, Amanda J. Phalin, Marsha D. Powers, and Patrick O. Zalupski.

**Others present:**

Melissa Curry, Interim Vice President for Human Resources; Joseph Glover, Provost and Senior Vice President for Academic Affairs; Amy Hass, Vice President and General Counsel; Mark Kaplan, Vice President for Government and Community Relations and University Secretary; Maria Gutierrez Martin, Interim Vice President for Advancement; Steve Orlando, Interim Vice President for Strategic Communications and Marketing; Mary Parker, Vice President for Enrollment Management and Associate Provost; Curtis Reynolds, Vice President for Business Affairs; Heather White, Vice President for Student Life; members of the University of Florida community, and the public.

**1.0 Call to Order and Welcome**

Committee Chair Anita G. Zucker welcomed everyone in attendance and called the meeting to order at 9:57 a.m. She noted that the meeting will be short and there will be more to review at the June meeting.

**2.0 Roll Call**

Interim Vice President Martin conducted a roll call of all Committee members, and all were present except for Trustee Corr who had an unavoidable conflict.

**3.0 Review Draft Agenda for June Meeting**

**3.1 Review Draft Minutes**

Committee Chair Zucker stated the minutes from the March 16, 2023 meeting will be reviewed at the June meeting.

**3.2 Review Discussion Item**

**Jacksonville Graduate Center**

Committee Chair Zucker shared that the Jacksonville City Council voted to support the Jacksonville Graduate Center. The University has raised \$50.5 million in private commitments to date for the Center, and the State will provide \$75 million. In order to match the state funding, UF Advancement will work to continue to raise the extra \$25 million in private support over the next few months.

Board Chair Hosseini added that all the fundraising activity has occurred within a couple of months. A little over \$60 million was raised, including \$50 million in actual cash with 20% down and incremental annual pledge payments over five years and a gift-in-kind of \$10 million from Jacksonville Electric Authority (JEA) for power. Donors were not promised anything in return for their contributions. He expressed his thanks to Trustee Zalupski and noted that all the credit goes to him, as he worked extremely hard to bring the Jacksonville group together quickly and raise this money. Trustee Zalupski responded that he is up to the challenge, and he appreciated the support he received from everyone, noting it was a big team effort.

Committee Chair Zucker expressed her thanks to Board Chair Hosseini and Trustee Zalupski for their work. She added there is no stopping now, and we must keep the ball rolling. She particularly noted her appreciation to Board Chair Hosseini for making sure the Board governance is being followed for gifts.

Board Chair Hosseini responded that the Board should be a stickler for following the governance. If we do not follow it ourselves and demand governance from our university leadership, then we may as well not have a Board of Trustees or a Governance Committee. He noted that the one thing that holds everyone together is governance. We must make sure there are checks and balances and that everything comes to our attention. If changes need to happen, we will make changes. We are going to go back in the Governance Committee and look at the governance around gifts. If the gift does not exactly meet governance guidelines (payments within five years with 20% up front), then it must have an additional approval process. It may go to the Provost and the President and then to the Chair for sign-off. Governance of the university must be followed, and the responsibility of signing off on the gifts to ensure we are following university governance may be assigned to the committee chair or someone else. There may be times when it is not easy for donors to meet the terms, so we may agree to seven or eight years of payments in order to receive the gift. In those cases, the Board and our university leadership must know about it so we can decide if that works for us.

#### **4.0 New Business**

Committee Chair Zucker asked Board Chair Hosseini to let us know the direction he would like the Advancement Committee to take and what we should be doing. She noted that one of the items the committee will bring back in December is the \$4.6B campaign data.

Board Chair Hosseini responded that he just received three years of audited financial statements for the University Foundation and requested Committee Chair Zucker and her committee to review those statements. The Board Chair will provide University Chief Audit Executive Dhanesh Raniga a specific request on what area to look at. This may be another discussion item for December.



## **5.0 Adjourn**

There being no further discussion, Committee Chair Zucker adjourned the meeting at 10:07 a.m.

DRAFT



**COMMITTEE ON AUDIT AND COMPLIANCE  
AGENDA**

**Thursday, June 8, 2023  
~9:05 a.m.**

**President’s Room 215B, Emerson Alumni Hall  
University of Florida, Gainesville, FL**

**Committee Members:**

Daniel T. O’Keefe (Chair), David L. Brandon, Richard P. Cole, Olivia E. Green, Morteza “Mori” Hosseini, Rahul Patel, Marsha D. Powers

- 1.0 Call to Order and Welcome ..... Daniel T. O’Keefe, Chair
- 2.0 Verification of Quorum ..... Vice President Liaison
- 3.0 Review and Approval of Minutes ..... Daniel T. O’Keefe, Chair  
[March 16, 2023](#)  
[May 9, 2023](#)
- 4.0 Action Item.....Daniel T. O’Keefe, Chair  
[AC1](#) July 1, 2023 – June 30, 2024, Office of Internal Audit Work Plan.....Dhanesh Raniga,  
Chief Audit Executive
- 5.0 Discussion Item..... Daniel T. O’Keefe, Chair
  - 5.1 Compliance and Ethics Educational Item – Healthcare Compliance.....Terra DuBois,  
Chief Compliance, Ethics and Privacy Officer; Robert Michalski, Vice President and  
Chief Compliance and Privacy Officer, UF Health
- 6.0 New Business..... Daniel T. O’Keefe, Chair
- 7.0 Adjourn ..... Daniel T. O’Keefe, Chair



**COMMITTEE ON AUDIT AND COMPLIANCE**

**Meeting Minutes**

**March 16, 2023**

**President's Room 215B, Emerson Alumni Hall**

**University of Florida, Gainesville, Florida**

**Time Convened: 9:13 a.m.**

**Time Adjourned: 9:22 a.m.**

**Committee and Board members present:**

Marsha D. Powers (Committee Chair), David L. Brandon, Richard P. Cole, Christopher T. Corr, James W. Heavener, Morteza "Mori" Hosseini (Board Chair), Lauren D. Lemasters, Daniel T. O'Keefe, Rahul Patel, Amanda J. Phalin, Patrick O. Zalpuski and Anita G. Zucker.

**Others present:**

Ben Sasse, President; Joseph Glover, Provost and Senior Vice President for Academic Affairs; Chris Cowen, Senior Vice President and Chief Financial Officer; Elias Eldayrie, Vice President and Chief Information Officer; Amy Hass, Vice President and General Counsel; Mark Kaplan, Vice President for Government and Community Relations and University Secretary; Charlie Lane, Senior Vice President and Chief Operating Officer; Maria Gutierrez Martin, Interim Vice President for Advancement; Marsha McGriff, Chief Diversity Officer and Senior Advisor to the President; David Nelson, Senior Vice President for Health Affairs and President of UF Health; David Norton, Vice President for Research; Steve Orlando, Interim Vice President for Strategic Communications and Marketing; Mary Parker, Vice President for Enrollment Management and Associate Provost; Heather White, Vice President of Student Life; Curtis Reynolds, Vice President for Business Affairs; Terra DuBois, Chief Compliance, Ethics, and Privacy Officer; Dhanesh Raniga, Chief Audit Executive; Joe Cannella III, Director of Audits, members of the University of Florida community, and the public.

**1.0 Call to Order and Welcome**

Committee Chair Marsha D. Powers welcomed everyone in attendance and called the meeting to order at 9:13 a.m.

**2.0 Verification of Quorum**

Chief Compliance, Ethics, and Privacy Officer Terra DuBois verified a quorum with all members present.

**3.0 Review and Approval of Minutes**

Chair Powers asked for a motion to approve the minutes of the December 8, 2022 Audit and Compliance committee meeting and the February 13, 2023 Audit and Compliance Committee pre-meeting which Trustee Cole made, and a second, which was made by Trustee Lemasters. Chair Powers asked for further discussion, and then asked for all in favor of the motion and any opposed, and the motion was approved unanimously.

#### **4.0 Action Items**

##### **AC1 FY23 Internal Audit Plan**

Committee Chair Powers noted this action item was reviewed and discussed at the February 2023 pre-meeting. Each quarter, internal audit reviews the approved projects to address any changes in the university's risk profile and to confirm that the business reasons to conduct the audit are relevant and applicable. Based on the current review and follow up discussions with University management the proposed change to the plan includes moving two audits to next year and adding one audit for University Athletic Association. The first is the Pcard Audit. The delay has been requested due to the impact of the implementation of the new UF Go system which will change our processes in that space. The second is IT Data Governance. UFIT has commenced a project to update the Data Governance Framework to support the pending UF Cloud Administrative Systems modernization initiative. Management has requested that deferring this audit to FY24 to allow time to approve and implement the Data Governance Framework.

Committee Chair Powers asked for a motion to approve Action Item AC1 which was made by Trustee Cole, and a second, which was made by Trustee Brandon for recommendation to the Board for its approval on the Consent Agenda. Committee Chair Powers asked for further discussion, and then asked for all in favor of the motion and any opposed, and the motion was approved unanimously.

#### **5.0 Discussion Item**

##### **5.1 Internal Audit Activity**

Chief Audit Executive (CAE) Dhanesh Raniga gave an update on the Internal Audit Activity. Since the last audit pre-meeting in February, two additional reports were issued including the College of Education and the UF Foundation IT Security. Three additional reports are in the final stages pending management action items to be finalized. Of the 16 follow-up items, 10 implemented, 5 extended. CAE Raniga provided a high-level overview of the results of the two audits that were issued.

CAE Raniga also indicated they are commencing the FY24 audit plan next month and will reach out to senior University executive and committee members for input. The planning process is very detailed. An assurance map will be presented to the committee on the relevant risks and where within the university there is risk coverage. . Gaps and high-level audits are then identified which also considers industry specific issues and the University's current strategic initiatives. Once the audit plan is developed, the proposed risk-based audits are reviewed on a quarterly basis for relevance after considering any changes in risk profile.

CAE Raniga provided additional updates including updating the committee on the internal audit

staffing and status of recruitment efforts. In addition, the Office of Internal Audit will host the state university audit group on campus in August 2023 to coincide with the planned Board of Governors meeting.

#### **6.0 New Business**

Committee Chair Powers noted since the pre-meeting they have reviewed Title IX Policy and Procedure internal audit report recommendations. Since that time, Senior Vice President and Chief Operating Officer Charlie Lane has established a working group to monitor the implementation of the recommendations. As noted during the pre-meeting, Committee Chair Powers commented she has been in close communication with Chief Compliance, Ethics, and Privacy Officer Terra DuBois and has directed Ms. DuBois to provide oversight of the Title IX audit remediation plan to ensure that identified gaps are appropriately mitigated.

Additionally, Chair Powers reported that she participated in the UF financial and federal audit exit conference done by the Auditor General's Office. She reported that the university's financial statements will have an unqualified audit opinion.

#### **7.0 Adjourn**

There being no further discussion, Committee Chair Powers adjourned the meeting at 9:22 a.m.

DRAFT

**COMMITTEE ON AUDIT AND COMPLIANCE**

**Pre-Meeting Minutes**

**Virtual Meeting**

**May 9, 2023**

**Time Convened: 10:52 a.m.**

**Time Adjourned: 11:56 a.m.**

**Committee and Board members present:**

Marsha D. Powers (Acting Committee Chair), Daniel T. O’Keefe (Committee Chair), David L. Brandon, Richard P. Cole, Christopher T. Corr, Olivia E. Green, Morteza “Mori” Hosseini (Board Chair), Rahul Patel, Amanda J. Phalin, Fred S. Ridley, Patrick O. Zalupski, and Anita G. Zucker

**Others present:**

Ben Sasse, President; Melissa Curry, Interim Vice President for Human Resources; Elias Eldayrie, Vice President and Chief Information Officer; Amy Hass, Vice President and General Counsel; Mark Kaplan, Vice President for Government and Community Relations and University Secretary; David Norton, Vice President for Research; Mary Parker, Vice President for Enrollment Management and Associate Provost; Curtis Reynolds, Vice President for Business Affairs; Heather White, Vice President for Student Life; Joe Cannella, Audit Director; Terra DuBois, Chief Compliance, Ethics, and Privacy Officer; Kate Moore, Director, Compliance and Ethics; Dhanesh Raniga, Chief Audit Executive; Olga Weider, University Controller; Alan West, Assistant Vice President and Treasurer; members of the University of Florida community and the public

**1.0 Call to Order and Welcome**

Acting Committee Chair Marsha D. Powers called the meeting to order at 10:52 a.m.

**2.0 Roll Call**

Chief Compliance, Ethics, and Privacy Officer (CCO) Terra DuBois conducted a roll call, and all Committee members were present. It was noted the new AC Committee Chair, Trustee Dan O’Keefe, will assume his role at the June meeting.

**3.0 Review Draft Agenda for June Meeting**

**3.1 Review Draft Minutes**

March 16, 2023

**3.2 Review Action Item**

**AC1 July 1, 2023 – June 30, 2024, Office of Internal Audit Work Plan**

Chief Audit Executive Dhanesh Raniga explained the FY24 Internal Audit Work Plan process, including key objectives and methodology to ensure the audit plan addresses the right strategic and operational risks, management concerns, and regulatory requirements. CAE Raniga shared that audit work planning involves a review of financial statements, reports to the Board presented by the CFO and other executives, stakeholder interviews, and third-party information on higher education industry risks and best practices. He also outlined the work plan's guiding principles, including the flexibility to change audit projects as the university's risk profile changes.

Trustee Dan O'Keefe complimented the work plan's effectiveness in identifying and prioritizing risks, its level of detail, and the level of input from major stakeholders in developing the plan. Trustee O'Keefe noted that the work plan is a useful tool for the Board to meet its fiduciary obligations to manage risk.

Board Chair Hosseini stated the recent Major Construction Projects audit report had a significant number of recommendations. He has spoken to CAE Raniga and the FCI Committee Chair to request a full report on what recommendations have been addressed at the December meeting. He noted a second audit will occur to ensure those items have been taken care of. He added he has requested an additional report from the AC Committee Chair that addresses gift agreements and governance. He has asked the General Counsel's Office to review the report and provide recommendations on potential changes to governance. Acting Committee Chair Powers recommended continuing ongoing discussions between the AC, FSPPM, and FCI Committee Chairs to keep up to date on related projects and issues. Trustee O'Keefe ensured Board Chair Hosseini that the AC Committee will work with the FCI Committee, Internal Audit, Advancement, and General Counsel to have both reports completed for the December meeting.

Board Chair Hosseini additionally addressed the \$4.6B fundraising campaign from the previous 4-6 years. Trustee Brandon referenced previous successful Joint FSPPM & FCI Committee Chair Meetings and offered to share draft documents related to gifts and naming with Trustee O'Keefe. Board Chair Hosseini noted ADV Committee Chair Zucker needs to be included in these joint meetings. He requested Trustee Zucker present a report on gift agreements at the December meeting and Trustee Zucker agreed.

### **3.3 Review Discussion Items**

#### **Antifraud Framework Update**

Assistant Vice President and University Controller Olga Weider provided an overview of the university's antifraud framework, which is an effort to codify fraud prevention and protection programs at UF. She shared five components of the framework: governance, prevention, detection, investigation and response, and monitoring. AVP Weider discussed the risks of fraud due to UF's size and decentralization, and she stressed the importance of creating an ethical culture through education and outreach programs to train staff on proper internal controls. AVP Weider also highlighted the advantages of recent technology improvements, including UF GO travel system and the updated deposit system, which allow better monitoring and analysis of financial transactions.

### **Annual Financial Reports (University and Component Units)**

AVP Olga Weider provided an update on the annual financial reports. She stated that the Auditor General issued the audit of the University's annual financial report in March 2023 indicating an unqualified opinion of no findings. All 26 component units (DSOs and affiliates) also received unmodified opinions from independent public accounting firms.

Acting Committee Chair Powers stated that she was pleased with the excellent audit reports UF has received. Board Chair Hosseini asked for clarification that Development (UF Foundation) received an unqualified/unmodified opinion, which AVP Weider confirmed. Board Chair Hosseini requested copies of the previous 3 years' reports and AVP agreed to provide them.

### **Internal Audit Activity**

CAE Dhanesh Raniga stated that since the prior committee meeting, two audit reports have been issued, four are in final report stage, and eight are in progress. He indicated that we are ahead of the prior year in terms of projects completed due to the efforts of the team, audit process refinements, and greater focus on high-level risks when performing the audits. CAE Raniga expressed optimism about the impact of increased use of data analytics for more in-depth analysis.

CAE Raniga then discussed the audit reports that were issued and shared that the Technology Licensing and Transfer Process audit indicated good controls are in place for commercializing technology at UF. He said that the Major Construction Projects audit uncovered that the university's project management systems and resources have not kept up with the growth in projects. Vice President Curtis Reynolds shared steps already taken and future plans for addressing the project management report recommendations in regard to policy and procedure, tracking system upgrade, and human capital investment.

Trustee Brandon noted that the audit report indicated a lack of communication between project management (Business Affairs) and construction accounting (CFO), and he wanted to be sure that these units communicated on the selection of a new project tracking system. VP Reynolds said that his team has already been working with the CFO's office on this issue, and they were also working to ensure any new system will integrate with the planned deployment of a new ERP system.

CAE Raniga shared follow-up statistics on management recommendations implemented and outstanding as of April 28. Trustee Amanda Phalin asked for clarification of the data, which was provided by CAE Raniga and Audit Director Joe Cannella.

Acting Committee Chair Marsha Powers reminded CAE Raniga to include new Committee Chair Dan O'Keefe in future monthly construction audit progress reviews.

### **FY 2024 Compliance and Ethics Work Plan**

Chief Compliance, Ethics, and Privacy Officer Terra DuBois shared an overview of the Compliance and Ethics Work Plan. She highlighted three major initiatives for FY24: enhancing the institutional policy approval process and new policies and regulations website, establishing



a compliance risk management program, and enhancing the compliance hotline referral and recordkeeping process. CCO DuBois expects a new centralized policy and regulation website to launch in June and implement a comprehensive compliance risk management program over the next fiscal year. She shared that her team is also working to improve efficiency in reviewing and triaging compliance hotline reports and using data analytics for root cause analysis that can be shared with leadership and the Board.

#### **Compliance and Ethics Educational Item – Healthcare Compliance**

CCO DuBois informed the Committee that she will present the annual healthcare compliance educational item at the June meeting with Chief Compliance Officer for UF Health Bob Michalski.

#### **4.0 New Business**

There was no new business to come before the committee.

#### **5.0 Adjourn**

There being no further discussion, Acting Committee Chair Powers adjourned the meeting at 11:56 a.m.

DRAFT



**COMMITTEE ON AUDIT AND COMPLIANCE  
ACTION ITEM AC1  
June 8, 2023**

**SUBJECT:** July 1, 2023 – June 30, 2024 Office of Internal Audit Work Plan

---

**BACKGROUND INFORMATION**

The Board of Governors Regulation 4.002 (6) states that the chief audit executive shall develop audit plans based on the results of periodic risk assessments. The plans shall be submitted to the Board of Trustees for approval. A copy of approved audit plans will be provided to appropriate university management and the Board of Governors Office, through the Office of the Inspector General and Director of Compliance (OIGC).

The Office of Internal Audit (OIA) establishes its audit coverage with a work plan that identifies the significant activities and high-risk topical areas. The current work plan was prepared to reflect the planned projects for the period from July 1, 2023 to June 30, 2024 and was prepared, pursuant to an audit risk assessment, with the objective of addressing key functions, activities and units of the university for the purpose of evaluating and improving the effectiveness of its risk management, internal controls and governance processes.

**PROPOSED COMMITTEE ACTION**

The Committee on Audit and Compliance is asked to approve the July 1, 2023 - June 30, 2024 Office of Internal Audit Work Plan for recommendation to the Board of Trustees for approval on the Consent Agenda.

**ADDITIONAL COMMITTEE CONSIDERATIONS**

Submission to the Board of Governors of a copy of the approved July 1, 2023 – June 30, 2024 Office of Internal Audit Work Plan is required, but approval is not required.

---

Supporting Documentation Included: Office of Internal Audit July 2023 – June 2024 Proposed Work Plan presentation

Submitted by: Dhanesh Raniga, Chief Audit Executive

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza “Mori” Hosseini, Chair

---

Ben Sasse, President and Corporate Secretary

# **Audit and Compliance Committee Meeting**

## **June 8, 2023**

**OFFICE OF INTERNAL AUDIT**  
**July 2023 – June 2024 Proposed Work Plan**

**Presented by:**  
**Dhanesh Raniga, Chief Audit Executive**

## PROPOSED JULY 2023 – JUNE 2024 WORK PLAN – Overview

### Work Plan Objective

- Address significant risk areas of the University's operations
- Evaluate and improve the effectiveness of the risk management, governance and control processes
- Effectively use available internal audit resources

### Approach and Methodology

- Risk-based – Focus on strategic, financial, operational, IT, regulatory or management concerns
- Work plan development process:
  - Review of UF-related information
  - Input via interviews of key stakeholders, including University Senior Executives and Audit and Compliance Committee members
  - Reassessed remaining audit projects in 2022/23 work plan for relevance and risks
  - Higher education sector-related current issues
  - Updated the 2022 university-level assurance map and risk profile linking risks to potential audit topics

## PROPOSED JULY 2023 – JUNE 2024 WORK PLAN – Guiding Principles and Highlights



Core theme – ‘*Protect University Business and Reputation*’ & ‘*Deliver Measurable Value*’



Risk focus – Right risks at the *optimal* time in the process. Considered leadership changes and potential impact on University’s strategy which may impact proposed audit topics.



Increased focus on assurance type internal audit projects to validate key internal controls while assessing for leading business practices and efficiency, e.g., College/departmental & DSO coverage; Cost control; Housing; Construction



Significant areas of the University’s operations, including addressing current issues in higher education, e.g., IT Security; Research Compliance; Data Governance; IT General Controls



Accounts for the decentralized nature of the University and leverages current university initiatives and BOG prescribed audits e.g., PBF/PE Reporting; Post-Tenure Faculty Review, UFGO Travel



Flexibility to allow for changing risk profile and continuing to align with leading practices and strategic direction of the University. Includes allowance to add University Athletics Association and UF Foundation Inc. audit projects during FY24.

**PROPOSED WORK PLAN – JULY 2023 TO JUNE 2024**

|   | Audit Area   | High Level Scope  | Rationale  |
|---|--|---|--|
| 1 | Housing Operations   | Assessment of key financial business processes and effectiveness of internal controls, including areas for efficiency and cost savings.   | Housing operations are managed as standalone operations and it is important that the University has strong internal controls for revenue, collections, billings and management reporting.  |
| 2 | Research Compliance – Post Award                                     | Assessment of compliance with sponsored contracts and grants. Scope will be co-developed to focus on current research compliance risks.   | The University receives significant research funds from federal and non-federal sources. Significant reputational and funding risk of non-compliance with contract award conditions, including allowability of costs.  |
| 3 | Major Construction   | Reassess end-to-end major construction life cycle processes. Audit will also test the implementation of the recommendations from the 2023 Major Construction Project audit for effectiveness of controls.   | Prior internal audit on Major Construction identified significant improvements in internal controls, project management and system-related observations. A reperformance of this audit was also requested by certain Board of Trustees members.  |
| 4 | Major Construction – Incurred Costs                                  | Review of incurred costs of work performed by General Contractor for compliance with contract. Review will include internal controls in place.  | University capital budget on construction is approx. \$2.2b and is significant to University operations. Contract management and compliance is important to confirm that there are good project management and monitoring controls in place to ensure that we comply with state funding regulations for cost allocation and probity. |
| 5 | IT Security Risk Assessment  | Assess information security controls using UFIT risk framework and NIST requirements, as appropriate, at selected decentralized locations to improve University cyber security maturity.  | Information technology, including cyber security, is a high-level risk in organizations. The University's decentralized governance structure adds another layer of risk that should be assessed and managed. This is an ongoing assessment in partnership with UFIT.   |
| 6 | Data Governance  | Assess data governance framework and business processes for compliance with University policies, practices, and legislative requirements to ensure that data is accessible, usable, and protected.  | It is important that data assets are formally managed throughout the University enterprise and trusted information is used for critical business processes, decision-making and accounting.  |
| 7 | College/Unit Level Assessment<br><i>(one College and one Center)</i> | Assessment of financial and operational internal controls and key business processes covering fiscal management and compliance with policies and procedures. Focus areas will include financial, HR, admissions, accuracy of management reporting and oversight controls. | Significant portion of the University's financial and operational processes are decentralized. High-level risk of inconsistent business practices, including impact on internal controls.  |

## OFFICE OF INTERNAL AUDIT

### PROPOSED WORK PLAN – JULY 2023 TO JUNE 2024

|    | Audit Area   | High Level Scope  | Rationale   |
|----|--|---|---|
| 8  | UF GO Travel System  | Assessment of key business processes for UF Go travel management system. Scope will include assessing internal controls over procurement cards and IT general controls.                   | University has implemented a new travel and expense reimbursement management system. Business processes and related policies and procedures have been updated.  |
| 9  | Institute of Food and Agricultural Sciences (IFAS) – Extension Offices | Assessment of financial and operational internal controls and key business processes covering fiscal management and compliance with policies and procedures using self-assessment survey. | IFAS Extension Offices are located throughout the state and are managed by minimal staff. Inadequate internal and monitoring controls are potential risks.  |
| 10 | Research Computing   | Assessment of information security controls using leading practice frameworks (e.g., NIST, ISO 27001) as guidance.  | The University's research data is stored in a restricted environment. Significant impact on research funding in addition to reputational and compliance risks if research data is compromised. An annual assessment is required for research compliance purposes.                     |
| 11 | Cyber Security Incident Response Management                            | In conjunction with UFIT, assess incident response management procedures using real test scenarios such as ransomware readiness, system breaches, etc.                                    | There has been a high level of cyber security incidents across all sectors. Risk mitigation strategies around cyber security include having a matured incident response plan. This is a requirement also for cyber insurance coverage.  |
| 12 | Performance Based Funding and Preeminent Designation Status Funding    | Provide assurance that the data submitted by the University complies with the data definitions established by the BOG.  | Florida Statutes section 1001.706(5)(e) requires each university to conduct an annual audit.  |
| 13 | Post-Tenure Faculty Review   | Review the University's post-tenure review process and report to the Board of Trustees as required by the Board of Governors Regulation 10.003(6) (a)(1)                                  | The Board of Governors updated Regulation 10.003 Post-Tenure Faculty Review to require an audit of the tenure process for the prior fiscal year once every three years beginning on January 1, 2024. The report is required by July 1.  |
| 14 | External Reporting & Data Integrity                                    | Assess internal controls and integrity of reporting data for management decision and to external agencies.  | The University provides data to meet certain external metrics and compliance reporting requirements. It is important that there is internal controls for data integrity and assurance. Assessment will focus on metrics and management reporting data exclusive of the PBF reporting. |

**PROPOSED WORK PLAN - JULY 2023 TO JUNE 2024**

|    | Audit Area                                   | High Level Scope  | Rationale  |
|----|--|---|--|
| 15 | Faculty Workload Management Process          | Assess the University’s business processes for managing faculty workload. Scope will include IT controls over system used and integrity of management information.                              | Faculty workload is an important factor in assessing hiring needs and identifying resources for academic programs. Accuracy of faculty workload data has budget (Operational) and strategic implications.                              |
| 16 | UF Online                                    | Assess IT general controls for the UF Online system   | UF Online system integrity is important to the online teaching mode of learning. UF’s reputation can be impacted if system-level controls are not adequate.  |
| 17 | Physician Practice Plan - Jacksonville       | Assess internal controls and key business processes for significant components of the practice plan. Scope will be determined based on review of risks and input from UF Health Internal Audit. | Direct Support Organizations are a key component of UF enterprise and supports internal audit’s strategy to cover decentralized unit-level operations for adequate internal controls and governance requirements.                      |
| 18 | Service Fees and Indirect Charges Governance | Assess compliance with policy and governance around service fees and indirect charges levied by units and impact on budget model  | In addition to overhead allocation, there are fees and indirect charges imposed by certain units for services outside the budget model. This has potential to create administrative burden and impacts funding allocation discussions. |
| 19 | Americans with Disabilities Act (ADA)        | In conjunction with Office of Compliance and Ethics, assess key business processes for compliance with ADA  | Non-compliance with ADA can impact strategic and reputational risks.   |
| 20 | Gator 1 Card IT General Controls             | Assess the IT general controls for the system used to manage Gator 1 card.  | Gator 1 card is integral to providing access to critical services, including access to University facilities. It is an in-house developed and maintained system.   |



## OFFICE OF INTERNAL AUDIT

### PROPOSED WORK PLAN - JULY 2023 TO JUNE 2024

|                                     | Audit Area          | High Level Scope | Rationale  |
|-------------------------------------|---------------------|------------------|--|
| <b>Other Significant Activities</b> |                     |                  |  |
|                                     | Follow-up           | Ongoing          | Follow up on the implementation of management action plans from internal audit and other assurance reports.                  |
|                                     | Management Requests | Ongoing          | Advisory services will be considered where internal audit can add value to improve internal controls and business processes. |
|                                     | Investigations      | Ongoing          | Responding to and following up on whistleblower and other complaints received through the 'Hotline' and other sources.       |



**COMMITTEE ON GOVERNANCE, GOVERNMENT RELATIONS  
AND INTERNAL AFFAIRS**

**AGENDA**

**Thursday, June 8, 2023**

**~9:30 a.m.**

**President’s Room 215B, Emerson Alumni Hall  
University of Florida, Gainesville, FL**

**Committee Members:**

Morteza “Mori” Hosseini (Board and Committee Chair), David L. Brandon, Richard P. Cole, Christopher T. Corr, James W. Heavener, Rahul Patel, Fred S. Ridley, Patrick O. Zalupski

- 1.0 Call to Order and Welcome .....Morteza “Mori” Hosseini, Chair
- 2.0 Verification of Quorum ..... Vice President Liaison
- 3.0 Review and Approval of Minutes.....Mori Hosseini, Chair  
[March 16, 2023](#)  
[May 9, 2023](#)
- 4.0 Action Items  
[GGRIA1](#) Direct Support Organizations Appointments .....Amy Hass, Vice President and General Counsel  
[GGRIA2](#) UF Regulation .....Amy Hass  
[GGRIA3](#) Facility Security Clearance..... David Norton, Vice President for Research
- 5.0 Discussion Item  
5.1 Government Update.....Mark Kaplan, Vice President for Government and Community Relations and University Secretary
- 6.0 New Business .....Mori Hosseini, Chair
- 7.0 Adjourn .....Mori Hosseini, Chair



**COMMITTEE ON GOVERNANCE, GOVERNMENT RELATIONS  
AND INTERNAL AFFAIRS**

**Meeting Minutes**

**March 16, 2023**

**President's Room 215B, Emerson Alumni Hall**

**University of Florida, Gainesville, FL**

**Time Convened: 3:49 p.m.**

**Time Adjourned: 4:25 p.m.**

**Committee and Board members present:**

Morteza "Mori" Hosseini (Board and Committee Chair), David L. Brandon, Richard P. Cole, Christopher T. Corr, Lauren D. Lemasters, Daniel T. O'Keefe, Rahul Patel, Amanda J. Phalin, Marsha D. Powers, Patrick Zalupski, and Anita G. Zucker.

**Others present:**

Ben Sasse, President; Joseph Glover, Provost and Senior Vice President for Academic Affairs; Scott Angle, Senior Vice President for Agriculture and Natural Resources; Chris Cowen, Senior Vice President and Chief Financial Officer; Melissa Curry, Interim Vice President for Human Resources; Elias Eldayrie, Vice President and Chief Information Officer; Amy Hass, Vice President and General Counsel; Mark Kaplan, Vice President for Government and Community Relations and University Secretary; Jim Kelly, Interim Chief Executive Officer of UF Health; Charlie Lane, Senior Vice President and Chief Operating Officer; Maria Martin, Interim Vice President for Advancement; Marsha McGriff, Chief Diversity Officer and Senior Advisor to the President; David Nelson, Senior Vice President for Health Affairs and President of UF Health; David Norton, Vice President for Research; Steve Orlando, Interim Vice President for Strategic Communications and Marketing; Mary Parker, Vice President for Enrollment Management and Associate Provost; Curtis Reynolds, Vice President for Business Affairs; Scott Stricklin, Director of Athletics; Heather White, Vice President of Student Life; members of the University of Florida community, and the public.

**1.0 Call to Order and Welcome**

Board and Committee Chair Hosseini welcomed everyone in attendance and called the meeting to order at 3:49 p.m.

**2.0 Verification of Quorum**

Vice President and University Secretary Kaplan verified a quorum noting Trustees Heavener and Ridley were unable to attend the meeting.

### **3.0 Review and Approval of Minutes**

Board and Committee Chair Hosseini asked for a motion to approve the committee minutes of the December 8, 2022 and February 13, 2023 meetings, which was made by Trustee Brandon, and a second, which was made by Trustee Zucker. Board Committee Chair Hosseini asked for further discussion, after which he asked for all in favor of the motion and any opposed, and the motion was approved unanimously.

### **4.0 Action Items**

#### **GGRIA1 Direct Support Organizations Appointments**

Vice President and General Counsel Amy Hass noted the Board had 19 direct support organization appointments for approval in their materials to review including bios of each appointee. These were provided during the pre-meeting last month.

- Citrus Research Development Foundation: Eric Rohrig
- Florida Foundation of Seed Producers: Charles Allison, John Sizemore
- Florida 4-H Club Foundation, Inc.: Mario J. Bailey, Ralph Herrerias, Terry Stout
- UF Foundation: Swati Patel, Eugene Pettis, Jon Pritchett, Sachio Semmoto, Howard Sheridan, Robert Stern, Anita Zucker
- UF Investment Corporation: Rebecca Patterson
- UF Leadership and Education Foundation: Reggie Brown, Michele Curts, Mike Joyner, Brian Myers, Carolina C. Villanueva

Board and Committee Chair Hosseini asked for any questions or further discussion. He then asked for a motion to approve Action Item GGRIA1 for recommendation to the Board for its approval on the Consent Agenda, which was made by Trustee Brandon and a second, which was made by Trustee Zucker. Board and Committee Chair Hosseini asked for further discussion, and then asked for all in favor of the motion and any opposed, and the motion was approved unanimously.

#### **GGRIA2 UF Regulations**

Vice President and General Counsel Amy Hass reviewed two regulations for GGRIA2. Proposed regulation 7.050 establishes the UF parameters to protect postsecondary examination and assessment instruments from unauthorized disclosure in accordance with the requirements of BOG Regulation 3.005. Proposed regulation amendment 7.100 implements the recent changes to BOG Regulation 8.012 related to necessary approvals, authority and process for the University to terminate academic programs.

Board and Committee Chair Hosseini asked for any questions or further discussion. He then asked for a motion to approve Action Item GGRIA2 for recommendation to the Board for its approval on the Consent Agenda, which was made by Trustee Zucker and a second, which was made by Trustee Brandon. Board and Committee Chair Hosseini asked for further discussion, and then asked for all in favor of the motion and any opposed, and the motion was approved unanimously.

### **GGRIA3-A and GGRIA3-B Collective Bargaining Agreements-Police Benevolent Association**

Vice President and General Counsel Amy Hass reviewed GGRIA3, two new three-year collective bargaining agreements between the Board of Trustees and the Florida Police Benevolent Association, Inc. (PBA), Lieutenants Bargaining Union and between the Board of Trustees and the Florida Police Benevolent Association, Inc. (PBA), Officers/Sergeants/PCOs Union.

Board and Committee Chair Hosseini asked for any questions or further discussion on the Collective Bargaining Agreements for the Police Benevolent Association. He then asked for a motion to approve Action Items GGRIA3-A and GGRIA3-B for recommendation to the Board for its approval on the Consent Agenda, which was made by Trustee Zucker and a second, which was made by Trustee Brandon. Board and Committee Chair Hosseini asked for further discussion, and then asked for all in favor of the motion and any opposed, and the motion was approved unanimously.

Additionally, Vice President and General Counsel Amy Hass brought forward an Action Item for the new Collective Bargaining Agreement for the UF Faculty Union. She stated they have agreed to accept the 3% merit raises that all other UF employees received effective October 1 without any additional changes or deviations. She requested the board to ratify that agreement. Committee Chair Hosseini asked for clarification on if anything additional beyond the 3% merit raise was included and VP Hass confirmed there was none.

Board and Committee Chair Hosseini asked for any questions or further discussion on the Collective Bargaining Agreement for the UF Faculty Union. He then asked for a motion to approve the Action Item for recommendation to the Board for its approval on the Consent Agenda, which was made by Trustee Brandon and a second, which was made by Trustee Zucker. Board and Committee Chair Hosseini asked for further discussion, and then asked for all in favor of the motion and any opposed, and the motion was approved unanimously.

### **GGRIA4 Officer Elections**

Vice President and General Counsel Amy Hass reviewed two procedural items aligning the board chair and vice chair's terms through the board of trustees' bylaws. The first procedural item has the new vice chair serve six months plus and an additional two years, bringing that term to a close in 2025. The current chair term is set to end in 2024, procedurally to align the chair with the vice chair, a call for a motion to extend the chair term to 2025. The second procedural item is to extend the term of the chairmanship to align with the vice chair term ending 2025 and move the end date from June 30 to December 31. This would align with the calendar year and the Board of Governors and the Governor's appointments of trustees. Trustee Corr shared his support of extending the chair's term and his personal thanks to Chairman Hosseini for his leadership.

Board and Committee Chair Hosseini asked for a motion to approve Action Item GGRIA4 for recommendation to the Board for its approval on the agenda, which was made by Trustee Corr and a second, which was made by Trustee Cole. Board and Committee Chair Hosseini asked for any further discussion. Trustees Patel and Brandon additionally shared their full support of extending Chairman Hosseini's term. Board and Committee Chair Hosseini asked for any further

discussion, and then asked for all in favor of the motion and any opposed, and the motion was approved unanimously.

Vice President and General Counsel Amy Hass indicated to Board and Committee Chair Hosseini he may open the floor to his nomination and election of vice chair. Board and Committee Chair Hosseini opened the floor for nominations of vice chair. He shared his personal thanks to all of the trustees and stated it is an honor and a privilege to work with them. Additionally, he stated that he is delighted the state of Florida, the legislators, and the Governor, see the value of the University of Florida. He said Trustee Patel, in particular, has been an incredible help to himself and to UF, including serving as Chair for the Presidential Search Committee.

Board and Committee Chair Hosseini put forward a motion to elect Trustee Patel as vice chair and that motion was seconded by Trustee Cole. Board and Committee Chair Hosseini asked for any further discussion. All trustees unanimously expressed their full support of appointing Trustee Patel as vice chair. Board and Committee Chair Hosseini asked for any further discussion, and then asked for all in favor of the motion and any opposed, and the motion was approved unanimously.

Trustee Patel extended his upmost thanks for the support and kind words from the Chairman and all the trustees.

## **5.0 Discussion Item**

### **5.1 Government Update**

Vice President for Government and Community Relations and University Secretary Mark Kaplan provided a government update. He shared that we are nearing the end of the second week of our nine-week legislative session. There have been a little over 1,700 bills that have been filed. As a point of reference, typically 200 bills are passed during a legislative session, which is scheduled to adjourn on May 5 this year. Continued discussion, amendments, and new proposals are expected. From an appropriations standpoint, there are a handful of system priorities that UF is advocating for and a variety of UF priorities around facilities, programs and of other aspects of the university. One of the gratifying procedural standpoints is the way legislators are looking to our faculty for expertise on issues. In closing, he highlighted Gator Day in Tallahassee on April 12, 2023.

## **6.0 New Business**

Board and Committee Chair Hosseini stated this legislative session will be very busy. There are a lot of polity items that we are looking at, including the state funding for UF and other universities. He is optimistic UF will be in good shape, if we show the legislature the value of UF and the return on investment we bring to the state of Florida. He is hopeful to be able to report at the June board meeting how we have done with our large number of asks to help our state, research, and students.

## **7.0 Adjourn**

There being no further discussion, Board and Committee Chair Hosseini adjourned the meeting at 4:25 p.m.



**COMMITTEE ON GOVERNANCE, GOVERNMENT RELATIONS  
AND INTERNAL AFFAIRS**

**Pre-Meeting Minutes**

**Virtual Meeting**

**May 9, 2023**

**Time Convened: 10:00 a.m.**

**Time Adjourned: 10:29 a.m.**

**Committee and Board members present:**

Morteza “Mori” Hosseini (Board and Committee Chair), David L. Brandon, Richard P. Cole, Christopher T. Corr, Oliva E. Green, James W. Heavener, Daniel T. O’Keefe, Rahul Patel, Amanda J. Phalin, Marsha D. Powers, Fred S. Ridley, Patrick O. Zalupski, and Anita G. Zucker.

**Others present:**

Ben Sasse, President; Chris Cowen, Senior Vice President and Chief Financial Officer; Melissa Curry, Interim Vice President for Human Resources; Elias Eldayrie, Vice President and Chief Information Officer; Joseph Glover, Provost and Senior Vice President of Academic Affairs; Amy Hass, Vice President and General Counsel; Mark Kaplan, Vice President for Government and Community Relations and University Secretary; Mary Parker, Vice President for Enrollment Management and Associate Provost; Curtis Reynolds, Vice President for Business Affairs; Heather White, Vice President for Student Life; members of the University of Florida community, and the public.

**1.0 Call to Order and Welcome**

Board and Committee Chairman Hosseini welcomed everyone in attendance and called the meeting to order at 10:00 a.m.

**2.0 Roll Call**

Vice President and University Secretary Mark Kaplan conducted a roll call, and all Committee members were present.

**3.0 Review Draft Agenda for June Meeting**

**3.1 Review Action Items**

Chairman Hosseini noted the pre-meeting is for discussion only and no action will come to the committee.

- **GGRIA1 Direct Support Organizations Appointments**

Vice President and General Counsel Amy Hass summarized the 23 direct support organization appointments before the committee for approval, including eighteen for UF Alumni Association, four for UF Historic St. Augustine, and 1 for UF Investment Corporation.

- UF Alumni Association (18): Jennifer Adams, Roger “Beau” Beaubien, Kristin Carter, Ruan Cox, Jessica Costello, Christina Cabrera, Christina Criser Jackson, Carlos del Sol, Alex Hurd, Kim Kaupe, Erica Loewe, Isabella Montoya, Careshia Moore, Glenna Palazzo, Nik Patel, Andrea Pelt-Thornton, Damon Sununtnasuk, Craig Thompson
- UF Historic St. Augustine (4): J. Michael Francis, Elsbeth “Buff” Gordon, Bill Robinson, Herschel Shepard
- UF Investment Corporation (1): Scott Friedman

Trustee Amanda Phalin expressed her full support of UF Alumni Association appointee Isabella Montoya.

- **GGRIA2 UF Regulations**

Vice President and General Counsel Amy Hass reviewed two regulations, 3.0375 and 7.010.

3.0375: The proposed regulation amendment reflects an increase in the repeat course surcharge from \$189.74 to \$204.65, an increase of \$14.91, as set by the BOG.

7.010: In accordance with BOG Regulation 10.003, this proposed regulation amendment replaces UF’s sustained performance evaluation process with a policy requiring tenured faculty to undergo a comprehensive post-tenure review every five years as promulgated by Senate Bill 7044 from the 2022 Legislative Session.

### 3.2 Discussion Item

- **Government Update**

Vice President for Government and Community Relations and University Secretary Mark Kaplan shared UF had a record year of funding receiving approximately \$130M in new recurring Education & General funding and more than \$250M for fixed capital outlay (PECO). This increased UF’s fixed capital outlay over the last five legislative sessions to an unprecedented \$750M. He noted the 2024 legislative session is set to begin on January 9, 2024 and committee meetings will begin this September. He expressed his immense gratitude to Board Chair Hosseini for his tireless effort as the biggest advocate for UF and without him UF would not have received this record-breaking funding.

Board and Committee Chair Hosseini thanked VP Kaplan for his kind words and added that the funding received by UF this year is unprecedented. He noted that we owe a debt of gratitude to everyone at UF, our faculty, staff, administration, trustees, for their teamwork and diligence. Specifically, he expressed his thanks to President Sasse and Trustee Zalupski for their efforts. He shared he is particularly proud of funding projects for P.K. Yonge and UF Health. He noted that the Dental Science Building is under review from the President, and he will come to the Board with his decision of what direction will be taken for that facility.



Trustee David Brandon echoed VP Kaplan’s comments on Chairman Hosseini’s dedication and tireless effort for UF.

VP Kaplan remarked on the policy takeaways, noting the Board of Governors will be providing direction to the universities.

Trustee Amanda Phalin inquired what the chances are of the funding for the Music Building will be vetoed. Board and Committee Chair Hosseini said they are pushing for the funding. The President will decide if more money is needed for the project and how funds will be used. He closed his remarks by thanking the Board for coming to Tallahassee for Gator Day and encouraged them to continue to reach out to legislators on behalf of UF.

#### **4.0 New Business**

There was no new business to come before the committee.

#### **5.0 Adjourn**

There being no further discussion, Board and Committee Chair Hosseini adjourned the meeting at 10:29 a.m.

DRAFT



**COMMITTEE ON GOVERNANCE, GOVERNMENT  
RELATIONS, AND INTERNAL AFFAIRS  
ACTION ITEM GGRIA1  
June 8, 2023**

**SUBJECT:** Direct Support Organization Appointments

---

**BACKGROUND INFORMATION**

Pursuant to University of Florida Governance Enhancements adopted by the University of Florida Board of Trustees on December 7, 2018, all appointments of Directors to University Direct Support Organizations must be approved by the University of Florida Board of Trustees.

The Direct Support Organizations listed below have requested the following individuals be approved to their board:

**UF Alumni Association, Inc. (18):**

|                       |                          |                  |                      |                   |
|-----------------------|--------------------------|------------------|----------------------|-------------------|
| Jennifer Adams        | Jessica Costello         | Alex Hurd        | Careshia Moore       | Damon Sununtnasuk |
| Roger 'Beau' Beaubien | Christina Cabrera        | Kim Kaupe        | Glenna Palazzo       | Craig Thompson    |
| Kristin Carter        | Christina Criser Jackson | Erica Loewe      | Nik Patel            |                   |
| Ruan Cox              | Carlos del Sol           | Isabella Montoya | Andrea Pelt-Thornton |                   |

**UF Historic St. Augustine, Inc. (4):**

|                    |                       |               |                  |
|--------------------|-----------------------|---------------|------------------|
| J. Michael Francis | Elsbeth 'Buff' Gordon | Bill Robinson | Herschel Shepard |
|--------------------|-----------------------|---------------|------------------|

**UF Investment Corporation, Inc. (1):**

Scott Friedman

**PROPOSED COMMITTEE ACTION**

The Committee on Governance, Government Relations, and Internal Affairs is asked to approve the individuals listed above and in the board materials for recommendation to the Board of Trustees for approval on the Consent Agenda.

**ADDITIONAL COMMITTEE CONSIDERATIONS**

None.

---

Supporting Documentation Included: Director Support Organization Appointments Summary

Submitted by: Amy Meyers Hass, Vice President and General Counsel

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza "Mori" Hosseini, Chair

---

Ben Sasse, President and Corporate Secretary



**COMMITTEE ON GOVERNANCE, GOVERNMENT  
RELATIONS, AND INTERNAL AFFAIRS**

DIRECT SUPPORT ORGANIZATION WITH  
BOARD APPOINTMENTS EXPIRING ON OR BEFORE  
JUNE 2023 FOR UF BOARD OF TRUSTEES APPROVAL

- UF Alumni Association - 18
- UF Historic St. Augustine - 4
- UF Investment Corporation - 1

## DIRECT SUPPORT ORGANIZATION:

### UF Alumni Association



|                        |                                  |
|------------------------|----------------------------------|
| <b>Name:</b>           | Jennifer Adams                   |
| <b>Type:</b>           | Elected Director (Reappointment) |
| <b>Replacing:</b>      | N/A                              |
| <b>Term Number:</b>    | Third                            |
| <b>Term Dates:</b>     | 07/01/2023-06/30/2025            |
| <b>Length of Term:</b> | 2 years                          |
| <b>Other DSO's:</b>    | N/A                              |

#### **Bio:**

Jennifer Adams, BSTEL 1997, is the Vice President of CNN Sports Programming. Based in Atlanta, Jennifer has worked at CNN for 24 years in a variety of roles across CNN, CNNi, HLN and truTV. As VP of CNN Sports, Jen leads teams in London and Atlanta who are responsible for newsgathering and programming, serving a variety of platforms including CNN International, CNN, CNN Digital and HLN. She works closely with Bleacher Report, Turner Sports and Discovery Sports around revenue driving opportunities. Jen and the CNN Sports team cover major sporting events like the Super Bowl, NCAA Men's & Women's Basketball Tournaments, NBA All-Star Game & Finals, The Masters Tournament and other golf majors, MLB World Series, NHL Stanley Cup, Olympics, the FIFA Men's & Women's World Cup, Formula 1 Racing, US Open and other tennis majors, Rugby World Cup and more. Outside of work, Jen is a busy mom to a 14-year old son and an 11-year old daughter. Living in a house divided and in an enemy state, Jen spends a lot of time sharing her love of the University of Florida and the wider Gator nation with her kids, friends and colleagues. Her family welcomed their first pet during the pandemic, a mini goldendoodle named Nox. Nox with a N and not a K! Jen is active in her East Cobb community volunteering in schools, with youth sports teams, and as an advisory board member for the Kate's Club organization, in addition to her role with the UFAA Board of Directors.

She has served on the UFAA Board of Directors since 2019; her current term expires on 6/30/2025.

**DIRECT SUPPORT ORGANIZATION:**

**UF Alumni Association**



|                        |                        |
|------------------------|------------------------|
| <b>Name:</b>           | Roger "Beau" Beaubien  |
| <b>Type:</b>           | Elected Director (New) |
| <b>Replacing:</b>      | Lance Karp             |
| <b>Term Number:</b>    | Second                 |
| <b>Term Dates:</b>     | 07/01/2023-06/30/2025  |
| <b>Length of Term:</b> | 2 years                |
| <b>Other DSO's:</b>    | N/A                    |

**Bio:**

Roger "Beau" Beaubien, BA 2005, is currently Of Counsel at Greenberg Traurig, LLP. He was previously Deputy Chief of Staff and Director of Cabinet Affairs to Governor Ron DeSantis. Beau formerly served as Special Counsel and Assistant Attorney General to Attorney General Pam Bondi. Beau was raised in Tampa, Florida. He graduated in 2005 from the University of Florida with a B.A. in Political Science, and in 2012 with his law degree from Florida State University. Beau enjoys reading about Florida history, fishing, and following Florida Gators athletics. Beau and his wife Alyssa live in Tallahassee with their son Beau.

**DIRECT SUPPORT ORGANIZATION:**

**UF Alumni Association**



|                        |                        |
|------------------------|------------------------|
| <b>Name:</b>           | Christina Cabrera      |
| <b>Type:</b>           | Elected Director (New) |
| <b>Replacing:</b>      | Scott Thomas           |
| <b>Term Number:</b>    | First                  |
| <b>Term Dates:</b>     | 07/01/2023-06/30/2025  |
| <b>Length of Term:</b> | 2 years                |
| <b>Other DSO':</b>     | N/A                    |

**Bio:**

Cristina Cabrera, BA 1994, MBA 1999, is a healthcare executive, proud community volunteer and mom. She currently works for a leading global telemedicine and virtual healthcare company, utilizing her Spanish speaking skills to support the company’s initiatives and expand client growth. In her free time, she serves as Volunteer VP for the Tampa Gator Club, community Alumni Advisor at her sorority’s local college chapter, mentor for the Hillsborough Professional Women’s Association, Christ the King School Parent Club committee member and Steering Committee member for Project Shoes at Christ the King Parish, donating over 1800 pairs of shoes to the underserved community.

Cristina currently lives in Tampa, FL and will be serving her first term on the UFAA Board of Directors; her term expires 6/30/2025.

**DIRECT SUPPORT ORGANIZATION:**

**UF Alumni Association**



**Name:** Kristin Carter  
**Type:** Elected Director (Reappointment)  
**Replacing:** N/A  
**Term Number:** Third  
**Term Dates:** 07/01/2023-06/30/2025  
**Length of Term:** 2 years  
**Other DSO's:** N/A

**Bio:**

Kristin Carter, BSJ 1993, is an attorney with the Office of the Broward County Attorney. Before beginning work for the county government as Chief of Staff to Commissioner Tim Ryan in 2012, she spent ten years working for the Florida Legislature. Kristin lives in Fort Lauderdale, FL and is the rescue mom of Lucy, a Rottweiler, and Wally, an American Bulldog mix. She contributes to the Machen Florida Opportunity Scholarship Program and volunteers with South Florida charities that offer free legal assistance to residents applying for U.S. citizenship. While at UF, she was active in Sigma Kappa and Florida Blue Key and served as General Chairman of Homecoming in 1995. She earned a master's degree from The George Washington University and a Juris Doctorate from Florida International University.

Kristin has served on the UFAA Board of Directors since 2018; her current term expires on 6/30/2025.

## DIRECT SUPPORT ORGANIZATION:

### UF Alumni Association



|                        |                        |
|------------------------|------------------------|
| <b>Name:</b>           | Jessica Costello       |
| <b>Type:</b>           | Elected Director (New) |
| <b>Replacing:</b>      | Renee Dabbs            |
| <b>Term Number:</b>    | Second                 |
| <b>Term Dates:</b>     | 07/01/2023-06/30/2025  |
| <b>Length of Term:</b> | 2 years                |
| <b>Other DSO's:</b>    | N/A                    |

#### **Bio:**

The Honorable Jessica G. Costello, BA '06, was appointed on March 29, 2019 by the Governor of Florida to serve as a Hillsborough County Court Judge. She presides over County Civil and Domestic Violence Injunction cases. Shortly after her appointment to the bench, Judge Costello was selected by the Governor and First Lady of Florida to serve as a member of the Florida Children and Youth Cabinet, an entity whose mission is to improve the self-sufficiency, safety, economic stability, health and quality of life of all children in Florida. She is a proud mom to son Cameron and wife to husband Shane, a shareholder with a Tampa law firm.

Prior to her judicial appointment, Judge Costello served as an Assistant Statewide Prosecutor with the Florida Attorney General's Office. In this role she managed local, state and federal law enforcement teams in the prosecution of organized crime throughout the state with a focus on counter-terrorism, gangs, human trafficking, drug trafficking and fraud. She has spent the majority of her career in the field of criminal prosecution and tried a significant number of cases to verdict, ranging from misdemeanors to complex multi-defendant criminal matters to capital homicide. Judge Costello served as a member of Florida's Anti-Terrorism Task Force and the FBI's Joint Terrorism Task Force Executive Committee. She also worked with community leaders and nongovernmental organizations to engage and inform the public about issues related to crime in the community.

Named Florida's Gang Prosecutor of the Year in 2015, Judge Costello was selected as a Top Government Attorney by Florida Trend from 2014-2019, and was inducted into the Tampa Bay Business Journal's 'Up and Comers' Hall of Fame in 2016. She was named a 'Woman of Color Leading Change' by the YWCA of Tampa Bay in 2017, received the University of Florida's Outstanding Young Alumni award in 2018 and in 2020 was recognized for her leadership and service as an Honorary Inductee into Florida Blue Key. In 2021, the Florida Assoc. of Women Lawyers named her a 'Leader in the Law' and in January 2022 the Hillsborough County Bar Association named Judge Costello 'Outstanding Jurist of the Year'.

Jessica currently lives in Tampa, FL.



## DIRECT SUPPORT ORGANIZATION:

### UF Alumni Association



|                        |                                  |
|------------------------|----------------------------------|
| <b>Name:</b>           | Ruan Cox                         |
| <b>Type:</b>           | Elected Director (Reappointment) |
| <b>Replacing:</b>      | N/A                              |
| <b>Term Number:</b>    | Second                           |
| <b>Term Dates:</b>     | 07/01/2023-06/30/2025            |
| <b>Length of Term:</b> | 2 years                          |
| <b>Other DSO's:</b>    | N/A                              |

#### **Bio:**

Ruan Cox, BS 2008, is a scientist, strategic partnerships and strategy professional, community builder, as well diversity and inclusion advocate. He currently serves as an Associate Director for Strategic Partnerships at Regeneron Genetics Center, a subsidiary of Regeneron Pharmaceuticals, Inc. In this capacity, Ruan helps to push forward the mission of one of the world's largest human genomic research efforts, which is to improve patient care by using genomic approaches to speed drug discovery and development. He works with universities, academic health care centers, and private industry worldwide to help Regeneron execute a wide range of strategic partnerships to enable this mission. Before joining Regeneron, Ruan served as the Assistant Director for Business Development in the Technology Transfer Office at the University of South Florida's Research and Innovation Division. Prior to his work at the University of South Florida, Ruan worked at the world-renowned Moffitt Cancer Center where he helped to create the industry alliances unit in the center's Office of Innovation. Ruan's relationship building prowess combined with his scientific training led to over \$180 million in new funding generated for cancer research and clinical care.

Ruan earned a Bachelor of Science in Biology from the University of Florida and a Ph.D. in Molecular Medicine from the University of South Florida's Morsani College of Medicine with a focus in Immunology. Through his research contributions to this field, Ruan has had numerous publications that have contributed to the advancement of treatment options for resolution of lung injury. Ruan currently serves on boards for the Tampa Bay Economic Development Corporation, American Thoracic Society, Scientists, Inc. and Iota Phi Theta Fraternity, Inc. Of all his volunteer efforts, Ruan takes particular pride in his work for the UF Alumni Association where he served four years on the Tampa Gator Club board including a term as president in the 2018-2019.

Ruan currently lives in New York, NY and has served on the UFAA Board of Directors since 2021; his current term expires 6/30/2025.

## DIRECT SUPPORT ORGANIZATION:

### UF Alumni Association



**Name:** Christina Criser Jackson  
**Type:** Elected Director (New)  
**Replacing:** Josh Weingard  
**Term Number:** First  
**Term Dates:** 07/01/2023-06/30/2025  
**Length of Term:** 2 years  
**Other DSO's:** N/A

#### **Bio:**

Christina, BA 2006, MS 2010, has dedicated her life to nonprofit work. With a bachelors in English and a master's degree in family, youth and community sciences, Christina is passionate about improving lives and strengthening our community. Starting her career at United Way Worldwide, Christina has served our Central Florida community for over a decade.

As President and CEO of United Way of Central Florida, Christina collaborates with a team of 35 staff members, 80 partner services, 2,000 volunteers, and 20,000 donors throughout Polk, Highlands, and Hardee counties. They are responsible for processing the Publix-United Way workplace campaign, raising over \$58 million annually throughout the southeastern United States. In addition to annual operations, her team recently opened the Carol Jenkins Barnett United Way Children's Resource Center at Bonnet Springs Park and launched a \$5.8 million grant to address behavioral health and early intervention needs in Polk County.

She is a board member at GiveWell Community Foundation, Polk Vision, and President of Association of Fundraising Professionals Florida Caucus. She is a sustaining member of the Junior League of Greater Lakeland and involved in various faith and civic groups. Christina is a graduate of the United Way Worldwide Advanced Leadership Program.

Christina currently lives in Lakeland, FL and will be serving her first term on the UFAA Board of Directors; his term expires 6/30/2025.

## DIRECT SUPPORT ORGANIZATION:

### UF Alumni Association



|                        |                                  |
|------------------------|----------------------------------|
| <b>Name:</b>           | Carlos del Sol                   |
| <b>Type:</b>           | Elected Director (Reappointment) |
| <b>Replacing:</b>      | N/A                              |
| <b>Term Number:</b>    | Third                            |
| <b>Term Dates:</b>     | 07/01/2023-06/30/2025            |
| <b>Length of Term:</b> | 2 years                          |
| <b>Other DSO's:</b>    | N/A                              |

#### **Bio:**

Carlos del Sol, BSIE 1972, retired as Vice President Global Engineering for the Campbell Soup Company where he was responsible for the corporate engineering function supporting operations worldwide. During his twenty-three-year tenure with Campbell, he led a highly engaged organization to successfully execute a multitude of complex capital projects, applying state of the art technology to introduce new products, expand manufacturing capability, and optimize supply chain operations. Mr. del Sol was recognized for leadership in the area of organization effectiveness and diversity.

Prior to joining Campbell, he held leadership positions in manufacturing, engineering, production, logistics, and advanced manufacturing technology at General Electric. Carlos earned a B.S. degree in Industrial Engineering from the University of Florida. Upon graduation, he joined General Electric and graduated from GE's two-year Manufacturing Management Program.

Carlos served as Vice Chairman of the Campbell Soup Foundation and as a Trustee of the Board of the United Way of Camden County, NJ. He has been recognized with the University of Florida Distinguished Alumnus Award, the University of Florida Industrial Engineering Alumni Leadership Award, and the Camden County, NJ Prominent Hispanic Award. He is a member and former chair of the University of Florida College of Engineering Dean's Advisory Board and currently serves as chair of the Industrial Engineering Advisory Board.

Carlos and his wife, Olga, live in Newberry, FL and he has served on the UFAA Board of Directors since 2019; his current term expires on 6/30/2025.

## DIRECT SUPPORT ORGANIZATION:

### UF Alumni Association



|                        |                        |
|------------------------|------------------------|
| <b>Name:</b>           | Alex Hurd              |
| <b>Type:</b>           | Elected Director (New) |
| <b>Replacing:</b>      | Jocelyn Moore          |
| <b>Term Number:</b>    | First                  |
| <b>Term Dates:</b>     | 07/01/2023-06/30/2025  |
| <b>Length of Term:</b> | 2 years                |
| <b>Other DSO's:</b>    | N/A                    |

#### **Bio:**

Alex Hurd, BA 2001, is a purpose driven leader with a track record of creating, leading, and managing businesses that leverage global partnerships to generate commercial value and drive societal impact. His career has spanned the globe with assignments across the Americas, Asia, Africa, and Europe.

Alex is currently the Vice President, Health Services for Walmart Canada, overseeing a complex business spanning retail pharmacy, clinics, vision centers and OTC medicines. He oversees a team of over 5,000 Associates tasked with enhancing access to affordable, personalized care for all Canadians. During his ten-year tenure with Walmart, Alex has held multiple global leadership roles, including as COO for ClarusONE, Walmart and McKesson's UK-based pharmaceutical sourcing joint venture, and Head of strategy and business development for Walmart's Health and Wellness business unit in the U.S.

Alex began his career with Deutsche Bank's investment bank and spent several years leading healthcare and renewable energy programs for the Clinton Foundation. He is a Fulbright Scholar and former co-chair for the Consumer Goods Forum's health and wellness steering committee.

He is fluent in five languages and currently resides with his family in Toronto. He will be serving his first term on the UFAA Board of Directors; his term expires on 6/30/2025.

## DIRECT SUPPORT ORGANIZATION:

### UF Alumni Association



|                        |                        |
|------------------------|------------------------|
| <b>Name:</b>           | Kim Kaupe              |
| <b>Type:</b>           | Elected Director (New) |
| <b>Replacing:</b>      | Kevin Mayeux           |
| <b>Term Number:</b>    | Second                 |
| <b>Term Dates:</b>     | 07/01/2023-06/30/2025  |
| <b>Length of Term:</b> | 2 years                |
| <b>Other DSO's:</b>    | N/A                    |

#### **Bio:**

Kim Kaupe, BSBA 2008, is a founder, keynote speaker, and one-of-a-kind teacher. From worldwide stages to her online courses, Kim's mission of investing in yourself, your career and your network has garnered the praise of corporate clients such as American Express, YPO and TEDx. On LinkedIn alone, she has served over 200,000+ students through her entrepreneur-focused LinkedIn Learning courses.

Her current company, Bright Ideas Only, is a marketing and fan engagement agency based in Austin, Texas and Charleston, South Carolina. The company works with powerhouse, A-list properties such as Oprah, The New York Mets, KISS, Shawn Mendes, ACE Comic Con, Miller Coors, and Paul McCartney to create new programs, revenue streams and branding. Her previous companies, 'ZinePak and The Superfan Company, garnered global praise from being named one of The Wall Street Journal's Startup of the Year to being featured on Season 5 of ABC's hit primetime show, Shark Tank, securing offers from 4 out of 5 sharks.

Kim's accolades include Forbes 30 Under 30, Advertising Age's 40 Under 40, Inc.'s 35 Under 35 and EY's Young Innovator of the Year Award. Kim regularly contributes commentary on business, entrepreneurship and entertainment to media outlets such as Rolling Stone, Forbes and Entrepreneur in addition to being featured on television networks, such as her appearance as a judge for 2019 Miss USA pageant LIVE on Fox.

Kim is passionate about giving back to the next generation through her volunteer work and service on foundation boards such as Junior Achievement and the Andrus Family Fund. She enjoys good music, witty banter, and commenting on life and entrepreneurship on her social channels. If you don't interrupt her during one of her beloved Florida Gator games, she is always up for a conversation, laugh, or figuring out a master plan on how she can meet one of her idols, Harrison Ford.

## DIRECT SUPPORT ORGANIZATION:

### UF Alumni Association



|                        |                                  |
|------------------------|----------------------------------|
| <b>Name:</b>           | Erica Loewe                      |
| <b>Type:</b>           | Elected Director (Reappointment) |
| <b>Replacing:</b>      | N/A                              |
| <b>Term Number:</b>    | Second                           |
| <b>Term Dates:</b>     | 07/01/2023-06/30/2025            |
| <b>Length of Term:</b> | 2 years                          |
| <b>Other DSO's:</b>    | N/A                              |

#### **Bio:**

Erica Loewe, BSPR 2011, is the Director of African American Media to President Joseph R. Biden at The White House. Previously, she served as the Deputy Communications Director for House Majority Whip James E. Clyburn, the highest-ranking African American in the United States Congress. Prior to joining House leadership, Erica served as Deputy Communications Director and Press Secretary on the House Financial Services Committee under Congresswoman Maxine Waters.

Some of her earliest professional experiences in politics include a top-tier public affairs firm, formerly known as the Podesta Group; the 2013 Presidential Inaugural Committee; the BGR Group, a former political consulting firm for the University of Florida; and the Obama White House.

However, the very first President she served was the 11th President of the University of Florida, Dr. J. Bernard Machen, in her role as Events Coordinator and Interim Director of Presidential Events and Commencement. Erica also volunteers with various political campaigns and organizations that align with issues close to her heart, including the Alzheimer's Association, which helps fight the disease her mother has suffered from for nearly 10 years.

Erica was born in Charleston, SC, raised in Miami, FL, and currently lives in Washington, DC. She has served on the UFAA Board of Directors since 2021; her current term expires 6/30/2025.

## DIRECT SUPPORT ORGANIZATION:

### UF Alumni Association



|                        |                              |
|------------------------|------------------------------|
| <b>Name:</b>           | Isabella Montoya             |
| <b>Type:</b>           | Presidential Appointee (New) |
| <b>Replacing:</b>      | Oscar Sanchez                |
| <b>Term Number:</b>    | First                        |
| <b>Term Dates:</b>     | 02/11/2023-06/30/2025        |
| <b>Length of Term:</b> | 2 years                      |
| <b>Other DSO's:</b>    | N/A                          |

#### **Bio:**

Isabella Montoya, BS 2022, currently resides between San Francisco and Los Angeles, where she is an Intellectual Property Specialist at Meta (Facebook). She began her career with Meta her sophomore year of college and since then, has worked on product operations and data analytics teams for the company. Isabella has a passion for teaching others about technology, while advocating for inclusivity and diversity in the industry. She has collaborated with many organizations, including Girls Who Code, to lead workshops on breaking into the technology sector.

Her career expands into the web3 and NFT space where she works with multiple startups to launch transformative projects in the sector. She has hosted and spoken at conferences such as NFT NYC, LA Tech Week, Miami Art Basel, and Hola Metaverso in Bogota. Her passion for film has led her to host large scale panels on the intersection between NFT's and the entertainment industry. Isabella has also competed in hackathons across the United States, where she has collaborated with teams to develop a variety of apps. Outside of work Isabella enjoys surfing, skateboarding, and classical music.

Isabella graduated from the University of Florida with a bachelor's degree in Information Systems and minor in Portuguese. She served as President of Woman of Warrington, Co-President of Latin American Women in Business, and was a strategist on UF's International Case Team. She was also a member of UF's Honor College, Florida Blue Key, Delta Gamma, and the National Portuguese Honors Society (Phi Lambda Beta). Additionally, through the University Scholars Program, Isabella researched the impact of algorithmic biases in artificial intelligence systems. During her time at UF, Isabella was honored with UFAA's Outstanding Leader Award and Heavener's Distinction in Leadership Award.

Isabella is serving a two-year appointment to fill a vacancy on the UFAA Board of Directors; her term expires 6/30/2025.

## DIRECT SUPPORT ORGANIZATION:

### UF Alumni Association



|                        |                                  |
|------------------------|----------------------------------|
| <b>Name:</b>           | Careshia Moore                   |
| <b>Type:</b>           | Elected Director (Reappointment) |
| <b>Replacing:</b>      | N/A                              |
| <b>Term Number:</b>    | Second                           |
| <b>Term Dates:</b>     | 07/01/2023-06/30/2025            |
| <b>Length of Term:</b> | 2 years                          |
| <b>Other DSO's:</b>    | N/A                              |

#### **Bio:**

Careshia Moore, BA '99, MEd '00, JD '07, is the President and CEO of Usher's New Look (UNL), the global youth development organization founded in 1999 by grammy-award winning artist, Usher Raymond IV. In her role as President and CEO of UNL, she provides strategic leadership to the organization that is committed to transforming the lives of underserved youth into passion-driven leaders.

Careshia is an advocate, author, and educator who has a heart for inspiring others to reach their potential through education. She shares her passion as a keynote speaker and panelist in a numerous conferences and workshops such as the Hope Global Forum and the National Black Child Institute Summit. As a life-long educator, her observation of the disparities among underserved youth was the catalyst for the work in which she is currently engaged and propels her to continue to seek out innovative strategies to equip youth to compete to succeed.

As an undergraduate student at the University of Florida, Careshia gained a passion for helping youth from communities in need access education as a vehicle to change the trajectory of their lives. During her time at UF she was engaged in various organizations and received numerous honors, including but not limited to, Executive Board member of Delta Sigma Theta Sorority, Inc., named as Presidential Scholar, recipient of the Florida Fund for Minority Teachers Fund, a member of Black Law School Association, and a member of numerous honor societies.

Careshia has continued to engage with her community through membership on boards such as Communities in Schools of Henry County and United Way Advisory Board. She is also a certified Aggression Replacement Trainer and has worked with justice-involved youth as a trainer and a Neighborhood Accountability Board Coordinator. In recognition of her dedication to the community and her passion for encouraging and inspiring others, she was named as one of Southern Journal Magazine's Top 14 under 40 and as a YMCA's Innovative Woman in History. Careshia is married to UF alumnus, Lamar Moore, and they are the proud parents of one son and one daughter.

She currently lives in McDonough, Georgia and has served on the UFAA Board of Directors since 2021; her current term expires 6/30/2025.



## DIRECT SUPPORT ORGANIZATION:

### UF Alumni Association



|                        |                                  |
|------------------------|----------------------------------|
| <b>Name:</b>           | Glenna Palazzo                   |
| <b>Type:</b>           | Elected Director (Reappointment) |
| <b>Replacing:</b>      | N/A                              |
| <b>Term Number:</b>    | Second                           |
| <b>Term Dates:</b>     | 07/01/2023-06/30/2025            |
| <b>Length of Term:</b> | 2 years                          |
| <b>Other DSO's:</b>    | N/A                              |

#### **Bio:**

Glenna Palazzo, BSPR '90, is President and Owner of Black Cat Revenue, a strategic business consulting firm focused on increasing sales results and improving sales operational efficiencies. Her experience includes work in the legal services, accounting, customer experience and cyber security industries. A veteran executive, Glenna has held sales and operational leadership roles for large and diverse organizations including Harvard Business School Publishing, AchieveGlobal, Wolters Kluwer and Epiq Legal Services before starting her own firm.

Glenna is active in her community and serves as the president of the high school Booster club and a member of the National Charity League.

While at UF, Glenna was President of the Inter-Residence Hall Association, Chairman of the Reitz Union Board of Managers, a member of Preview, Kappa Delta, Florida Blue Key and inducted into the University of Florida Hall of Fame. Glenna earned her bachelor's degree, with honors, and was named the UFAA Outstanding Leader for her graduating class. She also represented the Gainesville Rotary Club as an Ambassadorial Scholar for her post graduate education at the Manchester Business School in Manchester, England.

Glenna, her husband Alan, and two daughters live in the Dallas metroplex and are avid Gator fans supporting all Gator athletics that come to the state of Texas. She has served on the UFAA Board of directors since 2021; her current term expires on 6/30/2025.

## DIRECT SUPPORT ORGANIZATION:

### UF Alumni Association



|                        |                                  |
|------------------------|----------------------------------|
| <b>Name:</b>           | Nik Patel                        |
| <b>Type:</b>           | Elected Director (Reappointment) |
| <b>Replacing:</b>      | N/A                              |
| <b>Term Number:</b>    | Third                            |
| <b>Term Dates:</b>     | 07/01/2023-06/30/2025            |
| <b>Length of Term:</b> | 2 years                          |
| <b>Other DSO's:</b>    | N/A                              |

#### **Bio:**

Nik Patel, BA '96, MBA '01, is a Senior Vice President of Cyber/Information Security at Citi. He has been part of Citi for over 10 years holding various roles. Prior to Citi, Nik worked for Walmart and Accenture working in multiple locations including: Charlotte, NC; New York, NY; Boston, MA; Portland, OR; and Los Angeles, CA.

He received both his Economics degree and Master of Business from the University of Florida. While at UF, he held leadership roles in Student Government and Florida Blue Key and was ultimately elected to the UF Hall of Fame.

Nik has served on the UFAA Board of Directors since 2019. His current term expires on 6/30/2025.

## DIRECT SUPPORT ORGANIZATION:

### UF Alumni Association



|                        |                        |
|------------------------|------------------------|
| <b>Name:</b>           | Andrea Pelt-Thornton   |
| <b>Type:</b>           | Elected Director (New) |
| <b>Replacing:</b>      | Terri Lubaroff         |
| <b>Term Number:</b>    | First                  |
| <b>Term Dates:</b>     | 07/01/2023-06/30/2025  |
| <b>Length of Term:</b> | 2 years                |
| <b>Other DSO's:</b>    | N/A                    |

#### **Bio:**

Andrea Pelt-Thornton, BA 1983, is a retired Information Technology Agile Delivery Manager. Prior to her recent retirement from NextEra Energy/Florida Power and Light Company (FPL), she delivered Data Analytics and enterprise collaboration solutions for the corporation. As a member of the NextEra Energy Corporate Diversity Council, and past president of the African American Professional Employee Group, Andrea provided high level strategic direction to corporate-wide diversity and inclusion initiatives.

Andrea is active in various professional organizations including the Board of Directors for the Customer Service Week Conference (CS Week), delivering professional educational opportunities for utilities. She is also a past President of the Florida Chapter of the American Association of Blacks in Energy.

Andrea is committed to public service. She is President of the Delta Education, Health and Cultural Initiative, Inc., a non-profit organization which enriches the South Florida community. Additionally, Andrea is an active member of The Links Incorporated, Fort Lauderdale Chapter where she is the past Vice President of Programs. Andrea is a Director of the Black Archives and Lyric Theater Foundation in Miami, Florida, and a member of Delta Sigma Theta Sorority, Incorporated, where she has served in leadership roles nationally, regionally, and locally as president of the Miami Alumnae Chapter. An NAACP Life Member, Andrea fondly served for several years as part of the ACT-SO Committee for the Miami-Dade Branch of the NAACP.

Andrea established the Willie and Johnnie Pelt Endowed Scholarship fund and was awarded the 2022 Gator Philanthropist Award by the UF Association of Black Alumni. She also received the Delta Sigma Theta Miami Alumnae Chapter 2019 Professional Achievement Award, and was acknowledged by Legacy Magazine as one of South Florida's Most Influential Business Leaders of 2018. Andrea holds an MBA from Nova University, and a BS degree in Business Administration from the University of Florida. Together with husband Stanley and son Jeffrey, she loves travel, football, basketball, and family fun.

She will be serving her first term on the UFAA Board of Directors; her term expires on 6/30/2025.

## DIRECT SUPPORT ORGANIZATION:

### UF Alumni Association



|                        |                                  |
|------------------------|----------------------------------|
| <b>Name:</b>           | Damon Sununtnasuk                |
| <b>Type:</b>           | Elected Director (Reappointment) |
| <b>Replacing:</b>      | N/A                              |
| <b>Term Number:</b>    | Second                           |
| <b>Term Dates:</b>     | 07/01/2023-06/30/2025            |
| <b>Length of Term:</b> | 2 years                          |
| <b>Other DSO's:</b>    | N/A                              |

#### **Bio:**

Damon Sununtnasuk, BSBA '05, has an internationally decorated career in technology marketing and entrepreneurial leadership. Damon led marketing efforts at Microsoft, Google, and Samsung in London, Berlin, and Seoul, respectively. Damon is the founder and president of two award-winning startups – an industry-recognized natural products company, and a strategy consulting firm with a global client base. Damon has served on the board of multiple “Gator Clubs” around the world from Seattle to London, Seoul to New York, in addition to serving on the board of the Cambridge Alumni Association, Mexico.

Damon earned his Bachelor of Science in Business Administration (Magna Cum Laude) from the University of Florida, and his Master of Business Administration (First-Class Honors) from the University of Cambridge, England.

Damon is an avid traveler, having lived in five countries and traveled to more than 60. He currently lives in Mexico City, Mexico and has served on the UFAA Board of Directors since 2021; his current term expires on 6/30/2025.

## DIRECT SUPPORT ORGANIZATION:

### UF Alumni Association



|                        |                        |
|------------------------|------------------------|
| <b>Name:</b>           | Craig Thompson         |
| <b>Type:</b>           | Elected Director (New) |
| <b>Replacing:</b>      | Rebecca Brock          |
| <b>Term Number:</b>    | First                  |
| <b>Term Dates:</b>     | 07/01/2023-06/30/2025  |
| <b>Length of Term:</b> | 2 years                |
| <b>Other DSO's:</b>    | N/A                    |

#### **Bio:**

Craig, BS 2003, MA 2007, JD 2007, currently serves as the Chief Legal Officer of Integra Investments, a real estate private equity firm based in Miami, Florida.

Born and raised in Pensacola, Craig is a triple Gator, having received his J.D., M.S. in Entrepreneurship and B.S. in Business Management. While a student, he was twice elected as President of Florida Blue Key, President of the Interfraternity Council, selected as a J. Wayne Reitz Scholar and was inducted into the University of Florida Hall of Fame. A Gator since birth, 55 members of the Ponce-Gonzalez family have attended the University of Florida since Craig's grandfather, Sergio Ponce, enrolled in 1941.

Craig currently lives in Coral Gables, FL with his wife, Georgia, a double Gator herself, and their two young children. He is serving his first term on the UFAA Board of Directors; his term expires on 6/30/2025.

## DIRECT SUPPORT ORGANIZATION:

### UF Historic St. Augustine



|                        |                       |
|------------------------|-----------------------|
| <b>Name:</b>           | J. Michael Francis    |
| <b>Type:</b>           | Reappointment         |
| <b>Replacing:</b>      | N/A                   |
| <b>Term Number:</b>    | Second                |
| <b>Term Dates:</b>     | 06/08/2023-06/08/2027 |
| <b>Length of Term:</b> | 4 years               |
| <b>Other DSO's:</b>    | None                  |

#### **Bio:**

Dr. J. Michael Francis received his PhD in History in 1998 from the University of Cambridge. Between 1997 and 2012, he taught at the University of North Florida. In 2012, Dr. Francis was named the Hough Family Chair of Florida Studies at the University of South Florida, St. Petersburg, and in 2016 he was appointed Chair of the Department of History and Politics at USFSP, a position he held until 2020.

Dr. Francis has written and edited five books and numerous book chapters and articles. Since 2016, he has served as the Executive Director of an ambitious digital history project, titled *La Florida: The Interactive Digital Archive of the Americas*.

Dr. Francis has received more than two dozen national and international awards, including a four-year appointment as a Research Fellow at the American Museum of Natural History in New York, and a Jay I. Kislak Fellowship at the Library of Congress in Washington, DC. In 2019, Dr. Francis received a \$250,000 grant from the National Archives to support a three-year digital history project titled, *Lost Voices from America's Oldest Parish Archive, 1594-1821*.

In addition to his published work, Dr. Francis served on the St. Augustine 450th Commemoration Commission and as curator of the traveling museum exhibit, *Imagining La Florida: Juan Ponce de León and the Quest for the Fountain of Youth*. In 2021, Florida Governor DeSantis appointed Dr. Francis to serve on the Florida Historical Commission. That same year, Spain's King Philip VI bestowed upon Dr. Francis the Officer's Cross of the Order of Isabella the Catholic, one of the country's most prestigious civil orders.

## DIRECT SUPPORT ORGANIZATION:

### UF Historic St. Augustine



|                        |                       |
|------------------------|-----------------------|
| <b>Name:</b>           | Elsbeth “Buff” Gordon |
| <b>Type:</b>           | Reappointment         |
| <b>Replacing:</b>      | N/A                   |
| <b>Term Number:</b>    | Second                |
| <b>Term Dates:</b>     | 06/08/2023-12/31/2027 |
| <b>Length of Term:</b> | 4 years               |
| <b>Other DSO’s:</b>    | None                  |

#### **Bio:**

Elsbeth Gordon has written and illustrated several volumes published by University Press of Florida about Florida’s historic architectural landscape and why it is sacred to the nation’s and Florida’s identity and heritage. The first volume, *Florida’s Colonial Architectural Heritage*, spans building activities from 1565 to 1821 (and won the Book Award, Society of Architectural Historians). The second, *Heart and Soul of Florida: Sacred Sites and Historic Architecture*, spans 8,000 years of the State’s building heritage divided into three cultural periods, Indian, Spanish and British Colonial, and Territorial-Statehood. Her third book, *Walking St. Augustine: An Illustrated Guide and Pocket History to America’s Oldest City* (2015), is the story of St. Augustine from 1565 to today, building by building in color illustrations in the heart of what was once the “walled colonial city.” She also authored and recorded the Florida Humanities Council’s audio walking tours of St. Augustine, and articles in *Forum* and *El Escribano*.

Currently she is a Research Associate for the Historic St. Augustine Research Institute. She is a former member of the Board of Directors for Mission San Luis, Tallahassee, and the St. Augustine Lighthouse and Maritime Museum, and former Board member and past Vice President of the St. Augustine Archaeological Association. At the University of Florida, she is past President of Board of Advisors, University of Florida Performing Arts, and Board member of Florida Museum of Natural History. Before her contracts with University Press of Florida, she restored a number of Florida buildings listed on the National Register of Historic Places, and designed and sculpted the Martin Luther King, Jr. Memorial for the city of Gainesville. She lives in St. Augustine.

**DIRECT SUPPORT ORGANIZATION:**

**UF Historic St. Augustine**



|                        |                       |
|------------------------|-----------------------|
| <b>Name:</b>           | Bill Robinson         |
| <b>Type:</b>           | Reappointment         |
| <b>Replacing:</b>      | N/A                   |
| <b>Term Number:</b>    | Third                 |
| <b>Term Dates:</b>     | 06/08/2023-06/08/2027 |
| <b>Length of Term:</b> | 4 years               |
| <b>Other DSO's:</b>    | None                  |

**Bio:**

Mr. Robinson is a Fellow with the Healthcare Financial Management Association (HFMA); and served on the HFMA-Large System CFO Council; the Florida Hospital Association – CFO Forum; and the Health Management Academy – CFO Council.

Experience: 1998-2014, Senior Vice President and Chief Financial Officer, Shands HealthCare; 1996-1998, Senior Vice President and Chief Financial Officer, Beth Israel Deaconess Medical Center, Boston, Massachusetts; 1988-1996, Senior Vice President and Chief Financial Officer, Valley Regional Health System Inc., Methuen, Massachusetts; 1982-1985, Vice President for Finance, The Leonard Morse Hospital, Natick, Massachusetts; 1974-1982, Controller, The Memorial Hospital, Worcester, Massachusetts.

Education: M.B.A., Nichols College; B.S.B.A., Northeastern University.



## DIRECT SUPPORT ORGANIZATION:

### UF Historic St. Augustine



|                        |                       |
|------------------------|-----------------------|
| <b>Name:</b>           | Herschel Shepard      |
| <b>Type:</b>           | Reappointment         |
| <b>Replacing:</b>      | N/A                   |
| <b>Term Number:</b>    | Third                 |
| <b>Term Dates:</b>     | 06/08/2023-06/08/2026 |
| <b>Length of Term:</b> | 3 years               |
| <b>Other DSO's:</b>    | None                  |

#### **Bio:**

Herschel E. Shepard, born in Jacksonville, FL, is one of Florida's leading experts in historic preservation. He earned his Master of Fine Arts in Architecture at Princeton University in 1956. Once he joined the faculty at UF he served as Director of Preservation Institute: Nantucket and occupied the Beinecke-Reeves Chair in Historic Preservation. His research grants included an initial study for the reconstruction of Mission San Luis, Tallahassee. Herschel worked on numerous restoration projects, which include the Historic 1902, Capital, Mildred and Claude Pepper Archives, Union Bank, and Princess Murat House in Tallahassee; the Miami Jackson Administrative Unit 1 ("Alamo") in Miami; the Florida Theater in Jacksonville; Fort Clinch in Fernandina; and several colonial structures in St. Augustine. His consulting services included the Cul- tural Inventory of Tabuk Region, Saudi Arabia; the reconstruction of Mission San Luis, Tallahassee; and protection of the historic seawall in St. Augustine.

During Herschel's career he received such awards as the 1997 Carl Reinhardt Award by the Florida Trust for Historic Preservation; the 2000 John Dyal Award by the Jacksonville Chapter AIA; the 2002 State of Florida Bob Williams Award; and the 2012 City of St. Augustine Aviles Award. Currently he is continuing a study of the Mississippian copper breastplates excavated at Mount Royal, Florida, as well as serving on the Board of Directors, UF Historic St. Augustine.

Herschel professes his indebtedness to the University of Florida architectural faculty and administration for the friendship, expertise guidance and indeed tolerance shown to him during his practice, teaching and subsequent retirement. Herschel has received the status of FAIA Emeritus and Professor Emeritus, UF School of Architecture. The Herschel E. Shepard Digital Collection of his work is available at the University of Florida George A. Smathers Libraries.

## DIRECT SUPPORT ORGANIZATION:

### UF Investment Corporation



|                           |                       |
|---------------------------|-----------------------|
| <b>Name:</b>              | Scott Friedman        |
| <b>Type:</b>              | Reappointment         |
| <b>Replacing:</b>         | N/A                   |
| <b>Term Number:</b>       | Second                |
| <b>Term Dates:</b>        | 09/29/2023-09/28/2026 |
| <b>Length of Term:</b>    | 3 years               |
| <b>Any UF Affiliates:</b> | None                  |

#### **Bio:**

Scott Friedman sits on the Management Committee and the Investment Partners Committee at Soroban Capital, a multi-billion-dollar global investment firm. Scott builds and monitors comprehensive Risk Analytics for the firm, and leads Global Trading. Scott has experience trading across every asset class and all parts of the capital structure globally; including Equity, Fixed Income, Derivatives, Rates, FX, Commodities, Swaps, and Structured Products.

Prior to Soroban Capital, Scott was the Head Trader at TPG-Axon Capital where he designed and led the trading desk analytics/technology/infrastructure across four global offices (New York, London, Hong Kong, & Tokyo). Prior to joining TPG-Axon, Scott was a Cross-Asset Trader in the proprietary Goldman Sachs Risk Arbitrage & Principal Strategies Group (internal multi-billion-dollar Goldman Sachs Hedge Fund). Scott started his career in 2001 at Goldman Sachs & Co. as an Analyst.

Scott is a CFA charter holder, a FRM (Financial Risk Manager) charter holder, a NYSSA (New York Society of Security Analysts) member and a GARP (Global Association of Risk Professionals) member. In addition, Scott serves as the Treasurer on the Board of Directors for Success Academy Charter Schools, and serves on the Advisory Committee for the New York Stock Exchange.



**COMMITTEE ON GOVERNANCE, GOVERNMENT  
RELATIONS AND INTERNAL AFFAIRS  
ACTION ITEM GGRIA2  
June 8, 2023**

**SUBJECT:** University of Florida Regulation

---

**BACKGROUND INFORMATION**

3.0375: The proposed regulation amendment reflects an increase in the repeat course surcharge from \$189.74 to \$204.65, an increase of \$14.91, as set by the BOG.

**PROPOSED COMMITTEE ACTION**

The Committee on Governance, Government Relations and Internal Affairs is asked to approve the amendments to UF Regulation 3.0375, as set forth in the attached, for recommendation to the Board of Trustees for approval on the Consent Agenda.

**ADDITIONAL COMMITTEE CONSIDERATIONS**

None.

---

Supporting Documentation Included: UF Regulation 3.0375

Submitted by: Amy Meyers Hass, Vice President and General Counsel

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza "Mori" Hosseini, Chair

---

Ben Sasse, President and Corporate Secretary

**NOTICE OF PROPOSED REGULATION AMENDMENT**

Date: May 9, 2023

**REGULATION TITLE:**

Tuition Cost

**REGULATION NO.:**

3.0375

**SUMMARY:** The proposed regulation amendment reflects an increase in the repeat course surcharge from \$189.74 to \$204.65, an increase of \$14.91, as set by the BOG.

**AUTHORITY:** BOG Regulation 1.001, 7.001 and 7.003

**COMMENTS CONCERNING THE PROPOSED REGULATION AMENDMENT SHOULD BE SUBMITTED WITHIN 14 DAYS OF THE DATE OF THIS NOTICE TO THE CONTACT PERSON IDENTIFIED BELOW.** The comments must identify the regulation you are commenting on.

**THE PERSON TO BE CONTACTED REGARDING THE PROPOSED REGULATION AMENDMENT IS:** Courtney Brown, Legal Assistant II, 123 Tigert Hall, Post Office Box 113125, University of Florida, Gainesville, Florida 32611, 352-392-1358 office, 352-392-4387 facsimile, regulations@ufl.edu.

**NAME OF PERSON WHO APPROVED THE PROPOSED REGULATION**

**AMENDMENT:** Joseph Glover, Provost and Senior Vice President for Academic Affairs.

**THE FULL TEXT OF THE PROPOSED REGULATION AMENDMENT IS ATTACHED TO THIS NOTICE.**

REGULATIONS OF THE  
UNIVERSITY OF FLORIDA

3.0375 Tuition Cost.

(1) Tuition Cost shall be defined as tuition and fees assessed to students for enrollment in credit courses at the University of Florida. Tuition Cost consists of the following tuition and fees:

(a) Resident Tuition Cost, comprising the following, shall be defined as the tuition and fees charged an enrolled student who qualifies as a Florida resident as defined in BOG Regulation 7.005 and Section 1009.21 Fla. Stat.:

1. Resident Tuition;
2. Tuition Differential;
3. Student Financial Aid Fee;
4. Capital Improvement Trust Fund Fee;
5. Transportation Access Fee;
6. Health Fee;
7. Athletic Fee;
8. Activity and Service Fee; and
9. Technology Fee.

(b) Non-Resident Tuition Cost, comprising the following, shall be defined as the tuition and fees charged an enrolled student who does not qualify as a Florida resident as defined in BOG Regulation 7.005 and Section 1009.21 Fla. Stat.:

1. Resident Tuition;

2. Tuition Differential;
3. Non-Resident Fee;
4. Student Financial Aid Fee;
5. Non-Resident Student Financial Aid Fee;
6. Capital Improvement Trust Fund Fee;
7. Transportation Access Fee;
8. Health Fee;
9. Athletic Fee;
10. Activity and Service Fee; and
11. Technology Fee.

(2) Enrollment shall be defined as consisting of two components:

(a) Formal registration in one or more credit courses approved and scheduled by the University; and,

(b) Payment of Tuition Costs, or other appropriate arrangements for payment (deferment or third-party billing) for the courses in which the student is registered as of the end of the drop/add period.

(3) A student is liable for Tuition Costs associated with all courses for which the student is registered at the end of the drop/add period. The Tuition Cost payment deadline is 3:30 p.m. Friday of the second week of class.

(4) Except for those Tuition Costs set forth in sections (5) and (6) of this regulation, the following are the Tuition Costs, which, in addition to the student health, athletic, activity and service, and transportation access fees that are set forth in UF Regulation 3.0372, shall be levied and collected for the ~~2022~~2023-23-24 academic year:

(a) Undergraduate Courses Charged per Student Credit Hour ~~2022~~2023-2324:

|                                    |          |
|------------------------------------|----------|
| Resident Tuition                   | \$105.07 |
| Tuition Differential               | \$44.17  |
| Capital Improvement Trust Fund     | \$6.76   |
| Student Financial Aid              | \$5.25   |
| Technology                         | \$5.25   |
| Non-Resident Fee                   | \$707.21 |
| Non-Resident Student Financial Aid | \$35.36  |

(b) Notwithstanding the foregoing paragraph (a), an undergraduate resident student may not be charged the Tuition Differential if the student was in attendance at the University before July 1, 2007 and has maintained continuous enrollment at the University, is a beneficiary of a prepaid tuition contract pursuant to Section 1009.98(2)(b), Fla. Stat., which was in effect on July 1, 2007 and which remains in effect, or if the student otherwise meets the criteria set forth for exemption from payment of the tuition differential in Section 1009.24(16)(b), Fla. Stat.

(c) Notwithstanding the foregoing paragraph (a), if an undergraduate student is a beneficiary of a prepaid tuition contract pursuant to Section 1009.98(2)(b), Fla. Stat., purchased prior to July 1, 2024, the undergraduate resident tuition, paid on behalf of the student effective the Fall 2009 semester, will increase above the preceding fiscal year's assessed amount based on the actuarial reserve determined by the Florida Prepaid by the maximum percent allowed. Effective Fall 2014, the actuarial reserve percent change means that the undergraduate resident tuition amount paid on behalf of such a student will be \$105.07 per credit hour. Florida Prepaid will pay on behalf of any such student any other fees that are covered by that student's prepaid tuition contract.

(d) Graduate Courses Charged per Student Credit Hour ~~2022~~2023-2324:

|                                    |          |
|------------------------------------|----------|
| Resident Tuition                   | \$448.73 |
| Capital Improvement Trust Fund     | \$6.76   |
| Student Financial Aid              | \$22.43  |
| Technology                         | \$6.56   |
| Non-Resident Fee                   | \$690.21 |
| Non-Resident Student Financial Aid | \$34.51  |

(e) College of Law (JD degrees) ~~2022~~2023-23-24 (based on student admission date):

|                                    | Prior to Fall 2018 (per credit hour) | Fall 2018 and later (annual charge) |
|------------------------------------|--------------------------------------|-------------------------------------|
| Resident Tuition                   | \$652.47                             | \$19,139.12                         |
| Capital Improvement Trust Fund     | \$6.76                               | \$198.30                            |
| Student Financial Aid              | \$32.62                              | \$956.86                            |
| Technology                         | \$5.25                               | \$154.00                            |
| Non-Resident Fee                   | \$527.14                             | \$15,462.78                         |
| Non-Resident Student Financial Aid | \$26.35                              | \$772.92                            |



(f) College of Law (Environmental and Comparative LL.M. degrees) ~~2022~~2023-23

24(based on student admission date):

|                                    | Prior to Fall<br>2018 (per<br>credit hour) | Fall 2018 and later<br>(annual charge) |
|------------------------------------|--|--|
| Resident Tuition                   | \$652.47                                   | \$16,964.22                            |
| Capital Improvement Trust Fund     | \$6.76                                     | \$175.76                               |
| Student Financial Aid              | \$32.62                                    | \$848.12                               |
| Technology                         | \$5.25                                     | \$136.50                               |
| Non-Resident Fee                   | \$527.14                                   | \$13,705.64                            |
| Non-Resident Student Financial Aid | \$26.35                                    | \$685.10                               |

(g) College of Law (Tax and International Tax LL.M. degrees) ~~2022~~2023-23-24

(based on student admission date):

|                                    | Prior to Fall<br>2018 (per<br>credit hour) | Fall 2018 and later<br>(annual charge) |
|------------------------------------|--|--|
| Resident Tuition                   | \$724.97                                   | \$18,849.22                            |
| Capital Improvement Trust Fund     | \$6.76                                     | \$175.76                               |
| Student Financial Aid              | \$32.62                                    | \$848.12                               |
| Technology                         | \$5.25                                     | \$136.50                               |
| Non-Resident Fee                   | \$614.76                                   | \$15,983.76                            |
| Non-Resident Student Financial Aid | \$30.73                                    | \$798.98                               |

|     |   |             |
|-----|---|-------------|
| (h) | College of Pharmacy (PharmD) Degree Annual Charge <del>2022</del> 2023-2324:        |             |
|     | Resident Tuition  | \$19,844.74 |
|     | Capital Improvement Trust Fund  | \$243.36    |
|     | Student Financial Aid   | \$992.22    |
|     | Technology  | \$157.50    |
|     | Non-Resident Fee  | \$22,041.40 |
|     | Non-Resident Student Financial Aid  | \$1,102.06  |
| (i) | College of Medicine (MD) Degree Annual Charge <del>2022</del> 2023-2324:            |             |
|     | Resident Tuition  | \$32,743.70 |
|     | Capital Improvement Trust Fund  | \$270.40    |
|     | Student Financial Aid   | \$1,637.18  |
|     | Technology  | \$157.50    |
|     | Non-Resident Fee  | \$27,847.86 |
|     | Non-Resident Student Financial Aid  | \$1,392.38  |
| (j) | College of Veterinary Medicine (DVM) Degree Annual Charge <del>2022</del> 2023-234: |             |
|     | Resident Tuition  | \$25,248.16 |
|     | Capital Improvement Trust Fund  | \$270.40    |
|     | Student Financial Aid   | \$1,262.40  |
|     | Technology  | \$157.50    |
|     | Non-Resident Fee  | \$19,976.40 |
|     | Non-Resident Student Financial Aid  | \$998.80    |

(k) College of Dentistry (DMD) Degree Annual Charge ~~2022~~2023-2324:

|                                    |             |
|------------------------------------|-------------|
| Resident Tuition                   | \$37,563.52 |
| Capital Improvement Trust Fund     | \$270.40    |
| Student Financial Aid              | \$1,878.16  |
| Technology                         | \$157.50    |
| Non-Resident Fee                   | \$25,219.78 |
| Non-Resident Student Financial Aid | \$1,260.98  |

(l) College of Public Health and Health Professions (DPT) Degree Annual Charge

~~2022~~2023-2324:

|                                    |             |
|------------------------------------|-------------|
| Resident Tuition                   | \$19,522.30 |
| Capital Improvement Trust Fund     | \$263.64    |
| Student Financial Aid              | \$976.10    |
| Technology                         | \$157.50    |
| Non-Resident Fee                   | \$8,800.00  |
| Non-Resident Student Financial Aid | \$440.00    |

(m) College of Public Health and Health Professions (MPH) Degree Annual Charge

~~2022~~2023-2324:

|                                |             |
|--------------------------------|-------------|
| Resident Tuition               | \$13,201.82 |
| Capital Improvement Trust Fund | \$162.24    |
| Student Financial Aid          | \$660.08    |
| Technology                     | \$157.50    |
| Non-Resident Fee               | \$16,565.24 |

|                                    |          |
|------------------------------------|----------|
| Non-Resident Student Financial Aid | \$828.26 |
|------------------------------------|----------|

(n) College of Public Health and Health Professions (MPH) 42-Hour Accelerated

Degree Annual Charge ~~2022~~2023-2324:

|                                    |             |
|------------------------------------|-------------|
| Resident Tuition                   | \$11,551.56 |
| Capital Improvement Trust Fund     | \$141.96    |
| Student Financial Aid              | \$577.56    |
| Technology                         | \$157.50    |
| Non-Resident Fee                   | \$14,494.56 |
| Non-Resident Student Financial Aid | \$724.72    |

(o) College of Medicine Physician's Assistant Program Courses Charge Per Credit

Hour ~~2022~~2023-2324:

|                                    |          |
|------------------------------------|----------|
| Resident Tuition                   | \$590.87 |
| Capital Improvement Trust Fund     | \$6.76   |
| Student Financial Aid              | \$29.54  |
| Technology                         | \$6.56   |
| Non-Resident Fee                   | \$793.74 |
| Non-Resident Student Financial Aid | \$39.68  |

(p) College of Design, Construction, and Planning Graduate Courses Charge Per

Credit Hour ~~2022~~2023-2324:

|                                    |          |
|------------------------------------|----------|
| Resident Tuition                   | \$539.49 |
| Capital Improvement Trust Fund     | \$6.76   |
| Student Financial Aid              | \$26.97  |
| Technology                         | \$6.56   |
| Non-Resident Fee                   | \$690.21 |
| Non-Resident Student Financial Aid | \$34.51  |

(5) Pursuant to Section 1001.7065, Fla. Stat., the University of Florida has established the Preeminent State Research University Institute for Online Learning (“UF Online”). Tuition Costs levied and collected per credit hour for undergraduate students enrolled in this program for the ~~2022~~2023-23-24 academic year shall be as follows:

|   |          |
|---|----------|
| Resident Tuition                          | \$78.80  |
| Tuition Differential                      | \$33.12  |
| Capital Improvement Trust Fund            | \$6.76   |
| Resident Student Financial Aid            | \$5.25   |
| Technology                                | \$5.25   |
| Resident Tuition and Fees per credit hour | \$129.18 |

Non-Resident Tuition and Fees

Non-resident tuition is set at market rates and is program specific. Tuition and fees may be found at <https://ufonline.ufl.edu/tuition/>

(6) Tuition costs levied and collected for self-funded courses and programs are determined pursuant to BOG Regulation 8.002 and University of Florida Regulation 3.0376. Tuition costs for market rate programs other than UF Online are levied and collected at the rates set forth at <http://www.distance.ufl.edu/market-rate/>.

(7) Each student enrolled in the same undergraduate course more than twice, shall be assessed the Board of Governors or Florida Statute established surcharge of ~~\$189.74~~204.65 per credit hour in addition to the Tuition Costs outlined above in section (4) or (5), for each such course.

(8) An Excess Hour Surcharge shall be assessed to an undergraduate student for each credit hour in excess of the number of credit hours required to complete the baccalaureate degree program in which the student is enrolled. The University will calculate an excess hour threshold for each student based on the number of credit hours required for the degree. For any student who changes degree programs, the excess hour threshold must be adjusted only if the number of credit hours required to complete the new degree program exceeds that of the original degree program. The University will follow the definitions of required credit hours and other provisions governing the surcharge as set forth in BOG Regulation 7.003. The excess hour surcharge for students who enter a state university for the first time and maintain continuous enrollment is as follows:

(a) For the 2009-10 and 2010-11 academic years, an excess hour surcharge equal to 50 percent of the tuition rate as set forth in section (4) or (5), as applicable, for each credit hour in excess of 120 percent;

(b) For the 2011-12 academic year, an excess hour surcharge equal to 100 percent of the tuition rate as set forth in section (4) or (5), as applicable, for each credit hour in excess of 115 percent;

(c) For the 2012-13 academic year through the 2019 spring term, an excess hour surcharge equal to 100 percent of the tuition rate as set forth in section (4) or (5), as applicable, for each credit hour in excess of 110 percent; and

(d) For the 2019 summer term and thereafter, an excess hour surcharge equal to 100 percent of the tuition rate as set forth in section (4) or (5), as applicable, for each credit hour in excess of 120 percent.

(9) Any person classified as an out-of-state resident who has been appointed as a graduate assistant for at least 0.25 FTE shall be charged resident Tuition Costs. Upon completion of the appointment, such person shall be charged resident Tuition Costs for the remainder of his or her graduate career in any semester in which he or she receives a waiver of all tuition fees or all tuition fees are paid from University funds. If the student loses the waiver or tuition remission under this provision for any semester, he or she shall be liable for Tuition Costs for that semester based on his or her out-of-state residency classification. Any graduate student classified as an out-of-state resident who is receiving a full fellowship may be charged resident Tuition Costs.

(10) The Provost has the authority to designate programs in which Non-Resident Tuition Cost, or any portion thereof, are waived when such waiver is in support of the mission of the University and is consistent with policies specifically approved by the Board of Trustees.

(11) For the ~~2022~~2023-23-24 academic year the President or the President's designee has the authority to waive \$2.00 per credit hour of the Capital Improvement Trust Fund fee for graduate students holding appointments as graduate assistants or graduate associates.

Authority: BOG Regulations 1.001, 7.001 and 7.003.

History: New 9-10-02, Amended 9-19-03, 1-11-05, 7-19-05, 11-22-05, 9-8-06, 7-24-07, 1-9-08, 9-5-08 (BOT Approval), 10-3-08 (BOG Approval), 7-9-09 (BOG Approval), 9-11-09 (BOT Approval), 10-27-09 (BOG Approval), 10-8-10 (BOT Approval), 10-19-10 (BOG Approval), 7-5-11 (BOG Approval), 9-6-11 (BOT Approval), 6-8-2012 (BOT Approval), 8-3-2012 (BOG Approval), 7-8-13 (BOG Approval), 9-3-13 (BOT Approval), 12-6-13 (BOT Approval), 1-28-14 (BOG Approval), 6-6-14 (BOT Approval), 7-9-14 (BOG Approval), 6-4-15 (BOT Approval), 6-22-15 (BOG Approval), 6-9-16 (BOT Approval), 7-8-16 (BOG Approval), 6-8-17 (BOT Approval), 6-30-17 (BOG Approval), 6-7-18 (BOT Approval), 6-29-18 (BOG Approval), 9-6-19 (BOT Approval), 9-20-19 (BOG Approval), 8-27-20 (BOT Approval), 9-2-20 (BOG Approval), 6-10-21 (BOT Approval), 06-21-21 (BOG Approval), 06-16-22 (BOT Approval), 06-22-22 (BOG Approval), 6-\_\_-23 (BOT Approval), 6-\_\_-23 (BOG Approval).





**COMMITTEE ON GOVERNANCE, GOVERNMENT  
RELATIONS AND INTERNAL AFFAIRS  
ACTION ITEM GGRIA3  
June 8, 2023**

**SUBJECT:** Facility Security Clearance

---

**BACKGROUND INFORMATION**

Certain contracts between the University and federal governmental agencies and certain research at the University require a facility clearance rather than obtaining the clearances for individual Trustees and other officers. All Trustees must be listed in the designation.

**PROPOSED COMMITTEE ACTION**

The Committee on Governance, Government Relations and Internal Affairs is asked to approve Resolution R23-301 confirming that members of the Board of Trustees will not require, will not have, and be effectively and formally excluded from access to all classified information disclosed to the entity, designating a senior managerial group comprising the President and Vice President for Research for that purpose, and listing all Trustees, for recommendation to the Board of Trustees for approval on the Consent Agenda. The Board of Trustees temporarily excludes the President of the University, Dr. Benjamin E. Sasse, from access to classified information possessed at the University. President Sasse will continue to serve in the role of Senior Management Official for the interim, without access, while the University transfers his ability to access classified information entrusted to UF.

**ADDITIONAL COMMITTEE CONSIDERATIONS**

Board of Governors approval is not required. Upon the appointment of any new Trustees, the Board will need to approve a similar resolution to include them.

---

Supporting Documentation Included: Resolution R23-301

Submitted by: David Norton, Vice President for Research

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza "Mori" Hosseini, Chair

---

Ben Sasse, President and Corporate Secretary



## RESOLUTION

**NUMBER:** 23-301

**Subject:** Facility Security Clearance; Exclusion of Certain Directors and Officers; Designation of Senior Managerial Group for Classified Information

**Date:** June 8, 2023

WHEREAS, the University of Florida (“UF”, “the University”), a university in the State University System of Florida, desires to enter into contractual obligations with agencies of the United States Government, including contractual obligations requiring security clearance, and

WHEREAS, 32 C.F.R. Part 117, the National Industrial Security Program Operating Manual (“NISPOM Rule”), requires the Key Management Personnel, including UF Board of Trustees Members and Senior Leadership, meet the personnel clearance requirements for a security clearance consistent with the clearance level of the entity, and

WHEREAS, the NISPOM Rule further authorizes exclusion from security clearance requirements for certain members of the Board of Directors and other officers, provided that the entity’s governing board issue a formal action and provide a copy to the Cognizant Security Agency per 32 C.F.R. § 117.7(c)(2), and

WHEREAS, the University of Florida, Board of Trustees designated a Senior Managerial Group for the continued oversight of all Classified Information and programs at the University to include individuals occupying the following positions at the University: The President; and the Vice President for Research. The Board of Trustees temporarily excludes the President of the University, Dr. Benjamin E. Sasse, from access to classified information possessed at the University. President Sasse will continue to serve in the role of Senior Management Official for the interim, without access, while the University transfers his ability to access classified information entrusted to UF, and

NOW THEREFORE, BE IT RESOLVED, the following UF Board Members to be excluded from oversight of the Classified Program at UF:

Morteza Mori” Hosseini, Chair  
Rahul Patel, Vice Chair  
David L. Brandon  
Richard P. Cole  
Christopher T. Corr  
Olivia E. Green  
James W. Heavener  
Daniel T. O’Keefe  
Marsha D. Powers  
Fred S. Ridley  
Danaya C. Wright  
Patrick O. Zalupski  
Anita G. Zucker

These UF Board of Trustees members will not require, will not have, and can be effectively and formally excluded from, access to all classified information disclosed to the entity. These individuals do not occupy a position that would enable them to adversely affect the organization's policies or practices in the performance of classified contracts.

This action is affirmed by the University of Florida, Board of Trustees. The exclusion will remain in place for all the above mentioned UF Board of Trustees members until the exclusion is null and void due to a change in status of the Presidents access for the institution, a change in federal regulation or a change in the organization’s policies.

This action is in the form of a resolution to take effect immediately upon its adoption.

Adopted this 8<sup>th</sup> day of June 2023, by the Board of Trustees of the University of Florida.

---

Morteza “Mori” Hosseini, Chair

---

Ben Sasse, President and Corporate Secretary



COMMITTEE ON ACADEMIC, FACULTY  
AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC  
COMMUNICATIONS  
AGENDA

Thursday, June 8, 2023  
~10:10 a.m.

President’s Room 215B, Emerson Alumni Hall  
University of Florida, Gainesville, FL

**Committee Members:**

Rahul Patel (Chair), Richard P. Cole, Olivia E. Green, James W. Heavener, Daniel T. O’Keefe, Danaya C. Wright, Anita G. Zucker

- 1.0 Call to Order and Welcome .....Rahul Patel, Chair
- 2.0 Verification of Quorum ..... Vice President Liaison
- 3.0 Review and Approval of Minutes .....Rahul Patel, Chair  
[March 16, 2023](#)  
[May 10, 2023](#)
- 4.0 Action Items .....Rahul Patel, Chair  
[AFSSPRSC1](#) Tenure Upon Hire.....Joe Glover, Provost  
[AFSSPRSC2](#) Annual Tenure Awards.....Joe Glover  
[AFSSPRSC3](#) New Degrees.....Joe Glover  
[AFSSPRSC4](#) Degree Program Termination.....Joe Glover  
[AFSSPRSC5](#) Degree Program Changes.....Joe Glover
- 5.0 Discussion Items .....Rahul Patel, Chair  
5.1 Admissions Update..... Mary Parker, Vice President for Enrollment  
5.2 Faculty Senate Update..... Danaya Wright, Faculty Senate Chair  
5.3 Student Body President Update ..... Olivia Green, Student Body President  
5.4 Student Life Update..... Heather White, Vice President for Student Life
- 6.0 New Business.....Rahul Patel, Chair
- 7.0 Adjourn .....Rahul Patel, Chair



**COMMITTEE ON ACADEMIC, FACULTY  
AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC  
COMMUNICATIONS**

**Meeting Minutes**

**March 16, 2023**

**Time Convened: 1:16 p.m.**

**Time Adjourned: 3:41 p.m.**

**Committee and Board members present:**

Rahul Patel (Committee Chair), David L. Brandon, Richard P. Cole, Christopher T. Corr, Morteza "Mori" Hosseini (Board Chair), Lauren D. Lemasters, Daniel T. O'Keefe, Amanda J. Phalin, Marsha D. Powers, Patrick O. Zalupski and Anita G. Zucker.

**Others present:**

Ben Sasse, President; Joseph Glover, Provost and Senior Vice President for Academic Affairs; Scott Angle, Vice President for Agriculture and Natural Resources; Chris Cowen, Senior Vice President and Chief Financial Officer; Melissa Curry, Interim Vice President for Human Resources; Elias Eldayrie, Vice President and Chief Information Officer; Amy Hass, Vice President and General Counsel; Mark Kaplan, Vice President for Government and Community Relations and University Secretary; Jim Kelly, Chief Executive Officer of UF Health; Charlie Lane, Senior Vice President and Chief Operating Officer; Maria Martin, Interim Vice President for Advancement; Marsha McGriff, Chief Diversity Officer and Senior Advisor to the President; David Nelson, Senior Vice President for Health Affairs and President of UF Health; David Norton, Vice President for Research; Steve Orlando, Interim Vice President for Strategic Communications and Marketing; Mary Parker, Vice President for Enrollment Management and Associate Provost; Curtis Reynolds, Vice President for Business Affairs; Scott Stricklin, Director of Athletics; Heather White, Vice President for Student Life; Associate Provost, Angela Lindner; Assistant Provost, Cathy Lebo; members of the University of Florida community, and the public.

**1.0 Call to Order and Welcome**

Committee Chair Rahul Patel welcomed everyone in attendance and called the meeting to order at 1:16 p.m.

**2.0 Verification of Quorum**

Provost Glover verified a quorum with all members present.

**3.0 Review and Approval of Minutes**

Committee Chair Patel asked for a motion to approve the minutes from the December 8, 2022, January 12, 2023 (Mental Health Discussion), February 7, 2023 (Mental Health Discussion), and February 13, 2023 (Committee Pre-Meeting), which was made by Trustee Phalin and seconded

by Trustee Lemasters. Committee Chair Patel asked for further discussion, after which he asked for all in favor of the motion and any opposed, and the motion was approved unanimously.

#### **4.0 Action Items**

##### **AFSSPRSC1 Tenure Upon Hire**

Provost Glover indicated that there were six Tenure Upon Hire cases, two of which were from the Herbert Wertheim UF Scripps Institute for Biomedical Innovation & Technology. All Tenure Upon Hire cases have met the criteria for tenure and have been recommended to receive tenure. The cases are as follows:

- Dr. Miles Larmer, Professor, Department of History, College of Liberal Arts and Sciences
- Dr. Joe Garcia, Professor of Inflammation Science, The Herbert Wertheim UF Scripps Institute for Biomedical Innovation & Technology
- Dr. Luiz Pedro Carvalho, Professor, Department of Chemistry, The Herbert Wertheim UF Scripps Institute for Biomedical Innovation & Technology
- Dr. Changying Li, Professor, Department of Agricultural & Biological Engineering, IFAS
- Dr. Andrew Short, Professor and Chair, Department of Entomology and Nematology, IFAS
- Dr. Heng Xu, Professor, Department of Management, Warrington College of Business

Committee Chair Patel asked for any questions or further discussion. He then asked for a motion to approve Committee Action Item AFSSPRSC1 for recommendation to the Board for its approval on the Consent Agenda, which was made by Trustee O'Keefe, and second which was made by Trustee Phalin. Committee Chair Patel asked for further discussion, and then asked for all in favor of the motion and any opposed, and the motion was approved unanimously.

##### **AFSSPRSC2 New Degree: M.S. in Business Analytics**

Provost Glover indicated that the Warrington College of Business is proposing a new Master of Science in Business Analytics that will provide analytic computing, business, and communication skills to prepare students to work in various industries. They will learn how to become a crucial translator of functional business needs into analytics processes and analyses. This new degree has been approved by the Curriculum Committee and the Faculty Senate.

Committee Chair Patel asked for any questions or further discussion. He then asked for a motion to approve Committee Action Item AFSSPRSC2 for recommendation to the Board for its approval on the Consent Agenda, which was made by Trustee Phalin, and second which was made by Trustee Lemasters. Committee Chair Patel asked for further discussion, and then asked for all in favor of the motion and any opposed, and the motion was approved unanimously.

##### **AFSSPRSC3 Degree Program Change**

Provost Glover indicated that the College of Medicine is requesting to reduce the number of credit hours from 36 to 30 for the Master of Science with a major in Medical Sciences and a concentration in Gerontology. The change will align with the Graduate Council's minimum degree requirements and will not impact initial enrollment, retention, or graduation. This new degree has been approved by the Curriculum Committee and the Faculty Senate.

Committee Chair Patel asked for any questions or further discussion. He then asked for a motion to approve Committee Action Item AFSSPRSC3 for recommendation to the Board for its approval on the Consent Agenda, which was made by Trustee Lemasters, and second which was made by Trustee O'Keefe. Committee Chair Patel asked for further discussion, and then asked for all in favor of the motion and any opposed, and the motion was approved unanimously.

## **5.0 Discussion Items**

### **5.1 Admissions Update**

Vice President for Enrollment Management and Associate Provost Mary Parker gave an overview of the incoming class for Fall 2027. She handed out admissions packets to each of the Trustees so they could see what each student receives in the mail when they have been admitted to the University of Florida.

Vice President Parker discussed two projects that Enrollment Management has been developing:

- A new software platform called Scholarship Universe will be rolled out to the campus and the colleges to make the process for students applying for scholarships more efficient, reducing the time that colleges and service units spend on processing the scholarships, gaining better data to help leverage the institutional scholarships, and helping meet enrollment goals. The UF Foundation is participating to look at our institutional scholarships and make sure that we are awarding them to meet the needs.
- A new Across-Campus Task Force is looking at alternate credentials (such as workforce skills) to find out what they are, how we define the process for the University of Florida, whether it is for credit or non-credit and how we are displaying these skills/badges/credentials that students are receiving so they can share that information with the employer.

Vice President Parker then shared various statistics about the students from the night the admissions decisions were announced and of the incoming class compared to last year.

### **5.2 Faculty Senate Update**

Faculty Senate Chair and Trustee Amanda Phalin thanked everyone for their support and introduced incoming Faculty Senate Chair, Danaya Wright. She shared some of the work outstanding faculty have been involved in.

She asked that the Board continue to invest in faculty and emphasized that we are here to serve the students and the citizens of the State. As her term ends on the board, she made the following requests:

- Look at changing paid leave for faculty from 8 to 12 weeks.
- Look at increasing contributions for matching retirement.
- Support for additional faculty senate leader.
- She thanked Trustee Zucker for championing Baby Gator so they could increase their enrollment. As we move closer to Phase 3 of the Baby Gator renovation, she asked that

all the Trustees become involved in philanthropy and encourage their friends and colleagues to help as well.

### **5.3 Student Body President Update**

Student Body President and Trustee Lauren Lemasters provided an update about the projects that have progressed since the last meeting.

- She thanked Provost Glover for funding the Marston Science Library operating hours to 24/7 starting after Spring Break.
- Platform Graude will kick off on March 27 to students and alumni and will be called Gator Network. This is a UF exclusive Linked-In platform so students can get help from Alumni streamlined directly from the platform.
- Events Planned for Students
  - Day of Service was held on March 4 with 1300 students volunteering in various volunteer organizations.
  - Senior Send Off happens at the beginning of April at Ben Hill Griffin Stadium. This is a celebration for all graduating students.

Trustee Lemasters stated that while serving on the board she has learned about what true leadership and service is from the Board and about giving back to UF students. She was inspired by the number of women in leadership positions.

### **5.4 Mental Health Update**

Trustee Cole provided an update on mental health. He stated that the safety of the students is our #1 goal and after the pandemic we learned a lot about the mental health challenges that students are facing. He stated that Student Body President and Trustee Lauren Lemasters and Vice President for Student Life Heather White will provide a more in-depth update on Mental Health and what UF is doing to help with these challenges. They both provided a live demonstration of the app – Whole Gator. They reviewed the resources that were used and needed to support mental health at UF. They stated there is no wait time for students in crisis. The entire Whole Gator app was built from the ground up here at UF. Student Body President and Trustee Lemasters thanked UF leadership for making it happen, including CIO Elias Eldayrie, VP Heather White, and CFO Chris Cowen.

### **5.5 Student Life Update**

Vice President for Student Life Heather White provided an update on what the Office for Student Life has been doing to create an excellent student experience in three categories: Community Development, Holistic Wellbeing, and Career Engagement.

She shared a video for everyone to hear what the students are saying about their student experience.

Vice President White asked, “Why are we here?” She stated that we are here to focus on making our students successful while at UF and beyond. She continued the discussion with the different ways that the Office of Student Life is making that experience excellent.



## **5.6 Rankings Analysis Update**

Assistant Provost Cathy Lebo provided a rankings analysis update on the different factors that affect the rankings in the U.S. News and World Report and our status.

## **5.7 Honors Search Update**

Associate Provost Angela Lindner provided an update on the Honors Search. She shared the list of the members of the search committee and the timeline. She reviewed the application process and noted the committee has decided on 3 finalists for on-campus interviews. They hope to have someone hired who will start in July 2023.

## **5.8 Artificial Intelligence Update**

Provost Glover indicated that UF is building an AI University and infusing AI into everything that UF is doing. He discussed the various ways that UF and AI have been in the news and indicated that other universities are reaching out to UF to learn how to bring AI to their universities. Vice President Norton stated that the faculty have been submitting over 1000 AI-related research proposals and have received approximately \$70M to date in research funding.

## **6.0 New Business**

There was no new business to come before the committee.

## **7.0 Adjourn**

There being no further discussion, Committee Chair Patel adjourned the meeting at 3:41 p.m.



**COMMITTEE ON ACADEMIC, FACULTY  
AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC  
COMMUNICATIONS**

**Pre-Meeting Minutes**

**Virtual Meeting**

**May 10, 2023**

**Time Convened: 9:31 a.m.**

**Time Adjourned: 9:57 a.m.**

**Committee and Board members present:**

Rahul Patel (Committee Chair), David L. Brandon, Richard P. Cole, Oliva E. Green, James W. Heavener, Morteza “Mori” Hosseini (Board Chair), Daniel T. O’Keefe, Amanda J. Phalin, Patrick O. Zalupski, and Anita G. Zucker.

**Others present:**

Melissa Curry, Interim Vice President for Human Resources; Joseph Glover, Provost and Senior Vice President for Academic Affairs; Amy Hass, Vice President and General Counsel; Mark Kaplan, Vice President for Government and Community Relations and University Secretary; Maria Martin, Interim Vice President for Advancement; Steve Orlando, Interim Vice President for Strategic Communications and Marketing; Mary Parker, Vice President for Enrollment Management and Associate Provost; Curtis Reynolds, Vice President for Business Affairs; Heather White, Vice President for Student Life; members of the University of Florida community, and the public.

**1.0 Call to Order and Welcome**

Committee Chair Rahul Patel welcomed everyone in attendance and called the meeting to order at 9:31 a.m. He noted that this was an informational meeting only and that there would be no voting.

**2.0 Roll Call**

Provost Joe Glover conducted a roll call and Committee members were present.

**3.0 Review Draft Agenda for June Meeting**

**3.1 Review Draft Minutes**

Committee Chair Patel noted that we will review and approve the following minutes at the June BOT meeting:

March 16, 2023

May 10, 2023

**3.2 Review Action Items**

**AFSSPRSC1 Tenure Upon Hire**

Provost Joe Glover indicated there are two Tenure Upon Hire cases at this time, but there will be additional cases prior to the June meeting, specifically from the Hamilton Center.

- Dr. Changcheng Song, Associate Professor, Department of Finance, Insurance and Real Estate, Warrington College of Business
- Dr. Jane Bambauer, Professor, Department of Journalism, College of Journalism and Communications

### **AFSSPRSC2 Annual Tenure Awards**

Provost Glover reviewed the Annual Tenure Awards process. He indicated that President Sasse will be reviewing the recommendations for the tenure and promotion cases. The Board only ratifies the approved awards brought forward.

### **AFSSPRSC3 New Degrees**

Provost Glover indicated that there were three new degree proposals from various colleges as follows:

- The proposed Master of Science in Urban Analytics in the College of Design, Construction and Planning will focus on the implementation of new data science techniques, such as data mining, machine learning and other AI approaches, on urban data by introducing a systems perspective to better understand cities and their planning and design procedures.
- The proposed Master of Science in Artificial Intelligence Systems in the Herbert Wertheim College of Engineering will provide students with a working knowledge of techniques and software commonly used in Artificial Intelligence Systems. This degree is designed for students with strong analytical and computing backgrounds.
- The proposed Master of Science in Genetics and Genomics in the Colleges of Agriculture and Life Sciences, Liberal Arts and Sciences and Medicine will prepare students for an immediate job as a Genetic Counselor, Biological Science Teacher (Postsecondary), Biological Technician or Biological Scientist. This degree will increase the student's competitiveness for medical school or continuance to the Ph.D. in Genetics and Genomics or a related field.

Trustee Amanda Phalin requested the two new undergraduate degrees approved by the Faculty Senate on May 4 be added to this list: 1. B.S. in Meteorology and 2. B.S. in Music Business and Entrepreneurship. Provost Glover indicated those two new degrees will be effective Fall 2024 and will not be presented to the Board at this time.

### **AFSSPRSC4 Degree Program Termination**

Provost Glover indicated that the College of the Arts is requesting to terminate the Bachelor of Arts in Art Education. This program was replaced with a certificate that will fulfill the needs of the students wishing to teach art in the K-12 setting.

### **AFSSPRSC5 Degree Program Changes**

The College of Journalism and Communications is requesting to reduce the number of credit hours from 124 to 120 for the following degrees:

- B.S. in Media Production, Management and Technology Specializations:  
Digital Film and Television Production

Management and Strategy  
Media and Society

- B.S. in Journalism and Sports Media
- B.S. in Advertising Specializations:  
Persuasive Messaging  
Agency
- B.S. in Public Relations

The Accrediting Council on Education in Journalism and Mass Communications rescinded the stipulation on the number of credit hours that students needed to take outside the college and the extra four hours is no longer necessary due to the students being allowed to take over 50 credit hours within the college.

### **3.3 Review Discussion Items**

#### **Admissions Update**

Vice President for Enrollment Management and Associate Provost, Mary Parker will provide an overview of the enrollment numbers for the incoming class. She indicated that overall, the class looks good.

#### **Faculty Senate Update**

Trustee Amanda Phalin indicated that incoming Faculty Senate Chair Danaya Wright will provide the update at the June meeting, as her term ends at the end of May.

#### **Student Body President Update**

Trustee Olivia Green indicated that she will discuss the priorities for her time in office at the June meeting as follows: Community Engagement, Diversity, Equity, and Inclusion (DEI), and Gator Needs.

#### **Student Life Update**

Vice President for Student Life Heather White indicated she will provide an update at the June meeting on the Disability Resource Center, news about facilities, and new initiatives due to recent money that the legislature has appropriated.

#### **3.3.5 New Centers/Institutes**

Provost Glover stated that there are three new Centers/Institutes as follows:

- Name Change: Jacksonville Aging Studies Center to Institute for Population Health (College of Medicine-JAX)
- New Center: Center for Advanced Spatial Biomolecule Research (CASBR) (College of Medicine)
- New Center: Florida Semiconductor Institute (FSI) (Herbert Wertheim College of Engineering)

#### **3.3.6 Degree Name Changes**

Provost Glover shared three Degree Name changes, including:

- Ph.D. in Soil and Water Sciences to Ph.D. in Soil, Water, and Ecosystem Sciences

- M.S. in Soil and Water Sciences to M.S. in Soil, Water, and Ecosystem Sciences
- B.S. in Soil and Water Sciences to B.S. in Soil, Water, and Ecosystem Sciences

#### **4.0 New Business**

Provost Glover noted changes with the U.S. News and World Report ranking methods. Committee Chair Patel indicated the committee will be looking into two initiatives this year: 1. metrics, including those included in the accountability plan submitted to the Board of Governors and 2. a taskforce that will look into professional testing to help prepare students for success. Provost Glover noted there is a new Interim Dean for College of Law, Merritt McAlister, and that she is aware of what needs to be done with the rankings and with bar passage rates.

Committee Chair Patel indicated the Deans of the Colleges have presented their goals to increase college rankings at Board meetings. He will follow-up with the colleges and professional schools for an update.

#### **5.0 Adjourn**

There being no further discussion, the meeting was adjourned at 9:57 a.m.

DRAFT



**COMMITTEE ON ACADEMIC, FACULTY  
AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC  
COMMUNICATIONS**

**ACTION ITEM AFSSPRSC1**

**June 8, 2023**

**SUBJECT:** Tenure Upon Hire

---

**BACKGROUND INFORMATION**

The Chairs and Deans have recommended to the Provost and Senior Vice President for Academic Affairs that 14 newly appointed faculty members be granted tenure commencing with their appointment. These individuals meet the criteria set forth in the University's tenure and permanent status policy and have been recommended by the Provost to receive tenure. Attached is a summary of the Tenure Upon Hire cases.

**PROPOSED COMMITTEE ACTION**

The Committee on Academic, Faculty and Student Success, Public Relations and Strategic Communications is asked to approve the Tenure Upon Hire cases listed on the attached Summary for recommendation to the Board of Trustees for its approval on the Consent Agenda. While any administrative appointment is noted, tenure is granted only for the faculty appointments.

**ADDITIONAL COMMITTEE CONSIDERATIONS**

Board of Governors approval is not required.

---

Supporting Documentation Included: Tenure Upon Hire summary

Submitted by: Joseph Glover, Provost and Senior Vice President for Academic Affairs

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza "Mori" Hosseini, Chair

---

Ben Sasse, President and Corporate Secretary



**Tenure Upon Hire Summary  
June 2023**

**Dr. Changcheng Song – Warrington College of Business**

**Associate Professor, Department of Finance, Insurance and Real Estate**

Dr. Changcheng Song earned his B.S. in Economics and Management from Tsinghua University in 2006 and his Ph.D. in Economics from the University of California Berkeley in 2012. His prior institution is the Singapore Management University. He has published 9 papers and has 620 Google Scholar citations. Dr. Song publishes regularly in the most premier journals and has an established record of securing and managing competitive grants.

**Dr. Jane Bambauer – College of Journalism and Communications (joint appointment with Levin College of Law)**

**Professor, Department of Journalism**

Dr. Jane Bambauer earned her B.S. in Mathematics (with distinction) from Yale University in 2002 and her J.D. from Yale Law School in 2006. Her prior institution is the University of Arizona James E. Rogers College of Law. Dr. Bambauer has produced 17 articles, one book and 28 essay/chapters/technical papers/otherworks. She has more than 20 scholarly publications appearing in prestigious outlets and her work has been featured in the Washington Post, The New York Times, Fox News and Lawfare.

**Dr. Volker Sorger – Herbert Wertheim College of Engineering**

**Professor, Department of Electrical and Computer Engineering**

Dr. Volker Sorger earned his M.S. in Physics from the University of Texas-Austin in 2005, a Certificate in the Management of Technology from the Haas Business School in 2011 and his Ph.D. in Mechanical and Aerospace Engineering with a minor in Electrical and Computer Engineering from the University of California-Berkeley in 2011. His prior institution is George Washington University. Dr. Sorger is a highly accomplished researcher and scholar. He has published over 400 peer-reviewed articles in high impact journals. He has invented and filed over 20 US patents and licensed several to major electronics manufacturer and start-up backed adventures. Dr. Sorger has secured a total of \$30M in grants and contracts from multiple agencies including NSF, Office of Naval Research, DoD, Air Force Office of Scientific Research, Army Research Office, NASA and Semiconductor Research Corporation.

**Dr. Jeffrey Collins – Hamilton Center for Classical and Civic Education**

**Professor**

Dr. Jeffrey Collins earned his B.A. in History from Middlebury College in 1992, his M.A. and Ph.D. in History from Harvard University in 1999. His prior institution is Queen's University. Dr. Collins has published two monographs (Cambridge University Press and Oxford University Press) as well as numerous articles, book chapters and reviews. He won the 2021 Morris Forkosch Prize of the American Historical Association for the best book in the history of Britain, the British Empire and Commonwealth, post-1485.

**Dr. Karl Gunther – Hamilton Center for Classical and Civic Education**

**Associate Professor**

Dr. Karl Gunther earned his B.A. in Philosophy and History from Wheaton College in 2001, his M.A. in History from Northwestern University in 2002 and his Ph.D. in History from Northwestern University in 2007. His prior institution is the University of Miami. Dr. Gunther has published one monograph with Cambridge University Press as well as numerous articles, book chapters and reviews. His monograph was a finalist for the Royal Historical Society's Whitfield Prize. Dr. Gunther is an elected Fellow of the Royal Historical Society.

**Dr. David McPherson – Hamilton Center for Classical and Civic Education**

**Professor**

Dr. David McPherson earned his B.A. in Philosophy from Bethel University in 2005, his M.A. in Philosophy from Marquette University in 2011 and his Ph.D. in Philosophy from Marquette University in 2013. His prior institution is Creighton University. Dr. McPherson has published two monographs (Cambridge University Press and Oxford University Press), has edited a book with Cambridge University Press and has authored numerous articles, book chapters and reviews.

**Dr. Ana Siljak – Hamilton Center for Classical and Civic Education**

**Associate Professor**

Dr. Ana Siljak earned her A.B. in Political Science from Stanford University in 1990 and her Ph.D. in History from Harvard University in 1997. Her prior University is Queen's University. Dr. Siljak has authored one monograph, edited or co-edited three books, and authored ten articles, book chapters or reviews. One of her books was a finalist for the Charles Taylor Prize for literary nonfiction.

**Mr. Derek Bambauer – Levin College of Law**

**Professor of Law**

Mr. Derek Bambauer earned his B.A. in History and Science from Harvard College in 1996 and his J.D. from Harvard Law School in 2004. His prior institution is the University of Arizona. Mr. Bambauer is one of the nation's most cited legal scholars and will become the third most highly cited scholar on the Levin College of Law faculty. His scholarship has appeared in numerous law reviews, has co-authored a full-length book and has received a \$748,328 grant from the NSF to fund his research project entitled *DASS: A Framework for Accountable Smart Contract Wills*.



**Mr. Christopher Bradley – Levin College of Law**

**Professor of Law**

Mr. Christopher Bradley earned his A.B. in Classics from Princeton University in 2001, his M.Phil. in Medieval English in 2003 and his D.Phil. in Medieval English in 2008 from the University of Oxford, Balliol College and his J.D. (2007) and LL.M. in International Legal Studies (2008) from New York University School of Law. His prior institution is the University of Kentucky Rosenberg College of Law. Mr. Bradley has published articles in top law reviews, co-authored of a leading casebook and lead co-author of a widely used practitioner’s manual.

**Mr. Julian Cook, III – Levin College of Law**

**Professor of Law**

Mr. Julian Cook earned his B.A. in Public Policy from Duke University, his M.A. in Public Administration from Columbia University and his J.D. from the University of Virginia School of Law. His prior institution is the University of Georgia School of Law. Mr. Cook has published articles in top law reviews and is a co-author of a leading evidence casebook.

**Dr. Elizabeth Katz – Levin College of Law**

**Professor of Law**

Dr. Elizabeth Katz earned her B.S in History and Studies in Women and Gender in 2006 from the University of Virginia, her J.D. (2009) and M.A. in History (2009) from the University of Virginia, her M.A. in History (2015) and Ph.D. in History (2019) from Harvard University. Her prior institution is the Washington University School of Law. Dr. Katz has published articles two articles in top five law reviews and has published other articles in specialty law reviews. She has won several national awards for her publication record.

**Dr. Zachary Kaufman – Levin College of Law**

**Professor of Law**

Dr. Zachary Kaufman earned his B.A. in Political Science in 200 from Yale University, his J.D. in 2009 from Yale Law School, his M.Phil. in International Relations (2004) and D.Phil. (2012) from the University of Oxford. His prior institution is the University of Houston Law Center. Dr. Kaufman has published articles in top law reviews, has published a full-length scholarly book in 2016 and has another one that will be published this year.

**Mr. Tracey Maclin – Levin College of Law**

**Professor of Law**

Mr. Tracey Maclin earned his B.A. in Political Science in 1980 from Tufts University and his J.D. in 1983 from Columbia University School of Law. His prior institution is the Boston University School of Law. Mr. Maclin is a nationally recognized expert in Constitutional Criminal Procedure, Constitutional Law and the U.S. Supreme Court. He has published in several law reviews and has written over a dozen amicus curiae briefs and served as counsel of record for the American Civil Liberties Union, the National Association of Criminal Defense Lawyers and the Cato Institute in many Forth Amendment cases before the U.S. Supreme Court.

**Dr. Xin Wang – Institute of Food and Agricultural Sciences**

**Associate Professor, Department of Microbiology and Cell Science**

Dr. Xin Wang earned his B.S. in Biology in 2005 from Xiamen University (China), his M.S. in Marine Biology in 2008 from the Third Institute of Oceanography (China) and his Ph.D. in Microbiology in 2013 from the University of Hawaii at Manoa. His prior institution is Miami University. He is the PI on a grant from NSF for over \$890,000 and has been a co-PI on grants from NSF for over \$1M. Dr. Wang has numerous publications, several book chapters and has been invited to speak at numerous conferences.



**COMMITTEE ON ACADEMIC, FACULTY  
AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC  
COMMUNICATIONS  
ACTION ITEM AFSSPRSC2  
June 8, 2023**

**SUBJECT:** Annual Tenure Awards

---

**BACKGROUND INFORMATION**

The Board of Trustees has the authority to award tenure and permanent status. Provost Glover has recommended the award of tenure and permanent status to certain faculty meeting the requirements of the University's tenure and permanent status policy. A summary of highlights on each Faculty member recommended for tenure and permanent status is attached.

**PROPOSED COMMITTEE ACTION**

The Committee on Academic, Faculty and Student Success, Public Relations and Strategic Communications is asked to approve the Annual Tenure Awards to faculty recommended by the Provost as reflected in the attached summary for recommendation to the Board of Trustees for approval on the Consent Agenda.

**ADDITIONAL COMMITTEE CONSIDERATIONS**

Board of Governors approval is not required.

---

Supporting Documentation Included: Tenure and Permanent Status Annual Report

Submitted by: Joseph Glover, Provost and Senior Vice President for Academic Affairs

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza "Mori" Hosseini, Chair

---

Ben Sasse, President and Corporate Secretary

Tenure and Permanent Status Annual Report

| CaseNum | Name                             | College/Department             | Current Title | Proposed Title | Clg Tenure A | Clg Promotion A | Prov Tenure A | Prov PromotionA | Sex | Ethnicity | Description        |
|---------|----------------------------------|--------------------------------|---------------|----------------|--------------|-----------------|---------------|-----------------|-----|-----------|--------------------|
| 56      | Loizzo, Jamie Lynn               | AG-AG ED AND COMMUNICATION     | AST PROF      | ASO PROF       | R            | R               | R             | R               | F   | W         | White              |
| 315     | Sanchez-Jones, Mayerling Tatiana | AG-ALACHUA                     | EXT AGENT II  | EXT AGENT III  | R            | R               | R             | R               | F   | O         | Non Resident Alien |
| 286     | Binelli, Mario                   | AG-ANIMAL SCIENCES             | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | W         | White              |
| 312     | Halbritter, Alicia N             | AG-BAKER                       | EXT AGENT I   | EXT AGENT II   | R            | R               | R             | R               | F   | W         | White              |
| 229     | Wells, Bonnie C                  | AG-BREVARD                     | EXT AGENT II  | EXT AGENT III  | R            | R               | R             | R               | F   | W         | White              |
| 314     | Hobbs, Wayne                     | AG-CLAY                        | EXT AGENT I   | EXT AGENT II   | R            | R               | R             | R               | M   | W         | White              |
| 316     | Wallau, Annie Alyse              | AG-CLAY                        | EXT AGENT II  | EXT AGENT III  | R            | R               | R             | R               | F   | W         | White              |
| 317     | Tomlinson, Anna Paulette         | AG-COLUMBIA                    | EXT AGENT II  | EXT AGENT III  | R            | R               | R             | R               | F   | W         | White              |
| 83      | Kadyampakeni, Davie Mayeso       | AG-CREC-HORTICULTURE           | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | B         | Black              |
| 174     | Vincent, Christopher I           | AG-CREC-HORTICULTURE           | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | W         | White              |
| 313     | Cook, Kelsey Marie               | AG-DUVAL                       | EXT AGENT I   | EXT AGENT II   | R            | R               | R             | R               | F   | W         | White              |
| 239     | Grabau, Zane                     | AG-ENTOMOLOGY AND NEMATOLOG    | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | W         | White              |
| 82      | Bhadha, Jehangir                 | AG-EREC-BELLE GLADE            | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | A         | Asian              |
| 111     | Schortinghouse, Alyssa Michele   | AG-ESCAMBIA                    | EXT AGENT I   | EXT AGENT II   | R            | R               | R             | R               | F   | W         | White              |
| 5       | Jones, Jennifer Amanda           | AG-FAM YOUTH / COMM SCI        | AST PROF      | ASO PROF       | R            | R               | R             | R               | F   | W         | White              |
| 241     | Chouenc, Thomas                  | AG-FLREC-FT LAUDERDALE         | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | W         | White              |
| 276     | Qiu, Jiangxiao                   | AG-FLREC-FT LAUDERDALE         | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | A         | Asian              |
| 393     | Laughinghouse, Haywood D         | AG-FLREC-FT LAUDERDALE         | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | H         | Hispanic           |
| 170     | Lee, Seonghee                    | AG-GCREC - BALM                | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | A         | Asian              |
| 168     | Sarkhosh, Ali                    | AG-HORTICULTURAL SCIENCES      | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | W         | White              |
| 110     | Tancig, Mark                     | AG-LEON                        | EXT AGENT I   | EXT AGENT II   | R            | R               | R             | R               | M   | H         | Hispanic           |
| 204     | Hickey, Lisa Ann                 | AG-MANATEE                     | EXT AGENT II  | EXT AGENT III  | R            | R               | R             | R               | F   | W         | White              |
| 251     | Bailey, Mark T                   | AG-MARION                      | EXT AGENT I   | EXT AGENT II   | R            | R               | R             | R               | M   | X         | Not Reported       |
| 230     | Zangroniz, Ana N                 | AG-MIAMI-DADE                  | EXT AGENT I   | EXT AGENT II   | R            | R               | R             | R               | F   | H         | Hispanic           |
| 81      | Pearson, Brian J                 | AG-MREC-APOPKA                 | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | W         | White              |
| 242     | Martini, Xavier Philippe         | AG-NFREC-QUINCY                | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | W         | White              |
| 226     | Butler, Lauren Dillard           | AG-OKEECHOBEE                  | EXT AGENT II  | EXT AGENT III  | R            | R               | R             | R               | F   | W         | White              |
| 227     | Guay, Noelle Notarnicola         | AG-PALM BEACH                  | EXT AGENT I   | EXT AGENT II   | R            | R               | R             | R               | F   | W         | White              |
| 201     | Bresin, Shari Elyse              | AG-PASCO                       | EXT AGENT I   | EXT AGENT II   | R            | R               | R             | R               | F   | W         | White              |
|         |                                  | AG                             | AST PROF      | ASO PROF       | R            | R               | W             | W               | F   | W         | White              |
| 206     | Yasalonis, Anne E                | AG-POLK                        | EXT AGENT II  | EXT AGENT III  | R            | R               | R             | R               | F   | W         | White              |
| 205     | Nikolai, Andrea Marie            | AG-POLK                        | EXT AGENT II  | EXT AGENT III  | R            | R               | R             | R               | F   | W         | White              |
| 274     | Crandall, Raelene M              | AG-SCHL FOR, FISH, & GEOMATICS | AST PROF      | ASO PROF       | R            | R               | R             | R               | F   | W         | White              |
| 273     | Adams, Alison Eve                | AG-SCHL FOR, FISH, & GEOMATICS | AST PROF      | ASO PROF       | R            | R               | R             | R               | F   | W         | White              |
| 275     | Iannone, Basil V                 | AG-SCHL FOR, FISH, & GEOMATICS | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | W         | White              |
| 249     | McIntyre, Kristina Lyn-Richards  | AG-SEMINOLE                    | EXT AGENT I   | EXT AGENT II   | R            | R               | R             | R               | F   | W         | White              |
| 250     | McCormick, Kaydie Gene           | AG-SEMINOLE                    | EXT AGENT I   | EXT AGENT II   | R            | R               | R             | R               | F   | M         | Multiple           |
| 85      | Strauss, Sarah L                 | AG-SWFREC-IMMOKALEE            | AST PROF      | ASO PROF       | R            | R               | R             | R               | F   | W         | White              |
| 377     | Batuman, Ozgur                   | AG-SWFREC-IMMOKALEE            | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | W         | White              |
| 175     | Meru, Geoffrey Mugambi           | AG-TREC-HOMESTEAD              | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | X         | Not Reported       |
| 186     | Her, Young Gu                    | AG-TREC-HOMESTEAD              | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | A         | Asian              |
| 375     | Gazis-Seregina, Romina           | AG-TREC-HOMESTEAD              | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | H         | Hispanic           |
| 112     | Pienta, Rachel                   | AG-WAKULLA                     | EXT AGENT II  | EXT AGENT III  | R            | R               | R             | R               | F   | W         | White              |
| 113     | Anderson, Evan Haynes            | AG-WALTON                      | EXT AGENT I   | EXT AGENT II   | R            | R               | R             | R               | M   | W         | White              |
| 240     | Vieira de Paula Moraes, Silvana  | AG-WFREC-JAY                   | AST PROF      | ASO PROF       | R            | R               | R             | R               | F   | H         | Hispanic           |
| 253     | Lashley, Marcus Alan             | AG-WILDLIFE ECOLOGY / CONSERV  | AST PROF      | ASO PROF       | R            | R               | R             | R               | M   | W         | White              |
|         |                                  | AG                             | AST PROF      | ASO PROF       | R            | R               | W             | W               | M   | H         | Hispanic           |
|         |                                  | BA                             | AST PROF      | ASO PROF       | N            | N               | N             | N               | F   | A         | Asian              |
| 45      | Yang, Yang                       | BA-MARKETING-BUSINESS OFFICE   | AST PROF      | ASO PROF       | R            | R               | R             | R               | F   | A         | Asian              |
| 99      | Coche, Roxane                    | CJC-MEDIA PROD, MGMT, TECH GEN | AST PROF      | ASO PROF       | R            | R               | R             | R               | F   | M         | Multiple           |
| 191     | Jones, Ashley Elizabeth          | COTA-ART-DIRECTOR              | AST PROF      | ASO PROF       | R            | R               | R             | R               | F   | W         | White              |

Tenure and Permanent Status Annual Report

|     |                               |                                |            |            |   |   |   |   |   |   |                    |
|-----|-------------------------------|--------------------------------|------------|------------|---|---|---|---|---|---|--------------------|
| 380 | Lowe,Shannon Rae              | COTA-MUSIC-DIRECTOR            | AST PROF   | ASO PROF   | R | R | R | R | F | W | White              |
| 381 | Robertson,Jemmie Howard       | COTA-MUSIC-DIRECTOR            | AST PROF   | ASO PROF   | R | R | R | R | M | W | White              |
| 379 | Davitt,Megan Maureen Sheridan | COTA-MUSIC-DIRECTOR            | AST PROF   | ASO PROF   | R | R | R | R | F | W | White              |
| 412 | Costin,Aaron M                | DCP-CONSTRUCTION MGMT-ADMIN    | AST PROF   | ASO PROF   | R | R | R | R | M | W | White              |
| 1   | Bosch,Sheila Jones            | DCP-INTERIOR DESIGN            | AST PROF   | ASO PROF   | R | R | R | R | F | W | White              |
| 354 | Frias-Lopez,Jorge             | DN-ORAL BIOLOGY                | ASO PROF   |            | R |   | R |   | M | H | Hispanic           |
| 356 | Chang,Jia                     | DN-PERIODONTICS                | AST PROF   | ASO PROF   | R | R | R | R | M | A | Asian              |
| 95  | Suvajdzic,Marko               | DW-DIGITAL WORLD               | ASO DIR &  | PROF       | R | R | R | R | M | W | White              |
| 122 | Redding,Christopher Hyde      | ED-SHDOSE-SCHL OF HUM DEV&ORG  | AST PROF   | ASO PROF   | R | R | R | R | M | W | White              |
| 160 | Fernandez, Frank J            | ED-SHDOSE-SCHL OF HUM DEV&ORG  | AST PROF   | ASO PROF   | R | R | R | R | M | H | Hispanic           |
| 262 | Anthony,Christopher James     | ED-SPED SPECIAL EDUCATION      | AST PROF   | ASO PROF   | R | R | R | R | M | W | White              |
| 76  | Xing,Wanli                    | ED-STL SCHL-TEACH / LEARN      | AST PROF   | ASO PROF   | R | R | R | R | M | X | Not Reported       |
| 75  | Jung,Hyunyi                   | ED-STL SCHL-TEACH / LEARN      | AST PROF   | ASO PROF   | R | R | R | R | F | A | Asian              |
|     |                               | ED                             | AST PROF   | ASO PROF   | R | R | W | W | M | W | White              |
| 65  | Asadi Zanjani,Navid           | EG-ELECTRICAL / COMPUTER ENG   | AST PROF   | ASO PROF   | R | R | R | R | M | W | White              |
| 69  | Ferraro,Christopher Charles   | EG-ENG SCH SUSTAIN INFRST ENV  | AST PROF   | ASO PROF   | R | R | R | R | M | W | White              |
| 19  | Villanueva Alarcon,Idalis     | EG-ENGINEERING EDUCATION ADMIN | ASO PROF   | ASO PROF   | R |   | R |   | F | H | Hispanic           |
| 288 | Liu,Hongcheng                 | EG-INDUSTRIAL / SYSTEMS ENG    | AST PROF   | ASO PROF   | R | R | R | R | M | A | Asian              |
| 42  | Houim,Ryan W                  | EG-MECHANICAL / AEROSPACE ENG  | AST PROF   | ASO PROF   | R | R | R | R | M | W | White              |
| 43  | Hale,Matthew                  | EG-MECHANICAL / AEROSPACE ENG  | AST PROF   | ASO PROF   | R | R | R | R | M | W | White              |
| 385 | Ryan,Terence E                | HH-APK-ADMINISTRATION          | AST PROF   | ASO PROF   | R | R | R | R | M | W | White              |
| 257 | McVay,Megan Apperson          | HH-HEB-ADMINISTRATION          | AST PROF   | ASO PROF   | R | R | R | R | F | W | White              |
| 256 | Cheong,JeeWon                 | HH-HEB-ADMINISTRATION          | ASO PROF   | ASO PROF   | R |   | R |   | F | A | Asian              |
| 271 | Kim,Jin Won                   | HH-THEM ADMIN/INSTRUCTION      | AST PROF   | ASO PROF   | R | R | R | R | M | X | Not Reported       |
| 182 | Porges,Eric S Carter          | HP-CLINICAL / HLTH PSYCHOLOGY  | AST PROF   | ASO PROF   | R | R | R | R | M | W | White              |
| 389 | Bisesi,Joseph Hopkin          | HP-ENVIRONMENTAL GLOBAL HLTH   | AST PROF   | ASO PROF   | R | R | R | R | M | W | White              |
| 334 | Guirgis,Faheem Wagid          | JX-EMERGENCY MEDICINE-JAX      | PRG DIR &  | PROF       | R | R | R | R | M | W | White              |
| 372 | Smith,Plato                   | LB-DIRECTOR'S OFFICE-ADMIN     | ASO UNIV L | UNIV LIBRA | R | R | R | R | M | B | Black              |
| 371 | Huet,Helene I                 | LB-HUM / SOC SCI-CHAIR         | AST UNIV L | ASO UNIV L | R | R | R | R | F | W | White              |
| 370 | Hines,April Marie             | LB-HUM / SOC SCI-CHAIR         | AST UNIV L | ASO UNIV L | R | R | R | R | F | W | White              |
| 368 | Bossart,Jean-Louise           | LB-MARSTON SCI LIB CHAIR       | ASO UNIV L |            | R |   | R |   | F | W | White              |
| 7   | Strong,Adrienne E             | LS-ANTHROPOLOGY-GENERAL        | AST PROF   | ASO PROF   | R | R | R | R | F | W | White              |
| 2   | Contreras,Daniel A            | LS-ANTHROPOLOGY-GENERAL        | AST PROF   | ASO PROF   | R | R | R | R | M | H | Hispanic           |
| 289 | Torrey,Paul Adam              | LS-ASTRONOMY                   | AST PROF   | ASO PROF   | R | R | R | R | M | W | White              |
| 247 | Ginsburg,Adam                 | LS-ASTRONOMY                   | AST PROF   | ASO PROF   | R | R | R | R | M | W | White              |
|     |                               | LS                             | AST PROF   | ASO PROF   | N | N | W | W | M | X | Not Reported       |
| 236 | Fraser,Gareth John            | LS-BIOLOGY                     | AST PROF   | ASO PROF   | R | R | R | R | M | O | Non Resident Alien |
| 199 | Zeng,Yong                     | LS-CHEMISTRY-GENERAL           | ASO PROF   |            | R |   | R |   | M | A | Asian              |
|     |                               | LS                             | AST PROF   | ASO PROF   | R | R | W | W | M | X | Not Reported       |
| 157 | Akpan,Celestine L             | LS-ENGLISH                     | AST PROF   | ASO PROF   | R | R | R | R | M | B | Black              |
| 158 | Bordas,Camille A              | LS-ENGLISH                     | AST PROF   | ASO PROF   | R | R | R | R | F | H | Hispanic           |
| 159 | Gonzales,Laura                | LS-ENGLISH                     | AST PROF   | ASO PROF   | R | R | R | R | F | H | Hispanic           |
| 138 | Walther,Olivier Jean          | LS-GEOGRAPHY                   | AST PROF   | ASO PROF   | R | R | R | R | M | W | White              |
| 402 | Bartosova,Dana                | LS-MATHEMATICS                 | AST PROF   | ASO PROF   | R | R | R | R | F | W | White              |
| 131 | Ngonghala,Calistus            | LS-MATHEMATICS                 | AST PROF   | ASO PROF   | R | R | R | R | M | X | Not Reported       |
| 218 | Di Cerbo,Luca Fabrizio        | LS-MATHEMATICS                 | AST PROF   | ASO PROF   | R | R | R | R | M | W | White              |
|     |                               | LS                             | AST PROF   | ASO PROF   | N | N | W | W | F | A | Asian              |
| 132 | Fulda,Paul James              | LS-PHYSICS-GENERAL             | AST PROF   | ASO PROF   | R | R | R | R | M | O | Non Resident Alien |
| 123 | Wang,Yuxuan                   | LS-PHYSICS-GENERAL             | AST PROF   | ASO PROF   | R | R | R | R | M | A | Asian              |
| 125 | Klimenko,Serguei Grigorievich | LS-PHYSICS-GENERAL             | PROF       |            | R |   | R |   | M | W | White              |
|     |                               | LS                             | AST PROF   | ASO PROF   | N | N | N | N | M | W | White              |
| 127 | Soares,Benjamin               | LS-RELIGION                    | PROF       |            | R |   | R |   | M | W | White              |
| 148 | Bayne, Hannah                 | ED-SHDOSE-SCHL OF HUM DEV&ORG  | AST PROF   | ASO PROF   | R | R | R | R | M | A | Asian              |
| 407 | McAlister,Merritt Ellen       | LW-ASSOC DEAN-ACADEMIC         | ASO PROF   | PROF       | R | R | R | R | F | W | White              |

Tenure and Permanent Status Annual Report

|     |                         |                               |            |          |   |   |   |   |   |   |       |
|-----|-------------------------|-------------------------------|------------|----------|---|---|---|---|---|---|-------|
| 101 | Bhaduri-McIntosh,Sumita | MD-PEDS-INFECTIOUS DISEASES   | CHIEF & AS | PROF     | R | R | R | R | F | A | Asian |
| 400 | Guryanova,Olga          | MD-PHARMACOLOGY / THERAPEUTIC | AST PROF   | ASO PROF | R | R | R | R | F | W | White |
| 399 | de Kloet,Annette Diane  | MD-PHYSIOLOGY AND AGING       | AST PROF   | ASO PROF | R | R | R | R | F | W | White |
|     |                         | MD                            | PRG DIR &  | ASO PROF | R | R | W | W | M | A | Asian |
| 34  | Ezenwa,Miriam O         | NR-BNS-BIOBEHAVIORIAL NUR SCI | ASO PROF   | PROF     | R | R | R | R | F | B | Black |
| 365 | He,Mei                  | PH-PHARMACEUTICS              | AST PROF   | ASO PROF | R | R | R | R | F | A | Asian |
| 362 | Wang,Danxin             | PH-PHARMOTHERAPY TRNSL RSCH   | ASO PROF   |          | R |   | R |   | F | A | Asian |
| 360 | Whisler,Yan G           | PH-PHARMOTHERAPY TRNSL RSCH   | ASO PROF   |          | R |   | R |   | F | A | Asian |
| 322 | Biedrzycki,Adam Henry   | VM-LACS                       | AST PROF   | ASO PROF | R | R | R | R | M | W | White |
| 419 | Regier,Penny Jean       | VM-SACS                       | AST PROF   | ASO PROF | R | R | R | R | F | W | White |
|     | Pipkin, Matthew         | UF-Scripps                    | ASO PROF   | PROF     | R |   | R |   |   |   |       |
|     | Solt, Laura             | UF-Scripps                    | ASO PROF   | PROF     | R |   | R |   |   |   |       |



**COMMITTEE ON ACADEMIC, FACULTY  
AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC  
COMMUNICATIONS  
ACTION ITEM AFSSPRSC3  
June 8, 2023**

**SUBJECT:** New Degrees

---

**BACKGROUND INFORMATION**

The proposed Master of Science in Urban Analytics in the College of Design, Construction and Planning (CIP 11.0401) will focus on the implementation of new data science techniques, such as data mining, machine learning and other AI approaches, on urban data by introducing a systems perspective to better understand cities and their planning and design procedures. The Master of Science in Urban Analytics was approved by the Curriculum Committee and then by the Faculty Senate at their January 19, 2023, meeting.

The proposed Master of Science in Artificial Intelligence Systems in the Herbert Wertheim College of Engineering (CIP 11.0102) will provide students with a working knowledge of techniques and software commonly used in Artificial Intelligence Systems. This degree is designed for students with strong analytical and computing backgrounds. The Master of Science in Artificial Intelligence Systems was approved by the Curriculum Committee and then by the Faculty Senate at their February 16, 2023, meeting.

The proposed Master of Science in Genetics and Genomics in the colleges of Agriculture and Life Sciences, Liberal Arts and Sciences and Medicine (CIP 26.0801) will prepare students for an immediate job as a Genetic Counselor, Biological Science Teacher (Postsecondary), Biological Technician or Biological Scientist. This degree will increase the student's competitiveness for medical school or continuance to the Ph.D. in Genetics and Genomics or a related field. The Master of Science in Genetics and Genomics was approved by the Curriculum Committee and then by the Faculty Senate at their May 4, 2023, meeting.

**PROPOSED COMMITTEE ACTION**

The Committee on Academic, Faculty and Student Success, Public Relations and Strategic Communications is asked to approve the New Degrees listed above for recommendation to the Board of Trustees for approval on the Consent Agenda.

**ADDITIONAL COMMITTEE CONSIDERATIONS**

Board of Governors approval is required.

---

Supporting Documentation Included: New Degrees for Master of Science in Urban Analytics, Master of Science in Artificial Intelligence Systems and Master of Science in Genetics and Genomics request forms

Submitted by: Joseph Glover, Provost and Senior Vice President for Academic Affairs

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza "Mori" Hosseini, Chair

---

Ben Sasse, President and Corporate Secretary





**Board of Governors, State University System of Florida  
REQUEST TO OFFER A NEW DEGREE PROGRAM**

In Accordance with BOG Regulation 8.011

(Please do not revise this proposal format without prior approval from Board staff)

University of Florida  
Institution Submitting Proposal

Fall 2023  
Proposed Implementation Term

Design, Construction and Planning  
Name of College(s) or School(s)

Urban and Regional Planning  
Name of Department(s)/Division(s)

Urban and Regional Planning  
Academic Specialty or Field

Master of Science (M.S.) with a major in  
Urban Analytics  
Complete Name of Degree

11.0401  
Proposed CIP Code (2020 CIP)

The submission of this proposal constitutes a commitment by the university that, if the proposal is approved, the necessary financial resources and the criteria for establishing new programs have been met prior to the initiation of the program.

\_\_\_\_\_  
Date Approved by the University Board of Trustees

\_\_\_\_\_  
President's Signature Date

\_\_\_\_\_  
Board of Trustees Chair's Signature Date

Joseph Glover 4/21/2023 | 11:15 AM EDT  
\_\_\_\_\_  
Provost's Signature Date

**PROJECTED ENROLLMENTS AND PROGRAM COSTS**

Provide headcount (HC) and full-time equivalent (FTE) student estimates for Years 1 through 5. HC and FTE estimates should be identical to those in Appendix A – Table 1. Indicate the program costs for the first and the fifth years of implementation as shown in the appropriate columns in Appendix A – Table 3A or 3B. Calculate an Educational and General (E&G) cost per FTE for Years 1 and 5 by dividing total E&G by FTE.

| Implementation Timeframe | HC | FTE   | E&G Cost per FTE | E&G Funds | Contract & Grants Funds | Auxiliary/Philanthropy Funds | Total Cost |
|--------------------------|----|-------|------------------|-----------|-------------------------|------------------------------|------------|
| Year 1                   | 5  | 3.75  | \$11,759         | \$48,074  | 0                       | 0                            | \$48,074   |
| Year 2                   | 8  | 6     |                  |           |                         |                              |            |
| Year 3                   | 12 | 9     |                  |           |                         |                              |            |
| Year 4                   | 15 | 11.25 |                  |           |                         |                              |            |
| Year 5                   | 20 | 15    | \$9,345          | \$140,177 | 0                       | 0                            | \$140,177  |

## Additional Required Signatures

I confirm that I have reviewed and approved Need and Demand Section III.F. of this proposal.



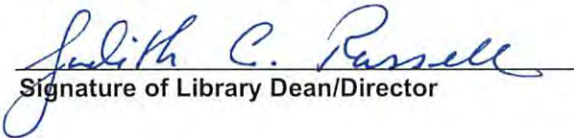
08/08/2022

---

Signature of Equal Opportunity Officer

Date

I confirm that I have reviewed and approved Non-Faculty Resources Section VIII.A. and VIII.B. of this proposal.



08/12/2022

---

Signature of Library Dean/Director

Date

## Introduction

### I. Program Description and Relationship to System-Level Goals

#### A. Describe within a few paragraphs the proposed program under consideration, and its overall purpose, including:

- degree level(s)
- majors, concentrations, tracks, specializations, or areas of emphasis
- total number of credit hours
- possible career outcomes for each major (provide additional details on meeting workforce need in Section III)

As the world becomes more urban, large and unprecedented quantities of data are being generated by humans about the built environment. Urban data are pervasive, and computing is ubiquitous, creating a great opportunity for reinvigorating and revamping the traditional urban planning field. According to the National Science Foundation, "Knowledge of computer science and computer programming is becoming a necessary skill... in marketing, advertising, journalism, and the creative arts." Integrating computer technologies into the analysis of urban spaces and regions and harnessing big data to do so is becoming an increasingly important aspect of policymaking. This degree complements geospatial training for policy-making that already occurs in our department. Smart cities and similar initiatives require advanced and specialized technical training informed by urban and regional planning's public interest mission and advanced computing expertise.

Both the pervasiveness of sensor technology and the growth of information and communication technology like 5G produce large quantities of data. Making sense of this data requires computer and data science skills. Technologies that are already highly concentrated in the built environment include, but are not limited to, connected and automated vehicles (CAV), vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) technologies, embedded environmental sensors, distributed intelligence and control in infrastructure, the sharing economy, and social networks. To understand and take advantage of these vast amounts of new data, the traditional data analysis methods in the built environment disciplines are insufficient and thus require advanced data analysis skills for large data such as machine learning and deep learning deployed in Artificial Intelligence (AI). Jobs in this field include working for the public sector (cities and counties, regional governments, departments of transportation) and private sector entities capturing and analyzing this data to determine everything from new school siting, anticipating new growth and development, climate change impacts, responses to disasters, and automating and redesigning spaces for new types of infrastructure.

This proposal offers a new interdisciplinary Master of Science with a major in Urban Analytics degree program in the Department of Urban and Regional Planning that is supported by the Department of Computer and Information Science and Engineering (CISE) and the Department of Electric and Computer Engineering (ECE) at the University of Florida. This new degree program will focus on the implementation of new data science techniques, such as data mining, machine learning, and other AI approaches, on urban data by introducing a systems perspective to better understand cities and their planning and design procedures. In the proposed program, a total of 36 credits are required: 15 credits in the major from the Department of Urban and Regional Planning (URP), 15 credits from the Departments of CISE or ECE, and 6 credits of thesis or master's research project that focuses on using Data Science and AI technologies to address urban issues.

According to U.S. News & World Report, students equipped with a combination of strong technology acumen, solid creative and interpersonal skills, and sufficient knowledge in a professional domain are in great demand by different employers. Government agencies and industries increasingly seek graduates who understand urban problems and have urban analytics skills. Top universities such as [MIT's Urban Science](#) program, [Georgia Tech's Master of Urban Analytics](#) program, [University of Pennsylvania's Master of Urban Spatial Analytics](#) program, and [University of Illinois' CS+X program](#) are currently offering urban analytics and data science programs under the urban studies domain in this emerging interdisciplinary field.

In Florida, Florida Atlantic University has a similar program in Data Science and Analytics (CIP 30.0601) that is "a multi-college interdisciplinary program, jointly administered by the Charles E. Schmidt College of Science, the College of Engineering & Computer Sciences, the College of Business, and the Dorothy F. Schmidt College of Arts & Letters." This degree offers four concentrations: data science in society, data science in business, data science and engineering, and data science via scientific inquiry, which complement this degree proposal. This proposed Urban Analytics program would focus on the intersection of urban planning and data analytics, and data science, which distinguishes it from FAU's Data Science and Analytics program with its emphasis on applications that reinforce the public interest with a focus on urban place-making.

As specified in section II.B below, UF has a unique position of strength to offer such an interdisciplinary degree at a graduate level that integrates the strengths in artificial intelligence and computer science and engineering program in the CISE and ECE departments with the urban planning program in the URP department. Students who graduate from this program will contribute to Florida's increasing demand for a STEM workforce.

**B. If the proposed program qualifies as a Program of Strategic Emphasis, as described in the Florida Board of Governors 2025 System Strategic Plan, please indicate the category.**

- **Critical Workforce**
  - Education
  - Health
  - Gap Analysis
- **Economic Development**
  - Global Competitiveness
  - Science, Technology, Engineering, and Math (STEM)
- Does not qualify as a Program of Strategic Emphasis.**

## **II. Strategic Plan Alignment, Projected Benefits, and Institutional Mission and Strength**

### **A. Describe how the proposed program directly or indirectly supports the following:**

- **System strategic planning goals (see the link to the 2025 System Strategic Plan on the [New Program Proposals & Resources](#) webpage)**
- **the institution's mission**
- **the institution's strategic plan**

The proposed M.S. with a major in Urban Analytics program is consistent with the Board of Governors' strategic vision and goals for the SUS 2025 System Strategic Plan: Excellence, Productivity, and Strategic Priorities for a Knowledge Economy. It will help to meet Florida's highest economic, workforce, and research needs.

The M.S. program meets the goals in the Teaching and Learning category by enhancing the relevance of the academic training it provides. It also adds to the pool of STEM degrees offered and awarded within the SUS.

In terms of Scholarship, Research, and Innovation, the proposed program will enhance opportunities for collaboration for external research funding between URP faculty and faculty in Computer and Information Science and Electronic Engineering. It can also foster research collaboration with private industry, Community, and Business Engagement goals.

Indirectly, the new program has the potential to attract a different and more analytically oriented cohort of students (Teaching and Learning) who have not historically been attracted to the current Master of Urban and Regional Planning.

### **B. Describe how the proposed program specifically relates to existing institutional strengths. This can include:**

- **existing related academic programs**
- **existing programs of strategic emphasis**
- **institutes and centers**
- **other strengths of the institution**

The University of Florida has put artificial intelligence (AI) as the focal point in its once-per-decade re-accreditation process for the next decade and has launched, among many AI initiatives, Artificial Intelligence Academic Initiative Center, dubbed (AI)<sup>2</sup> to promote AI and data science and integrate AI across the curriculum. The proposed MS in Urban Analytics is consistent with and is a concrete implementation of UF's strategic direction.

The UF CISE and ECE departments have excellent computer science graduate programs, and the UF URP department is a top urban planning program and is known for its innovations in planning technology, theories, and applications. Planning focuses on the public interest issues of equity and social justice that are essential in deploying these powerful technical tools in informing policy decisions that impact the physical, social, and economic city.

Furthermore, the Geoplan Center at the URP department has a national reputation in geographic information system (GIS) research and has a large digital data library of different GIS data in its Florida geographic digital library that provide students opportunities to work with big Florida data in their study and thesis.

In summary, the interdisciplinary M.S. in Urban Analytics program is very well aligned with UF's strategic investment in AI, combines technical strengths in UF's data science and AI within urban planning and design context, and offers students a unique opportunity to enhance their education experience at UF. Graduates of the program could work next to urban planners in local governments and consulting firms to inform decision-making on a variety of complex urban issues, such as the equity and effective delivery of urban services, including public transit and waste collection, and health and safety improvements in the city (e.g., the redesign of intersections to improve pedestrian safety and locations of parks).

Furthermore, the new program can also enhance the faculty collaborations in research in this new and rapidly developing fields like Smart Cities by building intellectual cooperation among existing faculties in URP, ECE, and CISE. The National Science Foundation (NSF), particularly in its Smart and Connected Communities program, offers funding opportunities for collaborative research in the intersection of urban planning, big data, and AI topics.

- C. Provide the date the pre-proposal was presented to the Council of Academic Vice Presidents Academic Program Coordination (CAVP ACG). Specify whether any concerns were raised, and, if so, provide a narrative explaining how each concern has been or will be addressed.**

The pre-proposal for M.S. in Urban Analytics program was presented to CAVP ACG on September 24, 2020. No concerns were raised.

- D. In the table below, provide a detailed overview and narrative of the institutional planning and approval process leading up to the submission of this proposal to the Board office. Include a chronology of all activities, providing the names and positions of both university personnel and external individuals who participated in these activities.**
- If the proposed program is a bachelor's level, provide the date the program was entered into the APPRiSe system, and, if applicable, provide narrative responding to any comments received from APPRiSe.**
  - If the proposed program is a doctoral-level program, provide the date(s) of the external consultant's review in the planning table. Include the external consultant's report and the institution's responses to the report as Appendix B.**

## **Planning Process**

This process began with a desire to create a new M.S. with a major in Urban Analytics by taking advantage of the synergies between the curricula in Urban and Regional Planning (URP), Computer and Information Science and Engineering (CISE), and Electric and Computer Engineering (ECE). Faculty from Urban and Regional Planning, with support from the department chairs in CISE and ECE, contributed to the development of the proposal, and it went through review and approval at the departmental, school, and college levels. The following is the planning process in table form.

**Planning Process**

| <b>Date</b>    | <b>Participants</b>                                 | <b>Planning Activity</b>  |
|----------------|---|---|
| April 2019     | URP faculty   | Inspired by MIT's new Urban Science program, the URP faculty in its faculty meeting developed an idea to create a MS in Urban Analytics program, and formed an Ad Hoc Committee to explore the feasibility of doing so. |
| May 2019       | Z-R. Peng, E. Tepe, I. Bejleri, Y. Wang, R. Steiner | The first Ad Hoc Committee meeting  |
| Sept. 25, 2019 | Z.R. Peng and John Harris                           | Dr. Peng met with ECE Department Chair, Dr. John Harris, to discuss collaboration and course arrangements.  |
| Oct. 9, 2019   | Z.-R. Peng and Juan Gilbert                         | Dr. Peng met with CISE department Chair Dr. Juan Gilbert, discussing collaboration and course arrangement.  |
| Oct. 18, 2019  | Z-R. Peng, E. Tepe, I. Bejleri, Y. Wang, R. Steiner | The second Ad Hoc Committee meeting   |
| Nov. 2019      | URP faculty   | The Ad Hoc committee presented the pre-proposal at the URP faculty meeting for discussion.  |
| Jan. 2020      | URP faculty   | The Ad Hoc committee presented the pre-proposal to URP faculty which voted in favor of the proposed degree.   |
| February 2020  | K. Larsen; DCP Dean Chimay Anumba                   | Dr. Larsen forwarded the approved pre-proposal to Dr. Anumba for review and approval and then forwarded the package to Assistant Provost Dr. Cheryl Gater in the Provost's Office.                                      |
| March. 2020    | Z. Peng, John Harris and Juan Gilbert               | Dr. Peng met with Drs. Harris and Gilbert and discussed the pre-proposal. They approved the pre-proposal and provided a letter of commitment for opening their courses to our MS students.                              |
| April 2020     | Z. Peng, K. Larsen                                  | Dr. Peng submitted the revised pre-proposal package to Dr. Larsen who submitted to UF Provost's Office.   |
| Sep. 2020      |   | Pre-proposal was approved by CAVP (Council of Academic Vice Presidents)   |
| Mar. 2021      | URP faculty   | Full proposal was submitted to the URP faculty for their review.  |

- E. Provide a timetable of key events necessary for the implementation of the proposed program following approval of the program by the Board office or the Board of Governors, as appropriate, and the program has been added to the State University System Academic Degree Program Inventory.**

## Events Leading to Implementation

| Date         | Implementation Activity   |
|--------------|---|
| Spring 2019  | The URP faculty in its faculty meeting developed an idea to create a MS in Urban Analytics program and formed an Ad Hoc Committee to explore the feasibility. |
| Jan. 2020    | URP faculty voted in favor of the proposed degree.  |
| April 2020   | Provost's Office approved the pre-proposal  |
| Sep. 2020    | pre-proposal was approved by CAVP (Council of Academic Vice Presidents)   |
| April 6 2021 | URP faculty approved the full proposal  |
| Fall 2022    | Internal review leading to UF BOT approval  |

## Institutional and State Level Accountability

### III. Need and Demand

**A. Describe the workforce need for the proposed program. The response should, at a minimum, include the following:**

- **current state workforce data as provided by Florida's Department of Economic Opportunity**
- **current national workforce data as provided by the U.S. Department of Labor's Bureau of Labor Statistics**
- **requests for the proposed program from agencies or industries in your service area**
- **any specific needs for research and service that the program would fulfill**

Nationally and within the State of Florida, there is a great demand for graduates with advanced skills in urban analytics, AI, and information systems. For example, the U.S. Bureau of Labor Statistics (BLS) 2019–29 employment projections show that occupations in the STEM field are expected to grow 8.0 percent by 2029, compared with 3.7 percent for all occupations. Among the STEM field, Computer and Information systems field will grow 15.4% by 2029. Based on the latest Florida's Regional Demand Occupations list from the Department of Economic Opportunity, the annual growth rate for computer and information systems managers is 1.84%, for management analysts is 1.88%.

We often received phone calls from Florida government agencies, consulting firms, and other employers asking for urban planning graduates with strong AI and urban analytical skills. They need graduates who have urban planning background and strong AI and analytical skills and who can make sense of the big data. As illustrated in the letter from Alta Planning & Design (in Appendix D), "Many organizations across the public and private sectors are undergoing digital transformations at an accelerating pace... There is great demand for urban & regional planning students who also have skills in data science, coding, and GIS." All planning and design firms face similar situations and have similar demands.



**B. Provide and describe data that support student demand for the proposed program. Include questions asked, results, and other communications with prospective students.**

We have so far received inquiries from 17 students about the Urban Analytics program before we even announced it. Students knew this through informal discussions with faculty that we are working on developing this program. The questions included the starting time, the basic requirements, the courses offered in the Department of Urban and Regional Planning, the Department of Computer and Information Science and Engineering, course prerequisites, course schedules, course delivery methods (in-person or online), and the cost and time requirements of the program.

We anticipate seeing many students applying for our proposal program once it is formally launched and announced.

**C. Complete Appendix A – Table 1 (1-A for undergraduate and 1-B for graduate) with projected student headcount (HC) and full-time equivalents (FTE).**

- Undergraduate FTE must be calculated based on 30 credit hours per year
- Graduate FTE must be calculated based on 24 credit hours per year

**In the space below, provide an explanation for the enrollment projections. If students within the institution are expected to change academic programs to enroll in the proposed program, describe the anticipated enrollment shifts and impact on enrollment in other programs.**

See Table 1-B for graduate student headcount (HC). No students within either Landscape Architecture or Urban and Regional Planning are expected to change majors to enter the program. It is not anticipated that graduate students from other programs will change majors to enter the program – the intent is to attract exceptional new students from all around the world that want to learn urban analytics. Based on the enrollment information from other similar programs, it is reasonable to project an enrollment of 5 students for the first year with an increase to 20 students by the fifth year.

**D. Describe the anticipated benefit of the proposed program to the university, local community, and the state. Benefits of the program should be described both quantitatively and qualitatively.**

The University of Florida must be able to respond to the various needs of its students, to evolving disciplines, and to new directions in technology and science. It is clear from national and state agendas that new knowledge and applied technologies are considered critical for continued advancement of society and for protecting the health, safety, welfare, and prosperity of our citizens. The proposed M.S. with a major in Urban Analytics program will help achieve this goal.

This new degree program will help the Department of Urban and Regional Planning retain its position among its peer institutions for education and research excellence, and as a leader in the use of technology and data science in advancing urban and regional planning research and practice. It will also help attract the best students, enhance faculty scholarship and productivity, achieve research excellence, and obtain external funding.

This will heighten the pre-eminence and ranking of Florida's SUS in both the U.S. and the

world. Ultimately, the new program will produce graduates who make significant contributions to their professions and society and support Florida's economy and its demand for a STEM workforce. In turn, the program's graduates will engage with and support the University's educational, research, and service missions.

- E. If other public or private institutions in Florida have similar programs that exist at the four- or six-digit CIP Code or in other CIP Codes where 60 percent of the coursework is comparable, identify the institution(s) and geographic location(s). Summarize the outcome(s) of communication with appropriate personnel (e.g., department chairs, program coordinators, deans) at those institutions regarding the potential impact on their enrollment and opportunities for possible collaboration in the areas of instruction and research.**

We searched the database on degrees awarded at AAU and Florida institutions (<https://ir.aa.ufl.edu/academic-support/academic-program-inventory/academic-marketplace/>), and found seven institutions offer Master's degree in the CIP Code 11.0401 in the state of Florida (see table below). None of them are similar to what we are proposing.

| Institution                     | College                   | Degree   | Focus  |
|---------------------------------|---------------------------|--|--|
| Florida Institute of Technology |                           | MS in Information Technology                   | provides the essential business and strategic technology management courses  |
| Florida State University        | Library                   | MS in Information                              | general librarianship, information architecture & technology, information needs & services, youth information needs & services,  |
| Nova Southeastern University    | Computing and Engineering | MS in Information Systems                      | Business Intelligence/Data Analytics, Information Assurance, and Cybersecurity Management, User Experience (UX)/Human-Computer Interaction   |
| South University -Tampa         |                           | MS in Information Systems                      | information systems in converged networks, modern software development methodologies, business intelligence, governance, information security, and emerging technologies.          |
| Strayer University              |                           | MS in Information Systems                      | Computer Forensics Management, Computer Security Management, Enterprise Network Management, Information Systems Management, IT project management, Software Engineering Management |
| university of South Florida     | Business                  | MS in Business Analytics & Information Systems | Business analytics, information technology, and management   |

FAU has a Master of Science in Data Science and Analytics program in CIP 30.0601. FAU's Master of Science in Data Science and Analytics (MS-DSA) is a multi-college interdisciplinary program offered in four concentrations: Data Science in Society housed in the College of Arts & Letters, Data Analytics in Business housed in the College of Business, Data Science and Engineering housed in the College of Engineering & Computer Science, Data Science via Scientific Inquiry housed in the College of Science. It is designed to provide students with interests in Data Science and Data Analytics with a unique and multifaceted educational opportunity within and across each of its areas of concentration. Students will emerge from the program with a broad understanding of data challenges and opportunities, along with the research and inquiry skills necessary to conduct independent research and answer questions within their area of specialization. The program prepares students to enter the workforce under roles such as Data Curator, Data Analyst, Statistician, Data Scientist, Market Analyst, and Software Engineer (see

<https://www.fau.edu/graduate/programs/datascienceandanalytics.php>).

Our proposed new major in Urban Analytics complements FAU's MS-DSA program as our focus is specifically on big data analytics in urban planning and design, which is complementary to the four concentrations in FAU's MS-DSA program.

- F. Describe the process for the recruitment and retention of a diverse student body in the proposed program. If the proposed program substantially duplicates a program at FAMU or FIU, provide a letter of support from the impacted institution(s) addressing how the program will impact the institution's ability to attract students of races different from that which is predominant on the FAMU or FIU campus. The institution's Equal Opportunity Officer shall review this Section of the proposal, sign, and date the additional signatures page to indicate that all requirements of this section have been completed.**

The University of Florida's Graduate School, through its Office of Graduate Diversity Initiatives (OGDI), is actively engaged in recruiting, retaining, and graduating students who typically are under-represented in graduate programs. It has a twofold mission: (1) to increase the number of graduate students from underrepresented ethnic or racial groups; and (2) to provide prospective and enrolled graduate students in underrepresented demographic groups with material aid and mentoring to help in their successful pursuit of a graduate school education. It accomplishes this mission through a variety of programs, services, and support initiatives, including a campus visitation program, fellowship and scholars programs, and professional development workshops. In addition, OGDI works with academic units to promote racial/ethnic diversity in graduate recruitment.

The College of Design, Construction and Planning will work in consultation with OGDI to use its resources to help ensure a diverse student body by actively recruiting students from Historically Black Colleges and Universities in Florida (e.g., Florida A&M University, UNCF, and so on) and in the US (e.g., Texas Southern University) through a variety means such as personal recruit events/visits, social media, and e-mail communications.

To the best of our knowledge, this proposed program does not duplicate other programs offered at FAMU and FIU.

#### **IV. Curriculum**

- A. Describe all admission standards and all graduation requirements for the program. Hyperlinks to institutional websites may be used to supplement the information provided in this subsection; however, these links may not serve as a standalone response. For graduation requirements, please describe any additional requirements that do not appear in the program of study (e.g., milestones, academic engagement, publication requirements).**

Applicants to this graduate program must have earned a bachelor's degree with a minimum upper-division GPA of at least 3.0 from an accredited US institution or international equivalent in Urban and Regional Planning and Computer & Information Science. Up to 9 graduate-level credits earned with a grade of B or better may potentially be transferred into this new degree program. A GRE is required for admission consideration, and for

international students, an English proficiency test such as TOEFL or IELTS is required.

A total of 36 credits is required to complete the M.S. degree, with 30 credits of course work and 6 credits of thesis or project report. All coursework used for the Graduate degree must meet a minimum 3.0 GPA (truncated) in overall and major credits.

Only graduate-level (5000-7999) work with a grade of B or better is eligible for transfer of credit. A maximum of 15 transfer credits are allowed. These can include no more than 9 credits from institution/s approved by UF, with the balance obtained from postbaccalaureate work at the University of Florida. Credits transferred from other universities are applied toward the degree requirements, but grades earned are not computed in the student's grade point average. Acceptance of transfer of credit requires approval of the student's supervisory committee and the Dean of the Graduate School.

**B. Describe the specific expected student learning outcomes associated with the proposed program. If the proposed program is a baccalaureate degree, include a hyperlink to the published Academic Learning Compact and the document itself as Appendix C.**

Each student will develop a solid base of understanding for data science and AI technologies and have a strong domain knowledge in urban studies and urban planning, understand social justice and equity, become an expert in their chosen field of research, and develop the skills necessary to pursue an independent research and practice agenda in both academia and industry.

Upon completion of this degree, students will be able to think critically and apply AI and Machine Learning methodologies to complex spatial analysis and environmental, and urban planning problems, and integrate technologies with analysis.

**C. If the proposed program is an AS-to-BS capstone, provide evidence that it adheres to the guidelines approved by the Articulation Coordinating Committee for such programs, as outlined in [State Board of Education Rule 6A-10.024](#). Additionally, please list the prerequisites, if any, and identify the specific AS degrees that may transfer into the proposed program.**

**Not applicable to this program because it is not an AS-to-BS Capstone.**

**D. Describe the curricular framework for the proposed program, including the following information where applicable:**

- **total numbers of semester credit hours for the degree**
- **number of credit hours for each course**
- **required courses, restricted electives, and unrestricted electives**
- **a sequenced course of study for all majors, concentrations, tracks, or areas of emphasis**

The 36-credit, two-year degree program will offer students a variety of courses in different clusters about urban and regional planning theory (6 credits required), methods (9 credits required), data science (3 credits required), Artificial Intelligence (9 credits required) and database (3 credits required) in collaboration with departments in the College of Engineering. Incoming students will begin the program in the fall semester. Based on their terminal project topic, each student will enroll in URP 6979 for their 6 credits of master's research project.

Here is the curriculum of the program in 4 semesters (all courses are 3 credit - letter graded unless noted otherwise) :

**First semester:**

- URP 6007 - Survey in Urban and Regional Planning (required for non-urban planning students)
- Choose one course from URP Theory and Practice courses (for urban planning students):
  - URP 6042 Urban Economy
  - URP 6100 Planning Theory and History
  - URP6421 Environmental Land Use Planning and Management
  - URP 6541 Economic Development Planning
  - URP 6716 Transportation Policy and Planning
- Choose one course from URP Methods courses:
  - URP 6223 Introduction to Urban Analytics
  - URP 6270 Introduction to Planning Information Systems
- CAP 5771 Introduction to Data Science

**Second semester:**

- Choose one course from URP Theory and Practice courses:
  - URP 6042 Urban Economy
  - URP 6061 Planning Administration and Ethics
  - URP 6131 Land Use Planning Law
  - URP 6203 Planning Research Design
  - URP 6711 Transportation and Land Use Coordination
  - URP 6745 Housing, Public Policy and Planning
- Choose one course from URP Methods courses:
  - URP 6224 Intermedial Urban Analytics
  - URP 6271 Automation for Geospatial Modeling and Analysis
  - URP 6272 Urban Spatial Analysis
  - URP 6821 Transportation and Land Use Modeling
- Choose one course from AI Cluster courses:
  - CAP 6610 Machine Learning
  - COT 5615 Mathematics for Intelligent Systems
  - CAP 6615 Neural Networks for Computing
  - EEL 6935 Big Data Ecosystems
  - EEL 6953 Machine Learning for Natural Language Processing
  - EEL 6825 Pattern Recognition and Intelligent Systems
  - EEL 6841 Machine Intelligence and Synthesis

**Third semester:**

- Choose one course from AI Cluster courses:
  - CAP 6610 Machine Learning
  - COT 5615 Mathematics for Intelligent Systems
  - CAP 5635 Artificial Intelligence Concepts
  - EEL 5840 Elements of Machine Intelligence
  - EEL 6814 Neural Networks and Deep Learning
  - EEE 6512 Image Processing and Computer Vision
- Choose one course from Database Cluster courses:
  - COP 5725 Database Management Systems
  - COT 5405 Analysis of Algorithms
  - COP 5536 Advanced Data Structures
- Take 3-credit Thesis or Masters Research Project (Choose one from the following)
  - URP 6971 Research for Master's Thesis (1-6 Credits, Max 6 Credits)
  - URP 6979 Master's Research Project (1-6 Credits, Max 6 Credits)

**Fourth semester:**

- Choose one course from AI Cluster courses:

- CAP 6610 Machine Learning
- COT 5615 Mathematics for Intelligent Systems
- CAP 6615 Neural Networks for Computing
- EEL 6935 Big Data Ecosystems
- EEL 6953 Machine Learning for Natural Language Processing
- EEL 6825 Pattern Recognition and Intelligent Systems
- EEL 6841 Machine Intelligence and Synthesis
- Choose one course from URP Methods courses:
  - URP 6224 Intermedial Urban Analytics
  - URP 6271 Automation for Geospatial Modeling and Analysis
  - URP 6272 Urban Spatial Analysis
  - URP 6821 Transportation and Land Use Modeling
- Take 3-credit Thesis or Masters Research Project (Choose one from the following)
  - URP 6971 Research for Master's Thesis (1-6 Credits, Max 6 Credits)
  - URP 6979 Master's Research Project (1-6 Credits, Max 6 Credits)

## E. Provide a brief description for each course in the proposed curriculum.

### Urban and Regional Planning Courses:

1. **URP 6007 Seminar in Urban and Regional Planning (3 credits):** An overview of the comprehensive planning process designed for graduates who are considering a career in urban and regional planning or who are pursuing studies, such as urban analytics, where some knowledge of the planning process is desirable.
2. **URP 6042 – Urban Economy (3 credits):** This course is designed to provide fundamental knowledge about urban economics to answer to following questions (1) Why do cities exist? (2) Why do some cities grow more rapidly while some decline? (3) What types of government interventions could result in urban growth? (4) Where to locate almost all urban land-uses? (5) Why do metropolitan areas exist?
3. **URP 6061 – Planning Administration and Ethics (3 credits):** Examine institutional and ethical decision-making frameworks within which planners carry out their day-to-day responsibilities and with which they relate to the wider world.
4. **URP 6100 – Planning Theory and History (3 credits):** Philosophy, theory, and history of inquiry into the processes of design, urban development systems.
5. **URP 6131 – Land Use Planning Law (3 credits):** The legal aspects of the allocation and development of land resources; private controls through covenants and easements; public regulation and control through zoning and subdivision regulation; social, economic, and political implications of land regulations.
6. **URP 6203 – Planning Research Design (3 credits):** Emphasizes research design and literature research; student presentations at appropriate stages in thesis work.
7. **URP 6270 – Introduction to Planning Information Systems (3 credits):** Introduction to concepts and theory associated with desktop GIS as related to urban and regional (environmental) planning.
8. **URP 6271 – Automation for Geospatial Modeling and Analysis (3 credits):** Covers methods and techniques for automating geospatial modeling and analysis for urban planning by using visual models, computer programming, and custom-built applications and tools that utilize Geographic Information Systems (GIS) technology in the context of planning information systems.
9. **URP 6272 – Urban Spatial Analysis (3 credits):** Theoretical and practical knowledge about spatial relationships as applied to urban form and the development and analysis of urban environments using geographic information systems and spatial analysis techniques such as spatial statistical modeling.

10. **URP 6276 – Internet Geographic Information Systems (3 credits):** Examines the theoretic and technological background in the emerging technologies in web-based geographic information systems (GIS).
11. **URP 6421 – Environmental Land Use Planning and Management (3 credits):** Introduction to the types of environmental impacts associated with land development and the connection between land use planning, the environmental regulation of land, and environmental assessment and analysis in the United States and internationally, with a special focus on Florida.
12. **URP 6541: Economic Development Planning (3 credits):** Major international and national economic development theory, issues and trends as they affect local economic development planning, methods, and practice.
13. **URP 6711: Transportation and Land Use Coordination (3 credits):** Explores the connection between land use and transportation by considering how four major sets of actors shape the urban environment: individuals, businesses, the professions and governments.
14. **URP 6716: Transportation Policy and Planning (3 credits):** Introduction to transportation policy planning in urban context. Transportation policy instruments and policy-making processes, critical issues in transportation policy, history of policy in U.S. at federal, state, and local levels.
15. **URP 6745: Housing, Public Policy, and Planning (3 credits):** Supply, demand, and market relationships. History of government housing policy. Exploration of relationship between housing policy and urban and regional planning.
16. **URP 6821: Transportation and Land-Use Modeling (3 credits):** The planning process, modeling and applications for passenger transportation and land-use development of metropolitan areas with respect paid to its contribution to transportation project and policy analysis.
17. **URP 6223: Introduction to Urban Analytics (3 credits):** This course introduces Urban Analytics and its applications to real world problems in urban and regional planning, urban studies, and related fields, including urban data sources, processing, visualization, modeling, and analysis methods.
18. **URP 6224: Intermedial Urban Analytics ((3 credits):** This course will provide implementations of advanced Machine Learning (ML) and Artificial Intelligence (AI) methods into spatial concepts using real world problems in the field. This course will also teach students relevant advanced programming skills to work with spatial datasets.
19. **URP 6971 Research for Master's Thesis (1-6 Credits, Max 6 Credits)**  
Research for Master's Thesis, Grading Scheme: S/U
20. **URP 6979 Master's Research Project (1-6 Credits, Max 6 Credits)**  
This option, in lieu of thesis, accommodates a physical design, geospatial analysis, or other community-based planning project that because of its maps, graphic content, or subject does not fit comfortably within a thesis format. Grading Scheme: S/U

#### **Computer and Information Science Courses:**

1. **CAP 5635 – Artificial Intelligence Concepts (3 credits):** Heuristic search, game theory, knowledge representation, logic, machine learning, AI languages and tools. Applications such as planning, natural language understanding, expert systems, and computer vision.
2. **CAP 5771 – Introduction to Data Science (3 credits):** Introducing the basics of data science including programming for data analytics, file management, relational databases, classification, clustering, and regression. The foundation is laid for big data applications

ranging from social networks to medical and business informatics.

3. **CAP 6610 – Machine Learning (3 credits):** This course covers concepts involved in developing computer programs that learn with experience with emphasis on methods based on probability, statistics, and optimization. Specific topics include discrete and continuous Generative Models and Clustering, Bayesian and Frequentist Statistics, Regression, Classification as Regression, Model Selection, Kernels, Gaussian Process Regression, and Markov modeling. Graphical models may be included if time permits.
4. **CAP 6615 – Neural Networks for Computing (3 credits):** Neural network models and algorithms. Adaptive behavior, associative learning, competitive dynamics, and biological mechanisms. Applications include computer vision, cognitive information processing, control, and signal analysis.
5. **COP 5536 – Advanced Data Structures (3 credits):** Development of efficient data structures used to obtain more efficient solutions to classical problems, such as those based on graph theoretical models, as well as problems that arise in application areas of contemporary interest.
6. **COP 5725 – Database Management Systems (3 credits):** Introduction to systems and procedures for managing large, computerized databases, including queries, how to use databases like SQL servers, Microsoft Access, FileMaker Pro, and more.
7. **COP 6726 – Database System Implementation (3 credits):** DBMS architecture, query processing and optimization, transaction processing, index structures, parallel query processing, object-oriented and object-relational databases, and related topics.
8. **COP 6755 – Distributed Database Systems (3 credits):** Distributed database systems including the areas of distributed database design, resource allocation, access plan selection, and transaction management.
9. **COT 5405 – Analysis of Algorithms (3 credits):** Introduction and illustration of basic techniques for designing efficient algorithms and analyzing algorithm complexity.
10. **COT 5615 – Mathematics for Intelligent Systems (3 credits):** Mathematical concepts commonly used in several areas of Intelligent Systems, including Computer Vision, Cybersecurity, Big Data / Data Science, Environmental Data Analysis, Human Centered Computing, Image and Signal Analysis, Machine Learning, Micro--and Macro--Biology, Neural Networks/Deep Learning, Sensor Networks, and Social Networks.

**Electrical and Computer Engineering Courses:**

1. **EEL 5840 – Elements of Machine Intelligence (3 credits):** Overview of machine intelligence and the role of machine learning in variety of real-world problems in areas such as remote sensing and adaptive filtering. Probability and statistics to handle uncertain data. Learning models from data in both a supervised and unsupervised fashion. Linear models (e.g., linear discriminant analysis) and non-linear models (e.g., neural networks) for classification. Linear dimensionality reduction (e.g., principal components analysis).
2. **EEE 6512 – Image Processing and Computer Vision (3 credits):** This course introduces fundamental concepts and techniques for image processing and computer vision. We will address 1) how to efficiently represent and process image/video signals, and 2) how to deliver image/video signals over networks.
3. **EEL 6533 – Data Analytics and Decision Sciences (3 credits):** Hypothesis testing of signals in the presence of noise by Bayes, Neyman-Pearson, minimax criteria; estimation of signal parameters.
4. **EEL 6814 – Neural Networks and Deep Learning (3 credits):** Understand and utilize



neural network concepts for signal processing and pattern recognition. Neural networks models will be explained from the point of view of nonlinear adaptive signal processing. Stress time varying models. Figures of merit for neural network design will also be covered.

5. **EEL 6825 – Pattern Recognition and Intelligent Systems (3 credits):** Decision functions; optimum decision criteria; training algorithms; unsupervised learning; feature extraction, data reduction; potential functions; syntactic pattern description; recognition grammars; machine intelligence.
6. **EEL 6841 – Machine Intelligence and Synthesis (3 credits):** Theory of machine intelligence applied to general problem of engineering intelligent computer systems and architecture. Applications emphasized.
7. **EEL 6935: Big Data Ecosystems (3 credits):** We will use all kinds of cloud resources for the course projects, including GENI, Amazon Web Services, Google Cloud, NSFCLOUD, and GatorCloud. This course involves intensive programming and extensive software systems. We use many professional tools for coding, project management, and documentation, e.g., Asana, Trello, GitHub, Google Drive etc.
8. **EEL 6953 Machine Learning for Natural Language Processing (3 credits):** The goal of natural language processing is to allow machines to understand and process human language. This course extends the knowledge presented in EEL-5840 Elements of Machine Intelligence to understand how machine learning methods can be applied to natural language processing. During the first part of the course, fundamental concepts and methods used in natural language processing are introduced. During the second portion of the course, more recent machine learning-based approaches, particularly neural networks/deep-learning are presented.

**F. For degree programs in medicine, nursing, and/or allied health sciences, please identify the courses that contain the competencies necessary to meet the requirements identified in [Section 1004.08, Florida Statutes](#). For teacher preparation programs, identify the courses that contain the competencies necessary to meet the requirements outlined in [Section 1004.04, Florida Statutes](#).**

**Not applicable to this program because the program is not a medicine, nursing, allied health sciences, or teacher preparation program.**

**G. Describe any potential impact on related academic programs or departments, such as an increased need for general education or common prerequisite courses or increased need for required or elective courses outside of the proposed academic program. If the proposed program is a collaborative effort between multiple academic departments, colleges, or schools within the institution, provide letters of support or MOUs from each department, college, or school in Appendix D.**

Some of the required courses within the proposed Urban Analytics degree program are similar to the current Masters of Urban and Regional Planning (M.U.R.P.) program, but differences exist between these two programs. First, the M.U.R.P. program requires 52-credits addressing the theories and methods of all aspects of urban planning, while the M.S. program requires only 15 credits of urban planning-related courses. The remaining, 15 credits are data science and AI related courses that are offered in the CISE and ECE departments. Second, the M.U.R.P. program focuses on educating professional planners,

while the Urban Analytics program focuses on educating urban data analysts and urban data scientists. Thus, M.U.R.P. has few required courses related to data science and AI, while the new degree program has many more required courses on data science and AI. Third, M.U.R.P. is fully accredited by the Planning Accreditation Board (PAB), while the M.S. program will not seek accreditation. The M.U.R.P. and M.S. programs will attract different cohorts of students, with the new Urban Analytics program attracting students with more technical backgrounds than the current M.U.R.P. program. Therefore, we do not anticipate current M.U.R.P. students will switch to the new M.S. program.

Appendix D shows the letters of support from the UF CISE and ECE departments, who support the students from this program to take courses in their respective departments. It also shows a letter of endorsement from David Wasserman, who is a graduate of the geodesign major in Sustainability and the Built Environment and a graduate of our Master of Urban and Regional Planning. He was recently hired by Alta Planning & Design as their first data scientist to incorporate urban analytics into the transportation planning practice.

**H. Identify any established or planned educational sites where the program will be offered or administered. If the proposed program will only be offered or administered at a site(s) other than the main campus, provide a rationale.**

This program will be delivered on UF's main campus in Gainesville.

**I. Describe the anticipated mode of delivery for the proposed program (e.g., face-to-face, distance learning, hybrid). If the mode(s) of delivery will require specialized services or additional financial support, please describe the projected costs below and discuss how they are reflected in Appendix A – Table 3A or 3B.**

The program will be delivered face-to-face. No specialized services or greater than normal financial support will be required.

**J. Provide a narrative addressing the feasibility of delivering the proposed program through collaboration with other institutions, both public and private. Cite any specific queries made of other institutions with respect to shared courses, distance/distributed learning technologies, and joint-use facilities for research or internships.**

It is possible for students from other institutions to take this master's degree program. An inter-institutional agreement will need to be made to make this happen. There is no specific inquiry made yet from other institutions.

**K. Describe any currently available sites for internship and/or practicum experiences. Describe any plans to seek additional sites in Years 1 through 5.**

**Not applicable to this program because the program does not require internships or practicums.**

**V. Program Quality Indicators - Reviews and Accreditation**

**A. List all accreditation agencies and learned societies that would be concerned with the proposed program. If the institution intends to seek specialized**

**accreditation for the proposed program, as described in [Board of Governors Regulation 3.006](#), provide a timeline for seeking specialized accreditation. If specialized accreditation will not be sought, please provide an explanation.**

This is a non-accredited program because it is an emerging interdisciplinary program, and there is no accreditation body established yet.

**B. Identify all internal or external academic program reviews and/or accreditation visits for any degree programs related to the proposed program at the institution, including but not limited to programs within academic unit(s) associated with the proposed degree program. List all recommendations emanating from the reviews and summarize the institution's progress in implementing those recommendations.**

The Planning Accreditation Board (PAB) accredited the Master of Urban and Regional Planning program for the maximal possible years - seven-year, through December 2026. Here are some comments and recommendations from the accreditation report:

“In its report the Site Visit Team noted many areas of excellence; the Program should be proud of its accomplishments. More specifically, the Site Visit Team found: strong research by faculty; an on-campus program that addresses the critical concerns of the state; and a high-quality online degree program. The Board is impressed by the innovation of an online degree program and the seamless integration of this modality with the campus-based program.”

Standard 4 / Curriculum

Sub-Criterion 4A2d / Plan Creation and Implementation

“The program shall offer a curriculum that teaches students the essential knowledge, skills, and values central to the planning profession [including] integrative tools useful for sound plan formulation, adoption, and implementation and enforcement.”

**Department response:** the course “Development Review” has been updated and offered.

Sub-Criterion 4A2e / Planning Process Methods

“The Program shall offer a curriculum that teaches students the essential knowledge, skills, and values central to the planning profession [including] tools for stakeholder involvement, community engagement, and working with diverse communities.”

**Department response:** A new course “Community Engagement” has been offered.

Sub-Criterion 4A3c / Governance and Participation

“The Program shall offer a curriculum that teaches students the essential knowledge, skills, and values central to the planning profession [including] the roles of officials, stakeholders, and community members in planned change.”

**Department response:** A new course “Community Engagement” has been offered, also the contents of the course “Planning Administration and Ethics” has been updated to enhance the contents of governance and public participation.

**C. For all degree programs, discuss how employer-driven or industry-driven competencies were identified and incorporated into the curriculum. Additionally, indicate whether an industry or employer advisory council exists to provide input for curriculum development, student assessment, and**

**academic-force alignment. If an advisory council is not already in place, describe any plans to develop one or other plans to ensure academic-workforce alignment.**

The industry-driven competencies were identified by investigating current market needs in existing job posting platforms and our URP alumni and industry advisory council. The curriculum was analyzed to ensure expected qualifications and skills would be met. Workshops and meetings involving the existing URP industry advisory council are regularly held to solicit feedback and input for curriculum development.

## **VI. Faculty Participation**

**A. Use Appendix A – Table 2 to identify existing and anticipated full-time faculty who will participate in the proposed program through Year 5, excluding visiting or adjunct faculty. Include the following information for each faculty member or position in Appendix A – Table 2:**

- **the faculty code associated with the source of funding for the position**
- **faculty member's name**
- **highest degree held**
- **academic discipline or specialization**
- **anticipated participation start date in the proposed program**
- **contract status (e.g., tenure, tenure-earning, or multi-year annual [MYA])**
- **contract length in months**
- **percent of annual effort that will support the proposed program (e.g., instruction, advising, supervising)**

**This information should be summarized below in narrative form. Additionally, please provide the curriculum vitae (CV) for each identified faculty member in Appendix E.**

The degree can be accomplished within the Department of Urban and Regional Planning using existing faculty and available courses in the College of Engineering. See Table 2 in Appendix A for the listing of faculty that will be directly involved with delivering the program and Appendix E for faculty's CVs.

**B. Provide specific evidence demonstrating that the academic unit(s) associated with the proposed program have been productive in teaching, research, and service. Such evidence may include trends over time for average course load, FTE productivity, student HC in major or service courses, degrees granted, external funding attracted, and other qualitative indicators of excellence (e.g., thesis, dissertation, or research supervision).**

The faculty in URP are highly productive in teaching, research, and service. The program in urban and regional planning recently secured reaccreditation by the Planning Accreditation Board for the maximum period allowed (7 years).

In the past 10 years the faculty in URP have published 10 books, 202 refereed journal articles, 17 book chapters, 2 extramural exhibitions, 55 reports and monographs and 281 extramural presentations at national and international conferences. The faculty has attracted 131 external contract and grants for a total of \$25.6 million dollars.

## VII. Budget

- A. Use Appendix A – Table 3A or 3B to provide projected costs and associated funding sources for Year 1 and Year 5 of program operation. In narrative form, describe all projected costs and funding sources for the proposed program(s). Data for Year 1 and Year 5 should reflect snapshots in time rather than cumulative costs.**

Excluding three new courses, the proposed curriculum includes existing courses taught by existing faculty. Current faculty are anticipated to absorb the first new course (URP 6007 Survey in Urban and Regional Planning). Therefore, we do not expect to increase costs to offer these courses. In addition, the department just hired a new tenure-track Assistant professor from MIT whose expertise is Artificial Intelligent and Urban Analytics. The new faculty is expected to teach the two new course (URP 6223 Introduction to Urban Analytics and URP 6223 Intermediate Urban Analytics), and the salary is listed on Table 3A in year 1 as \$48,074, which reflects the effort associated with this degree program. We expect to hire a staff member as the program grows in the future but will use existing support staff in the department for the first year, which is indicated by the \$15,000 for staff salaries and benefits in Table 3A in year 1. Year 5 in Table 3A Salary and Benefits (Faculty) \$103,405 reflects possible annual raises for the assistant professor, and the additional effort from existing departmental faculty. \$36,772 in Salaries and Benefits (A&P and USPS) reflects the proposed new support staff hire.

- B. Use Appendix A – Table 4 to show how existing Education & General (E&G) funds will be reallocated to support the proposed program in Year 1. Describe each funding source identified in Appendix A – Table 4, and provide a justification below for the reallocation of resources. Describe the impact the reallocation of financial resources will have on existing programs, including any possible financial impact of a shift in faculty effort, reallocation of instructional resources, greater use of adjunct faculty and teaching assistants, and explain what steps will be taken to mitigate such impacts.**

Existing E&G funds will be reallocated for the newly hired assistant professor. The new program will not require any additional effort from the faculty beyond that already committed to the urban and regional planning program, nor will it require the reallocation of other resources used to support other educational programs; therefore, there is no impact on existing programs.

- C. If the institution intends to operate the program through continuing education, seek approval for market tuition rate, or establish a differentiated graduate-level tuition, as described in [Board of Governors Regulation 8.002](#), provide a rationale and a timeline for seeking Board of Governors' approval.**

Not applicable to this program because the program will not operate through continuing education, seek approval for market tuition rate, or establish a differentiated graduate-level tuition

- D. Provide the expected resident and non-resident tuition rate for the proposed program for both resident and non-resident students. The tuition rates should be reported on a per credit hour basis, unless the institution has received**

**approval for a different tuition structure. If the proposed program will operate as a continuing education program per [Board of Governors Regulation 8.002](#), please describe how the tuition amount was calculated and how it is reflected in Appendix A – Table 3B.**

This program will be offered at DCP's current credit hour rate as follows:

In-State: tuition \$539.49, other fees: \$86.50. Total Florida Resident Rate/credit hour: \$625.99

Non-resident: tuition \$539.49, non-resident fee: \$690.21, non-resident student financial aid: \$34.51. Total non-resident rate/credit hour: \$1,350.71

Source: <https://www.fa.ufl.edu/directives/2020-21-academic-year-tuition-and-fees/>

**E. Describe external resources, both financial and in-kind support, that are available to support the proposed program, and explain how this amount is reflected in Appendix A – Table 3A or 3B.**

We expect faculty members to obtain research grants from external sources to support student's research as graduate assistantship. We will work with the college's development team to seek philanthropic donations to support this new MS in Urban Analytics program. Furthermore, we expect to have some alumni to provide guest lectures, offer seminars and workshops to our graduate students.

## **VIII. Non-Faculty Resources**

**A. Describe library resources currently available to implement and/or sustain the proposed program through Year 5 below, including but not limited to the following:**

- the total number of volumes and serials available in the discipline and related disciplines
- all major journals that are available to the university's students

**The Library Director must sign the additional signatures page to indicate that they have review Sections VIII.A. and VIII.B.**

The George A. Smathers Libraries at the University of Florida hold over 6.7M print volumes, 1.5M e-books, and provide access to over 148K full-text print and electronic journals, as well as over 1992 electronic databases. The Libraries offer a video production studio, maker-spaces, and a virtual and augmented reality lab. All campus libraries host computer labs managed by Academic Technology which provide access to specialized software, including ArcGIS, CAD, Adobe Creative Cloud, and more. The Libraries provide expertise in GIS, Informatics, and Data Management.

Due to the interdisciplinary nature of Urban and Regional Planning, print resources are found throughout the library system. AFA Library holds materials about planning and the built environment, Library West holds collections related to city and regional planning, as well as government documents (UF is a US Federal Documents Regional Depository Library), and the Marston Science Library holds collections related to geography and the environment, and data science. The Legal Information Center has holdings in growth management, codes, and planning. The Department of Special and Area Studies Collections includes several collections of interest, including the University of Florida Architectural Archives and the Map and

Imagery Library—the latter heavily used by planning students.

Electronic books, journals, and many key databases, such as the Avery Index to Architectural Periodicals, Compendex, GeoRef, Web of Science, ProQuest Dissertations & Theses Global, and others, are available via the internet to UF students, faculty, and staff. Many relevant databases are multidisciplinary and are funded centrally. The UF Libraries expend over \$12 million annually on electronic resources. Listed below is a selection of important journals available through UF Libraries that will support students in this program. Due to the interdisciplinary nature of urban & regional planning, as well as data science, this is only a representative list.

*ACM Transactions on Knowledge Discovery from Data (TKDD)*  
*Annals of the American Association of Geographers*  
*Applied Geography*  
*Computers, Environment, and Urban Systems*  
*Earth's Future*  
*Environment and Planning*  
*GeoJournal*  
*Health & Place*  
*IEEE Transactions on Pattern Analysis and Machine Intelligence*  
*International Journal of Geographical Science*  
*Journal of Planning Education & Research*  
*Journal of Planning Literature*  
*Journal of the American Planning Association*  
*Landscape and Urban Planning*  
*Planning Theory and Practice*  
*Transportation Research Record*  
*Urban Studies*  
*Urban Land*  
*Urban Ecology*

In addition to the collections held by the George A. Smathers Libraries, faculty, students, and staff have access to both Interlibrary Loan and Uborrow. The Libraries hold memberships in a number of consortia and institutions, such as the Center for Research Libraries, ensuring access through interlibrary loan to materials not held or subscribed locally. Uborrow allows patrons to easily borrow material from other Florida academic libraries. This partnership is often faster and with a longer loan period than the traditional interlibrary loan.

The Libraries offer consultations, workshops, and events throughout the year, and this program has the support of the following professionals: Design Librarian/Liaison to Urban and Regional Planning, Informatics Librarian, Computer Science & Engineering Librarians, Map & Imagery Librarian, Geospatial Information Services (GIS) Librarian, and the Smathers Libraries' Academic Research Consulting and Services (ARCS) team which provides expertise in data science, informatics, and AI, with an ongoing search for a Natural Language Processing and AI specialist.

Additionally, the GeoPlan Center within the School of Landscape Architecture and Planning maintains the Florida Geographic Data Library, which maintains a collection of spatial information that is shared with all persons and agencies in Florida. It contains over 400 layers of geospatial information in the following data categories: land cover, hydrology, soils, environmental quality, conservation, transportation, and geographic library. The FGDL has

been shared with the UF Map and Imagery Library and is a resource available for the proposed degree.

**B. Discuss any additional library resources that are needed to implement and/or sustain the program through Year 5. Describe how those costs are reflected in Appendix A – Table 3A or 3B.**

**Not applicable to this program because no additional library resources are needed to implement or sustain the proposed program.**

**C. Describe any specialized equipment and space currently available to implement and/or sustain the proposed program through Year 5.**

The College of DCP has facilities in three on-campus buildings – the Architecture Building, Rinker Hall and the Fine Arts C Building – and the Florida Institute for Built Environment Resilience (FIBER) shares its offices in the Ayers Building. The college has approximately 170,000 sq. ft. of classroom, lab spaces, office space, including a 2,000 sq. ft. graduate student research hub and a floor of research offices for research centers and programs (see Table 1). Graduate students who are working in research centers and institutes have a workspace in the center offices. The Center for World Heritage Research and Stewardship, the Geo-Facilities Planning and Information Research (GeoPlan), the Center for Health and the Built Environment, International Center for Adaptation Planning and Design (iAdapt) and Envision Design (for IND) have offices on the first floor in the Architecture Building. The Shimberg Center for Housing Studies, the Center for Advanced Construction Information Modeling, the Flour Program in Construction Safety and the Powell Center for Construction and Environment are located in the Rinker Building. Graduate students who work as teaching assistants or research assistants on other research are assigned shared office space in either the Architecture or Rinker Building. Other graduate students can get a locker and share the workspace in the student research hub with other graduate students. The research center and shared office spaces are locked workspaces, and the graduate research hub has key code access.

Table 1 Space in the College of Design, Construction and Planning

Space in Campus Buildings by type of space (sq. ft.)

| Usage                      | Architecture Building | Rinker Hall | Fine Arts C | Total Space by Type |
|----------------------------|-----------------------|-------------|-------------|---------------------|
| Classrooms                 | 2,000                 | 11,000      | 0           | 13,000              |
| Instructional Labs/studios | 34,000                | 6,000       | 10,000      | 50,000              |
| Research Lab               | 6,500                 | 8,800       | 1,500       | 16,800              |
| Graduate Student Hub       | 2,000                 | 0           | 0           | 2,000               |
| Office                     | 12,500                | 7,000       | 1,000       | 20,500              |
| Support Space              | 48,000                | 15,000      | 4,500       | 67,500              |
| Total                      | 105,000               | 47,800      | 17,000      | 169,800             |

**D. Describe any additional specialized equipment or space that will be needed to implement and/or sustain the proposed program through Year 5. Include any**



**projected Instruction and Research (I&R) costs of additional space in Appendix A – Table 3A or 3B. Costs for new construction should be provided in response to Section X.E. below.**

**Not applicable to this program because no new I&R costs are needed to implement or sustain the program through Year 5**

**E. If a new capital expenditure for instructional or research space is required, indicate where this item appears on the university's fixed capital outlay priority list. Appendix A – Table 3A or 3B includes only I&R costs. If non-I&R costs, such as indirect costs affecting libraries and student services, are expected to increase as a result of the program, describe and estimate those expenses in narrative form below. It is expected that high enrollment programs, in particular, would necessitate increased costs in non-I&R activities.**

**Not applicable to this program because no new capital expenditures are needed to implement or sustain the program through Year 5.**

**F. Describe any additional special categories of resources needed to operate the proposed program through Year 5, such as access to proprietary research facilities, specialized services, or extended travel, and explain how those projected costs of special resources are reflected in Appendix A – Table 3A or 3B.**

**Not applicable to this program because no additional special categories of resources are needed to implement or sustain the program through Year 5.**

**G. Describe fellowships, scholarships, and graduate assistantships to be allocated to the proposed program through Year 5, and explain how those are reflected in Appendix A – Table 3A or 3B.**

**Not applicable to this program because no fellowships, scholarships and/or graduate assistantships will be allocated to the proposed program through Year 5.**

## IX. Required Appendices

The appendices listed in tables 1 & 2 below are required for all proposed degree programs except where specifically noted. Institutions should check the appropriate box to indicate if a particular appendix is included to ensure all program-specific requirements are met. Institutions may provide additional appendices to supplement the information provided in the proposal and list them in Table 4 below.

**Table 1. Required Appendices by Degree Level**

| Appendix | Appendix Title   | Supplemental Instructions  | Included? Yes/No | Required for Degree Program Level |                     |                        |
|----------|--|--|------------------|-----------------------------------|---------------------|------------------------|
|          |  |  |                  | Bachelors                         | Masters/ Specialist | Doctoral/ Professional |
| A        | Tables 1-4   |  | Y                | X                                 | X                   | X                      |
| B        | Consultant's Report and Institutional Response           |  | N                |                                   |                     | X                      |
| C        | Academic Learning Compacts                               | Include a copy of the approved or proposed Academic Learning Compacts for the program  | N                | X                                 |                     |                        |
| D        | Letters of Support or MOU from Other Academic Units      | Required only for programs offered in collaboration with multiple academic units within the institution  | Y                | X                                 | X                   | X                      |
| E        | Faculty Curriculum Vitae                                 |  | Y                | X                                 | X                   | X                      |
| F        | Common Prerequisite Request Form                         | This form should also be emailed directly to the BOG Director of Articulation prior to submitting the program proposal to the Board office for review. | N                | X                                 |                     |                        |
| G        | Request for Exemption to the 120 Credit Hour Requirement | Required only for baccalaureate degree programs seeking approval to exceed the 120 credit hour requirement   | N                | X                                 |                     |                        |
| H        | Request for Limited Access Status                        | Required only for baccalaureate degree programs seeking approval for limited access status   | N                | X                                 |                     |                        |

**Table 2. Additional Appendices**

| <b>Appendix</b> | <b>Appendix Title</b> | <b>Description</b>                             |
|-----------------|-----------------------|--|
| A               | Tables 1-4            | Required Tables                                |
| B               | Letters of Support    | Department chairs and Industry support letters |
| C               | Faculty CVs           | Faculty CVs                                    |

**APPENDIX A**  
**TABLE 1-B**  
**PROJECTED HEADCOUNT FROM POTENTIAL SOURCES**  
**(Graduate Degree Program)**

| Source of Students<br>(Non-duplicated headcount in any given year)*                              | Year 1 HC | Year 1 FTE  | Year 2 HC | Year 2 FTE | Year 3 HC | Year 3 FTE | Year 4 HC | Year 4 FTE   | Year 5 HC | Year 5 FTE |
|--|-----------|-------------|-----------|------------|-----------|------------|-----------|--------------|-----------|------------|
| Individuals drawn from agencies/industries in your service area (e.g., older returning students) | 0         | 0           | 0         | 0          | 0         | 0          | 0         | 0            | 0         | 0          |
| Students who transfer from other graduate programs within the university**                       | 0         | 0           | 0         | 0          | 0         | 0          | 0         | 0            | 0         | 0          |
| Individuals who have recently graduated from preceding degree programs at this university        | 1         | 0.75        | 2         | 1.5        | 3         | 2.25       | 4         | 3            | 5         | 3.75       |
| Individuals who graduated from preceding degree programs at other Florida public universities    | 1         | 0.75        | 1         | 0.75       | 2         | 1.5        | 2         | 1.5          | 3         | 2.25       |
| Individuals who graduated from preceding degree programs at non-public Florida institutions      | 1         | 0.75        | 1         | 0.75       | 2         | 1.5        | 2         | 1.5          | 3         | 2.25       |
| Additional in-state residents***   | 0         | 0           | 0         | 0          | 0         | 0          | 0         | 0            | 0         | 0          |
| Additional out-of-state residents***   | 1         | 0.75        | 2         | 1.5        | 3         | 2.25       | 4         | 3            | 5         | 3.75       |
| Additional foreign residents***  | 1         | 0.75        | 2         | 1.5        | 2         | 1.5        | 3         | 2.25         | 4         | 3          |
| Other (Explain)***   | 0         | 0           | 0         | 0          | 0         | 0          | 0         | 0            | 0         | 0          |
| <b>Totals</b>  | <b>5</b>  | <b>3.75</b> | <b>8</b>  | <b>6</b>   | <b>12</b> | <b>9</b>   | <b>15</b> | <b>11.25</b> | <b>20</b> | <b>15</b>  |

\* List projected annual headcount of students enrolled in the degree program. List projected yearly cumulative ENROLLMENTS instead of admissions.

\*\* If numbers appear in this category, they should go DOWN in later years.

\*\*\* Do not include individuals counted in any PRIOR category in a given COLUMN.

**APPENDIX A**  
**Table 2**  
**Anticipated Faculty Participation**

| Faculty Code                   | Faculty Name or "New Hire" Highest Degree Held Academic Discipline or Specialty | Rank         | Contract Status | Initial Date for Participation in Program | Mos. Contract Year 1 | FTE Year 1 | % Effort for Prg. Year 1 | PY Year 1   | Mos. Contract Year 5 | FTE Year 5 | % Effort for Prg. Year 5 | PY Year 5   |
|--------------------------------|---|--------------|-----------------|---|----------------------|------------|--------------------------|-------------|----------------------|------------|--------------------------|-------------|
| A                              | Kristin E. Larsen, Ph.D.<br>Urban and Regional Planning                         | Professor    | Tenure          | Fall 2023                                 | 9                    | 0.75       | 0.05                     | 0.04        | 9                    | 0.75       | 0.05                     | 0.04        |
| A                              | Zhong-Ren Peng, Ph.D.<br>Urban and Regional Planning                            | Professor    | Tenure          | Fall 2023                                 | 9                    | 0.75       | 0.05                     | 0.04        | 9                    | 0.75       | 0.05                     | 0.04        |
| A                              | Ilir Bejler, Ph.D.<br>Urban and Regional Planning                               | Assoc. Prof. | Tenure          | Fall 2023                                 | 9                    | 0.75       | 0.05                     | 0.04        | 9                    | 0.75       | 0.05                     | 0.04        |
| A                              | Yan Wang, Ph.D.<br>Urban and Regional Planning                                  | Asst. Prof.  | Accuring        | Fall 2023                                 | 9                    | 0.75       | 0.10                     | 0.08        | 9                    | 0.75       | 0.10                     | 0.08        |
| A                              | Emre Tepe, Ph.D.<br>Urban and Regional Planning                                 | Asst. Prof.  | Accuring        | Fall 2023                                 | 9                    | 0.75       | 0.10                     | 0.08        | 9                    | 0.75       | 0.10                     | 0.08        |
| C                              | Shenhao Wang, Ph.D.<br>Urban Analytics  | Asst. Prof.  | Accuring        | Fall 2023                                 | 9                    | 0.75       | 0.40                     | 0.30        | 9                    | 0.75       | 0.40                     | 0.30        |
|                                |   |              |                 |   | 0                    | 0.00       | 0.00                     | 0.00        | 0                    | 0.00       | 0.00                     | 0.00        |
|                                |   |              |                 |   | 0                    | 0.00       | 0.00                     | 0.00        | 0                    | 0.00       | 0.00                     | 0.00        |
| <b>Total Person-Years (PY)</b> |   |              |                 |   |                      |            |                          | <b>0.56</b> |                      |            |                          | <b>0.56</b> |

| Faculty Code              | Code Description  | Source of Funding                   | PY Workload by Budget Classification |             |
|---------------------------|---|-------------------------------------|--------------------------------------|-------------|
|                           |   |                                     | Year 1                               | Year 5      |
| A                         | Existing faculty on a regular line  | Current Education & General Revenue | 0.26                                 | 0.26        |
| B                         | New faculty to be hired on a vacant line  | Current Education & General Revenue | 0.00                                 | 0.00        |
| C                         | New faculty to be hired on a new line   | New Education & General Revenue     | 0.30                                 | 0.30        |
| D                         | Existing faculty hired on contracts/grants  | Contracts/Grants                    | 0.00                                 | 0.00        |
| E                         | New faculty to be hired on contracts/grants                                       | Contracts/Grants                    | 0.00                                 | 0.00        |
| F                         | Existing faculty on endowed lines   | Philanthropy & Endowments           | 0.00                                 | 0.00        |
| G                         | New faculty on endowed lines  | Philanthropy & Endowments           | 0.00                                 | 0.00        |
| H                         | Existing or new faculty teaching outside of regular/tenure-track line course load | Enterprise Auxiliary Funds          | 0.00                                 | 0.00        |
| <b>Overall Totals for</b> |   |                                     | <b>0.56</b>                          | <b>0.56</b> |

Worksheet Table 2 Faculty Participation

APPENDIX A

TABLE 3A  
PROJECTED COSTS AND FUNDING SOURCES

|    | A  | B  | C                                 | D                          | E                              | F                               | G                              | H  | I               | J                              | K                                  | L                     | M                               | N                              | O  | P               |
|----|--|--|-----------------------------------|----------------------------|--------------------------------|---------------------------------|--------------------------------|--|-----------------|--------------------------------|------------------------------------|-----------------------|---------------------------------|--------------------------------|--|-----------------|
| 1  | Institutions should not edit the categories or budget lines in the table below. This table is specific to state-funded (E&G) programs, and institutions are expected to explain all costs and funding sources in Section VIII.A. of the proposal. Detailed definitions for each funding category are located at the bottom of the table. |  |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 2  | Budget Line Item   | Reallocated Base* (E&G) Year 1   | New Recurring Growth (E&G) Year 1 | New Recurring (E&G) Year 1 | New Non-Recurring (E&G) Year 1 | Contracts & Grants (C&G) Year 1 | Philanthropy Endowments Year 1 | Other Funding Year 1 - Please Explain in Section VIII.A. of the Proposal | Subtotal Year 1 | Continuing Base** (E&G) Year 5 | New Enrollment Growth (E&G) Year 5 | Other*** (E&G) Year 5 | Contracts & Grants (C&G) Year 5 | Philanthropy Endowments Year 5 | Other Funding Year 5 - Please Explain in Section VIII.A. of the Proposal | Subtotal Year 5 |
| 3  | Salaries and Benefits (Faculty)  | 33,074   | 0                                 | 0                          | 0                              | 0                               | 0                              | 0  | \$23,074        | 103,405                        | 0                                  | 0                     | 0                               | 0                              | 0  | \$103,405       |
| 4  | Salaries and Benefits (ASP and USPS)   | 15,000   | 0                                 | 0                          | 0                              | 0                               | 0                              | 0  | \$15,000        | 36,772                         | 0                                  | 0                     | 0                               | 0                              | 0  | \$36,772        |
| 5  | Operations (including assistantships & fellowships)  | 0  | 0                                 | 0                          | 0                              | 0                               | 0                              | 0  | \$0             | 0                              | 0                                  | 0                     | 0                               | 0                              | 0  | \$0             |
| 6  | Programmatic Expenses****  | 0  | 0                                 | 0                          | 0                              | 0                               | 0                              | 0  | \$0             | 0                              | 0                                  | 0                     | 0                               | 0                              | 0  | \$0             |
| 7  | Total Costs  | \$48,074   | \$0                               | \$0                        | \$0                            | \$0                             | \$0                            | \$0  | \$48,074        | \$140,177                      | \$0                                | \$0                   | \$0                             | \$0                            | \$0  | \$140,177       |
| 8  | Identify reallocation sources in Table 4   |  |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 9  | ****Includes recurring E&G funded costs ("reallocated base," "enrollment growth," and "new recurring") from Years 1-4 that continue into Year 5  |  |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 10 | ****Identify if non-recurring  |  |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 11 | ****Include library costs, expenses, OCC, special categories, etc.   |  |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 12 | Faculty and Staff Summary  |  |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 13 | Total Positions  | Year 1   | Year 5                            |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 14 | Faculty (person-years)   | 0.59   | 0.59                              |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 15 | FTE (ASP and USPS)   | 0.35   | 0.35                              |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 16 |  |  |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 17 |  |  |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 18 | <b>Table 3a Column Explanations</b>  |  |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 19 | 1  | E&G funds that are already available in the university's budget and will be reallocated to support the new program. Please include these funds in the Table 4 - Anticipated reallocation of E&G funds and indicate their source.   |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 20 | 2  | Additional E&G funds allocated from the tuition and fees trust fund contingent on enrollment increases.  |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 21 | 3  | Recurring funds appropriated by the Legislature to support implementation of the program.  |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 22 | 4  | Non-recurring funds appropriated by the Legislature to support implementation of the program. Please provide an explanation of the source of these funds in the budget section (section VIII.A.) of the proposal. These funds can include initial investments, such as infrastructure. |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 23 | 5  | Contracts and grants funding available for the program.  |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 24 | 6  | Philanthropy Endowments (D&O) to support the program.  |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 25 | 7  | Includes the sum of columns 1, 2, and 3 over time.   |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 26 | 8  | See explanation provided for column 2.   |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 27 | 9  | These are specific funds provided by the Legislature to support implementation of the program.   |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 28 | 10   | See explanation provided for column 5.   |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 29 | 11   | See explanation provided for column 6.   |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |
| 30 | 12   | Any funding sources not already covered in any other column of the table. Please provide an explanation for any funds listed in these columns in the narrative for Section VIII.A. of the proposal.  |                                   |                            |                                |                                 |                                |  |                 |                                |                                    |                       |                                 |                                |  |                 |

| Year 1  | Year 5  | Total E&G Funding | Annual Student FTE | E&G Cost per FTE |
|---------|---------|-------------------|--------------------|------------------|
| 12919.6 | 9345.12 | \$140,177         | 3.75               | 9345.12          |

Calculated Cost per Student FTE

**APPENDIX A**  
**TABLE 4**  
**ANTICIPATED REALLOCATION OF EDUCATION GENERAL FUNDS\***

| Program and/or E&G account from which current funds will be reallocated during Year 1 | Base before reallocation | Amount to be reallocated | Base after reallocation |
|---|--------------------------|--------------------------|-------------------------|
| URP E&G account   | 70,000                   | 48,074                   | \$21,926                |
|   | 0                        | 0                        | \$0                     |
|   | 0                        | 0                        | \$0                     |
|   | 0                        | 0                        | \$0                     |
|   | 0                        | 0                        | \$0                     |
|   | 0                        | 0                        | \$0                     |
|   | 0                        | 0                        | \$0                     |
|   | 0                        | 0                        | \$0                     |
| <b>Totals</b>   | <b>\$70,000</b>          | <b>\$48,074</b>          | <b>\$21,926</b>         |

\* If not reallocating E&G funds, please submit a zeroed Table 4

## APPENDIX B

### Communications with Dr. Juan Gilbert, Chair of the Department of Computer and Information Science and Engineering

**From:** Gilbert, Juan E <[juan@ufl.edu](mailto:juan@ufl.edu)>  
**Sent:** Tuesday, March 31, 2020 10:46 AM  
**To:** Peng, Zhong-Ren <[zpeng@ufl.edu](mailto:zpeng@ufl.edu)>  
**Cc:** Larsen, Kristin Esther <[klarsen@ufl.edu](mailto:klarsen@ufl.edu)>; Stephens, Tina <[tstephens@cise.ufl.edu](mailto:tstephens@cise.ufl.edu)>  
**Subject:** Re: Meeting request Re: Urban Analytics

Zhong-Ren, our graduate affairs committee reviewed this and they are OK with this. The only concern they have is if we (CISE) have enough seats in those classes for our own students already? Given the size of our program, we have very limited seats at this time, but we are OK with this and we wanted to make you aware that our classes are very full at this time.

Let me know if you have any questions.

Thanks,

—  
Juan E. Gilbert, Ph.D.  
Andrew Banks Family Preeminence Endowed Professor & Chair  
Computer & Information Science & Engineering Department  
Herbert Wertheim College of Engineering  
University of Florida  
P.O. Box 116120  
Gainesville, FL 32611  
352.392.1527 (V)  
352.273.0738 (F)  
[juan@ufl.edu](mailto:juan@ufl.edu)  
Twitter: @DrJuanGilbert  
<http://www.juangilbert.com/>

On Mar 27, 2020, at 10:14 AM, Gilbert, Juan E <[juan@ufl.edu](mailto:juan@ufl.edu)> wrote:

Zhong-Ren, I will have our graduate affairs committee review this and we will get back with you.

Thanks,

On Mar 27, 2020, at 12:21 AM, Peng, Zhong-Ren <[zpeng@ufl.edu](mailto:zpeng@ufl.edu)> wrote:

Dear Juan,



Just want to give you an update on this issue. The faculty at the Department of Urban and Regional Planning has approved the proposal to develop a Master of Urban Analytics and a Certificate of Urban Analytics. The pre-proposal of the Master of Urban Analytics has been forwarded to the Provost's office who will forward to the Governing Board for final approval. Once the pre-proposal is approved, we will develop a full proposal. It will be a long process.

The Certificate of Urban Analytics proposal (attached) needs to go through the UF approval system. Since the students need to take some of the courses from your department, the UF approval system needs supporting documents that include your agreement to allow the Certificate students to take courses from your department. You don't have to provide a formal letter of support, an e-mail is sufficient.

I anticipate no more than 5 students per year would take the certificate, so the demand for your courses is small. Plus, we have identified many courses from your department, therefore, it's unlikely all students will select the same course.

Thank you for your support. I look forward to your positive response.

Zhong-Ren

Communications with Department of Electrical and Computer Engineering

**From:** Harris, John Gregory <harris@ece.ufl.edu>  
**Sent:** Sunday, March 29, 2020 1:28 PM  
**To:** Peng, Zhong-Ren <zpeng@ufl.edu>  
**Cc:** Evern, Michelle L <mevern@ece.ufl.edu>  
**Subject:** Re: Meeting request

Hello Zhong-Ren,

Hope you are staying safe in these dire times. Thanks for spearheading the new Master of Urban Analytics and the new Certificate of Urban Analytics. These are good opportunities for the students. The students in these programs have permission to take course in the Electrical and Computer Engineering Department provided they meet the course prerequisites. Let me know if you need anything else from me.

Good luck with these programs. Hopefully we will all be back on campus soon.

John

**John G. Harris, Professor and Chair**  
**Department of Electrical and Computer Engineering**  
216 Larsen Hall, P.O. Box 116200  
University of Florida, Gainesville, FL 32611-6200  
[www.ece.ufl.edu](http://www.ece.ufl.edu), [harris@ece.ufl.edu](mailto:harris@ece.ufl.edu), (352) 392-0913

On Mar 27, 2020, at 12:14 AM, Peng, Zhong-Ren <[zpeng@ufl.edu](mailto:zpeng@ufl.edu)> wrote:

Dear John,

Just want to give you an update on this issue. The faculty at the Department of Urban and Regional Planning has approved the proposal to develop a Master of Urban Analytics and a Certificate of Urban Analytics. The pre-proposal of the Master of Urban Analytics has been forwarded to the Provost's office who will forward to the Governing Board for final approval. Once the pre-proposal is approved, we will develop a full proposal. It will be a long process.

The Certificate of Urban Analytics proposal (attached) needs to go through the UF approval system. Since the students need to take some of the courses from your department, the UF approval system needs supporting documents that include your agreement to allow the Certificate students to take courses from your department. You don't have to provide a formal letter of support, an e-mail is sufficient.

I anticipate no more than 5 students per year would take the certificate, so the demand for your courses is small. Plus, we have identified many courses from your department, therefore, it's unlikely all students will select the same course.

Thank you for your support. I look forward to your positive response.

Zhong-Ren



1402 Third Avenue #206  
Seattle, WA 98101  
(206) 735-7466 | [altago.com](http://altago.com)

3/26/2021

UF Administration  
University of Florida  
College of Design, Construction and Planning  
P.O. Box 115701  
Gainesville, FL 32611-5701

### **Letter of Support for Urban Analytics Program**

Dear UF Administration,

We are writing to offer our support for the proposed Master of Science in an Urban/Civic Analytics program at the Department of Urban and Regional Planning at the University of Florida. We believe that this program will prepare the next generation of civil servants for an era defined by changing expectations brought by technological change.

Many organizations across the public and private sectors are undergoing digital transformations at an accelerating pace. Simultaneously, technology is ruthlessly reducing the transaction costs in most arenas of life including how we find information, how we purchase things, and how we acquire mobility on demand. All of this is occurring in a world awash with new datasets derived from telematics, mobility data standards, and now artificial intelligence. As these new datasets emerge, so are new processing capabilities ranging from learning algorithms to new frontiers of graphic processing units (GPU) oriented computing. The International Transport Forum is trying to prepare practitioners for a time when policy is algorithmically governed. These are the unavoidable trends of our business. The planning profession is awakening to these new opportunities, and, as advisors and guardians of the future of our built environments, we need to do more to prepare for what is next.

There is great demand for urban & regional planning students who also have skills in data science, coding, and GIS. The profession needs to define how these technologies can better the lives of the people we serve, or their applications will be decided purely by technologists with no commitment or context to support the public interest. We also hope this program would promote the recruitment of underrepresented voices in planning so that graduates will come from a diversity of socioeconomic perspectives, cultures, and ethnicities. This is critical for the planning profession as we work to solve problems in diverse communities. An MS in Urban/Civic Analytics that will educate graduate students in both analytics and urban planning is exactly what we need to grow our business and transform our profession. We highly support it and would be interested in hiring qualified graduates from this program.

Sincerely,

David Wasserman, AICP, Data Science Practice Leader

Alta Planning + Design, Inc

### **About Alta Planning & Design**

Alta Planning + Design is an active transportation company dedicated to creating active, healthy communities through planning, landscape architecture, engineering, and education/encouragement programs. Alta was founded in 1996 when cities and communities were calling for safer streets for people walking and bicycling as the non-motorized transportation movement developed into a profession in the United States. We pioneered the field of active transportation, evolving our planning and design work into a visionary global practice that empowers people to live active, healthy lives and gets them to where they need to go.

[altago.com](http://altago.com)

Revised 12-8-21

**APPENDIX C – Faculty CV**

**DR. KRISTIN E. LARSEN, AICP**  
**University of Florida, Department of Urban and Regional Planning**  
**P.O. Box 115706**  
**Gainesville, FL 32611-5706**  
**352-294-1482 klarsen@ufl.edu**

### **Academic Employment**

- 1/13 – DIRECTOR, University of Florida (UF), School of Landscape Architecture and Planning (SLA&P); since 1/16, this appointment also incorporates the position of Chair, Department of Urban and Regional Planning (URP)
- 1/11–12/12 CHAIR, UF, URP
- 7/18 – PROFESSOR, UF, URP
- 8/08 – 6/18 ASSOCIATE PROFESSOR, UF, URP
- 8/01–8/08 ASSISTANT PROFESSOR, UF, URP; Graduate Coordinator from 5/06 to 5/09

### **Education**

- 8/95 – 5/01 Cornell University – Doctoral degree with a focus on City and Regional Planning.
- 8/87 – 5/90 University of Florida – Master of Arts in Urban and Regional Planning.
- 6/86 – 8/86 University of Florida – Post-bac at the Preservation Institute: Nantucket.
- 8/81 – 5/86 University of Florida – Bachelor of Science in Business Administration.

### **Administrative Accomplishments**

As Chair of the Department of URP, I spearheaded the development of the first online graduate program in urban and regional planning in the U.S., shepherded the department through two successful accreditation reviews, both securing the maximum 7-year period with the most recent review including the online delivery of our graduate degree, making it the first fully online accredited degree in planning. As Director of the School of Landscape Architecture and Planning, I strengthened the collaborative research and teaching opportunities between landscape architecture and planning, establishing further integration via updated bylaws, and spearheaded the adoption of the School's first strategic plan.

### **Teaching Milestones**

Received Outstanding Teacher of the Year four times in URP and once college-wide. Developed four new courses and significantly revised a fifth course for online delivery. Chaired 39, co-chaired 30, and participated as a member of 22 master's thesis and project committees for students who have completed their degrees and chaired 6, co-chaired 3, and participated as a member on 5 dissertation committees for Ph.D. students who have completed their degrees. I also participated on 6 graduate committees of students who completed a non-thesis option.

### **Grants (selected)**

- Over \$1,032,021 in internal and external grants awarded either as Principal or Co-Principal Investigator since Fall 2001 including the HUD Urban Scholars Fellowship, the State of Florida Division of Historical Resources Grant, and the UF-City of Gainesville Research Awards.
- 5/19-7/21 Principal Investigator, Clarence S. Stein Institute for Urban and Landscape Studies, support archival research toward completion of a book, *Design for Community Resilience – The Legacy of Henry Wright* – \$9,800.
- 5/17-5/18 Co-Principal Investigator with Kathryn Frank (PI), Laura Dedenbach (Co-PI), and Tyeshia Redden (Co-PI) on a UF-City of Gainesville Research Award, “Neighborhoods as Community Assets: Preparing for the Future While Protecting Neighborhoods” - \$49,131.
- 8/09-8/10 Research funds from the Clarence S. Stein Institute during my sabbatical year to

Revised 12-8-21

- complete a draft of the biography of Clarence S. Stein - \$20,000.
- 9/07-12/10 Co-Principal Investigator with Dr. Ilir Bejleri, William O'Dell, and Dr. Ruth Steiner on a research grant from the Wachovia Foundation to develop a "Florida Housing Suitability Model" – grant of \$500,000.
- 8/05-10/06 Co-Principal Investigator with Timothy McLendon (Principal Investigator), Florida Department of State, Division of Historical Resources Grant, "Contributions of Historic Preservation to the Quality of Life of Florida Residents" – grant of \$89,250.
- 6/04-9/05 Principal Investigator, HUD Urban Scholars Fellowship, "Defining Characteristics and Implementation: Analysis of Housing Trust Funds with a Focus on Florida's SHIP Program" – grant of \$52,862.

### Publications (selected)

- 2020 Laura Dedenbach, Kathryn Frank, Kristin Larsen, and Tyeshia Redden. "Building the Foundation for Arnstein's Ladder: Community Empowerment through a Participatory Neighborhood Narrative Process" in Mickey Lauria and Carissa Slotterback (Eds.) *Learning from Arnstein's Ladder: From Citizen Participation to Public Engagement*, RTPI Library Series.
- 2017 Laurel Harbin and Kristin Larsen. "Communitarian Regionalism in India: How Lessons from the New Deal Greenbelt Town Programme Translated to Post-World War II India." *Planning Perspectives*, 32(2): 225-247.
- 2017 Jeongseob Kim and Kristin Larsen. "Can New Urbanism Infill Development Contribute to Social Sustainability? The Case of Orlando, Florida." *Urban Studies*. 54(16): 3843-3862.
- 2016 Kristin Larsen. *Community Architect: The Life and Vision of Clarence S. Stein*. New York: Cornell University Press.
- 2015 Ruonui Wang, Kristin Larsen, & Anne Ray. "Rethinking Locational Outcomes for Housing Choice Vouchers: A Case Study in Duval County, Florida." *Housing Policy Debate*, 25(4), 715-738.
- 2009 Kristin Larsen. "Reassessing State Housing Trust Funds – Results of a Florida Survey." *Housing Studies*, Vol. 24 (2): 173-201.
- 2008 Kristin Larsen. "The Radburn Idea as an Emergent Concept – Henry Wright's Regional City." *Planning Perspectives*, Vol. 23(3): 381-395.
- 2005 Kristin Larsen. "Cities to Come – Clarence Stein's Post-War Regionalism." *Journal of Planning History*, Vol. 4 (1): 33-51.
- 2002 Kristin Larsen. "Harmonious Inequality? Zoning, Public Housing, and Orlando's Separate City, 1920-1945." *Journal of Planning History*, 1(2): 154-180

[15 additional peer reviewed publications plus 4 book reviews and 7 reports.]

### Conference Engagement

Peer reviewed presentations at six international and twenty-one national conferences. In 2014, I served as a member of the International Planning History Society Conference Program and Proceedings Committee. This is the primary conference for planning historians worldwide. In 2013, I served as co-chair of the Conference Program Committee for the Society for American City and Regional Planning History (SACRPH). In 2010-11, I co-chaired the Planning History Track for the World Planning Schools Congress, 2011.

### Service (selected)

I served as one of two elected Southeastern Regional Representatives to the Association of Collegiate Schools of Planning Governing Board from 2016-18. This is the primary national organization for planning academics. From 2015-19, I have served as book review editor of the

*Journal of Planning History* and continue to serve on the journal's editorial board. In August 2006, I was appointed by Governor Jeb Bush to serve on the Governor's Affordable Housing Study Commission, which I did until the commission was disbanded in June 2011.



**Resume**

**Name:** Zhong Ren Peng **Email:** zpeng@ufl.edu  
**Position:** Professor **Telephone:** 352-294-1491  
**Professional Mailing Address:** 462 ARCH Building, University of Florida  
**City:** Gainesville **State:** Florida  
**Fax:** 352-392-3308 **Zip Code:** 32611

**a) Professional Preparations**

|   |               |             |       |
|---|---------------|-------------|-------|
| Portland State University                     | Urban Studies | August 1994 | Ph.D. |
| Portland State University                     | Economics     | June 1994   | M.S.  |
| University of Science and Technology of China | Geography     | July 1986   | M.S.  |
| Central China Normal University               | Geography     | July 1983   | B.S.  |

**b) Appointments**

| <b>Dates</b>     | <b>Organization</b>  | <b>Position</b>                                  |
|------------------|--|--|
| 3/2017 – Current | International Center for Adaptation Planning and Design, University of Florida | Director and Professor                           |
| 1/2011 – Current | University of Florida  | Professor  |
| 8/07 – 12/2010   | University of Florida  | Professor and Chair                              |
| 8/05 – 8/07      | University of Wisconsin-Milwaukee  | Professor  |
| 4/2003 – 8/07    | Center for Advanced Spatial Information Research,                              | Director   |
| 8/03 – 1/04      | Massachusetts Institute of Technology  | Visiting Associate Professor                     |
| 8/01 – 7/05      | University of Wisconsin-Milwaukee  | Associate Professor                              |
| 8/96 – 7/01      | University of Wisconsin-Milwaukee  | Assistant Professor                              |
| 9/95 – 8/96      | Georgia Institute of Technology  | Research Scientist II                            |
| 9/94 -- 8/95     | Portland State University, Oregon  | Research Associate & Adjunct Assistant Professor |
| 8/86 -- 2/90     | Chinese Academy of Sciences, Beijing, PRC                                      | Assistant Research Professor                     |

**c) Products****Recent Publications**

- Han, Yu and **Zhong-Ren Peng\***, (2019), “The integration of local government, residents, and insurance in coastal adaptation: an agent-based modeling approach,” *Computers, Environment and Urban Systems*, Volume 76, Pages 69-79, (<https://doi.org/10.1016/j.compenvurbsys.2019.04.001>)
- Fu, Xinyu, Bowen Sun, Kathryn Frank, Zhong-Ren Peng (2019), “Evaluating sea-level rise vulnerability assessments in the USA,” *Climatic Change* (2019) 155: 393–415. <https://doi.org/10.1007/s10584-019-02488-5>
- Fu, Xinyu and Zhong-Ren Peng (2018), Assessing the sea-level rise vulnerability in coastal communities: A case study in the Tampa Bay Region, US, *Cities*, <https://doi.org/10.1016/j.cities.2018.10.007>
- Li, Chao, Zhanyong Wang\*, Bai Li, **Zhong-Ren Peng\***, Qingyan Fu (2018), Investigating the relationship between air pollution variation and urban form. *Building and Environment*, <https://doi.org/10.1016/j.buildenv.2018.06.038>
- Song, Jie, Xinyu Fu, Ruoniu Wang, **Zhong-Ren Peng\***, Zongni Gu (2017), “Does planned retreat matter? Investigating land use change under the impacts of flooding induced by sea level rise,” *Mitigation and Adaptation Strategies for Global Change*, (<https://doi.org/10.1007/s11027-017-9756-x>)
- Jie Song, Xinyu Fu, Yue Gu, Yujun Deng, **Zhong-Ren Peng\*** (2017), An Examination of Land Use Impacts of Sea Level Rise Induced Flooding. *Natural Hazards and Earth System Sciences*, 17(3), 315-334. doi:10.5194/nhess-17-315-2017

7. Fu, Xinyu, Jie Song, Bowen Sun, and **Zhong-Ren Peng\***, (2016), "Living on the Edge": Estimating the Economic Cost of Sea Level Rise on Coastal Real Estate in the Tampa Bay Region, Florida, *Ocean & Coastal Management*, DOI: 10.1016/j.ocecoaman.2016.09.009.
8. Song, J., **Peng\***, Z. R., Zhao, L., & Hsu, C. H. (2016), "Developing a theoretical framework for integrated vulnerability of businesses to sea level rise." *Natural Hazards*, 1-21.
9. Fu, Xinyu, Mohammed Gomaa, Yujun Deng & **Zhong-Ren Peng\*** (2016), Adaptation planning for sea level rise: a study of US coastal cities, *Journal of Environmental Planning and Management*, DOI:10.1080/09640568.2016.1151771

#### d) **Synergistic Activities**

In the last five years (2015-2019), Dr. Peng published 66 refereed journal articles, 4 book chapters and made over 30 presentations as keynote speaker, invited speaker and conference presenter in international conferences in the areas of adaptation planning for climate change, transportation planning, transportation and environment, and geographic information systems (GIS), particularly Internet GIS.

#### **Selected Research Grants**

1. "Evaluating the connection between transit and TNCs (Transportation Network Companies)," Sponsored by the Florida Department of Transportation, \$200,000, Role: PI, 9/1/2019 – 1/31/2021
2. "Evaluating the effectiveness and funding mechanism of the Downtowner service in Tampa, Florida for statewide application", Sponsored by the Florida Department of Transportation, \$163,766, Role: PI, 8/15/2019 – 10/30/2020
3. Belmont Forum: Enabling Large-Scale Adaptive Integration of Technology Hubs to Enhance Community Resilience Through Decentralized Urban Food-Water-Energy Nexus Decision Support, Sponsored by Belmont Forum/NSF, \$258,956, August 2018 – July 2021, Role: UF-PI
4. Economic Analysis Framework for Freight Transportation Based on Florida Statewide Multi-Modal Freight Model, Sponsored by Florida Department of Transportation, \$339,930, August 2016 – February 2018, Role: PI
5. Coastal SEES (Track 1): Planning for hydrologic and ecological impacts of sea level rise on sustainability of coastal water resources, Sponsored by National Science Foundation, \$476,904, August 2013 – July 2015, Role: Co-PI
6. A Spatial-Temporal Econometric Model to Estimate Costs and Benefits of Sea-Level Rise Adaptation Strategies, Sponsored by Florida Sea Grant, \$200,000, Feb. 2012 – Jan. 2014, Role: PI
7. Development of Sea Level Rise Adaptation Planning Procedures and Tools Using NOAA Sea Level Rise Impacts Viewer, Sponsored by NOAA, \$185,000, Feb. 2012 – Jan. 2014, Role: PI
8. A Parameterized Climate Change Projection Model for Hurricane Flooding, Wave Action, Economic Damages, and Population Dynamics, sponsored by NOAA, \$400,000, September 2009-January 2014, Role, Co-PI.

#### **Awards**

1. University of Florida Term Professor, by the University of Florida, September 2017
2. International Educator of the Year, by University of Florida, October 2016
3. UF Research Foundation Professor, by University of Florida, March 2016

#### **Service**

1. Member, Geographic Information Science and Applications Committee, Transportation Research Board of National Academy of Science, 2011- current
2. Co-Chair, Sensor Technology Sub-Committee, Transportation Research Board of National Academy of Science, 2012 – current
3. Board of Director and Chair, International Association for China Planning (2006 – 2011)
4. Editorial Board member of the Journal of Urban and Regional Information Systems Association (URISA) (2008 – current)
5. Editorial Board member of the Journal of Intelligent Transportation Systems (2011 – current)

### Abbreviated Faculty Curriculum Vitae

|                           |                  |                            |  |                                  |  |
|---------------------------|------------------|----------------------------|--|----------------------------------|--|
| Name: <b>Ilir Bejleri</b> |                  |                            |  | Year of Appointment: <b>2001</b> |  |
| Academic Rank:            |                  | <b>Associate Professor</b> |  | Other:                           |  |
| Association with Program: | <b>Full-time</b> |                            |  |                                  |  |
| Tenured:                  | <b>Yes</b>       |                            |  |                                  |  |

#### **Educational History:**

|   |                       |                             |      |
|---|-----------------------|-----------------------------|------|
| University of Tirana, Albania             | PhD                   | Architecture / Urban Design | 1994 |
| Polytechnic University of Tirana, Albania | Candidate of Sciences | Architecture                | 1992 |
| Polytechnic University of Tirana, Albania | BS                    | Architecture                | 1986 |

#### **Positions and Employment**

|                   |  |
|-------------------|--|
| 07/2007 – Present | Associate Professor, Department of Urban and Regional Planning, University of Florida                            |
| 08/2011 – Present | Associate Professor, (affiliate appointment), Department of Coastal and Civil Engineering, University of Florida |
| 01/2001 – Present | Co-Director, Geoplan Center, University of Florida   |
| 08/2000 – 06/2007 | Assistant Professor, University of Florida   |
| 08/1999 – 07/2000 | Assistant Scientist, Geoplan Center, University of Florida   |
| 08/1995 – 07/1999 | Research Associate, Geoplan Center, University of Florida  |
| 01/1994 – 06/1995 | Assistant Professor, Polytechnic University of Tirana, Albania   |
| 09/1993 – 12/1993 | Visiting Researcher, Polytechnic University of Milan, Italy  |
| 09/1991 – 08/1993 | Instructor, Polytechnic University of Tirana, Albania  |
| 06/1989 – 06/1991 | Visiting Researcher, Architecture and Design Institute, Tirana, Albania  |
| 09/1987 – 05/1989 | Instructor, Polytechnic University of Tirana, Albania  |

#### **Selected Refereed Journal Articles**

- Bejleri, I., Noh, S., Gu, Z., Steiner, R. L., & Winter, S. M. (2018). Analytical method to determine transportation service gaps for transportation disadvantaged populations. *Transportation Research Record*, 2672(8), 649-661. doi: 10.1177/0361198118794290
- Neff, D.F., Yoon, S., Bejleri, I., Steiner, R., Everhart, D., Bumbach, M., Harman, J. (2018), Impact of NP state regulations on population access to care, *Nursing Outlook*, DOI 10.1016/j.outlook.2018.03.001
- Bejleri, I., Steiner, R. L., Yoon, S., Harman, J., & Neff, D. F. (2017). Exploring transportation networks relationship to healthcare access and as affected by urban sprawl. *Transportation Research Procedia*, 25, 3066-3078, DOI- <https://doi.org/10.1016/j.trpro.2017.05.314>
- Bejleri, I., Steiner, R., Neff, D.F., Harman, J., Yoon, S., Lutz, B., and Bumbach, M. (2015). Informing Planning to Address Healthcare Disparities: Assessing Spatial Accessibility to Health Care Using GIS Analysis. *Proceedings of the Annual Conference of the 14th International Conference on Computers in Urban Planning and Urban Management (CUPUM)*. Boston, MA, July 2015
- Carrick, G., Bejleri, I., Ouyang, Y., “Methodological Approach to Spatiotemporal Optimization of Rural Freeway Enforcement in Florida”, *Transportation Research Record: Journal of the Transportation Research Board*, No 2425, Transportation Research Board of the National Academies, Washington, DC, 2014, pp 1-9

Ouyang, Y., Bejleri, I., "Geographic Information System-Based Community-Level Method to Evaluate Influence of Built Environment on Traffic Crashes", Transportation Research Record: Journal of the Transportation Research Board, No 2432, Transportation Research Board of the National Academies, Washington, DC, 2014, pp 124-132

Bejleri, I., Carrick, G, Wingfield, N., "Rethinking Electronic Crash Data Collection Transmission Model: Conceptual Framework for Centralized Web-Based Crash Data Collection System," Transportation Research Record: The Journal of the Transportation Research Board, Issue 2148, 2010, pp 93-100

**Selected Funded research contracts, grants or commissions**

**Title: Expanding Accessibility, Utilization and Data Integration of Signal Four Analytics (GIS Web-Based Crash Data Collection, Reporting and Analysis System)**

**Sponsor: Florida Department of Transportation**

**Role: Principal Investigator**

**Duration: October 2013 – September 2020**

**Total Award: \$1,800,000**

**Title: A Unified and Sustainable Solution to Improve Geolocation Accuracy of Crash Data.**

**Sponsor: Florida Department of Transportation**

**Role: Principal Investigator**

**Duration: October 2012 – September 2020**

**Total Award: \$1,100,000**

**Title: Transportation Safety Center**

**Sponsor: Florida Department of Transportation**

**Role: Co-Principal Investigator (with Nithin Agarwal as PI)**

**Duration: July 2018 – December 2020**

**Total Award: \$220,000 (Co-PI portion)**

**Title: Metroplan Orlando Crash Geospatial Database**

**Sponsor: Metroplan Orlando Metropolitan Planning Organization**

**Role: Principal Investigator**

**Duration: July 2010 – June 2020**

**Total Award: \$350,000**

**Title: Large Truck Crash Analysis for Freight Mobility and Safety Enhancement in Florida**

**Sponsor: Florida Department of Transportation**

**Role: Co-Principal Investigator (with Xia Jin as PI)**

**Duration: January 2017 – June 2019**

**Total Award: \$80,000 (Co-PI portion)**

**Title: GIS-Based Instructional Tool for Crash Prediction Methods**

**Sponsor: Southeastern Transportation Research Innovation Education Development Center (STRIDE)**

**Role: Principal Investigator**

**Duration: August 2013 – December 2014**

**Total Award: \$79,000**

## NSF BIOGRAPHICAL SKETCH

---

NAME: Wang, Yan

---

ORCID: 0000-0002-3946-9418

---

POSITION TITLE & INSTITUTION: Assistant Professor, Department of Urban and Regional Planning and Florida Institute for Built Environment Resilience

---

### (a) PROFESSIONAL PREPARATION

| INSTITUTION                       | LOCATION                | MAJOR / AREA OF STUDY                     | DEGREE<br>(if applicable) | YEAR<br>YYYY |
|-----------------------------------|-------------------------|---|---------------------------|--------------|
| Beijing<br>Jiaotong<br>University | Beijing                 | Construction, Engineering<br>& Management | BENG                      | 2013         |
| Beijing<br>Jiaotong<br>University | Beijing                 | Asset Valuation                           | MOTH                      | 2015         |
| Virginia Tech                     | Blacksburg,<br>Virginia | Civil Engineering                         | PHD                       | 2018         |

### (b) APPOINTMENTS

2018 - present Assistant Professor, Department of Urban and Regional Planning and Florida Institute for Built Environment Resilience, University of Florida, Gainesville, FL

2016 - present Visiting Researcher, Department of Construction and Infrastructure System Engineering, Georgia Institute of Technology, Atlanta, GA

2015 - 2018 Graduate Fellow, BioBuild Program, Interdisciplinary Graduate Education Programs (IGEP), Virginia Tech, Blacksburg, VA

### (c) PRODUCTS

#### Products Most Closely Related to the Proposed Project

- Hao H, Wang Y. Leveraging multimodal social media data for rapid disaster damage assessment. *International Journal of Disaster Risk Reduction*. 2020; 51:101760. DOI: <https://doi.org/10.1016/j.ijdrr.2020.101760>
- Wang Y, Taylor J. Detecting urban emergencies technique (DUET): A data-driven approach based on Latent Dirichlet Allocation topic modeling. *Journal of Computing in Civil Engineering*. 2019; 33(3):04019023. DOI: [https://doi.org/10.1061/\(ASCE\)CP.1943-5487.0000819](https://doi.org/10.1061/(ASCE)CP.1943-5487.0000819)
- Wang Y, Hulse D, Von Meding J, Brown M, Dedenbach L. Conceiving resilience: Lexical shifts and proximal meanings in the human-centered natural and built environment literature from 1990 to 2018. *Developments in the Built Environment*. 2020; 1:100003. DOI: <https://doi.org/10.1016/j.dibe.2019.100003>
- Wang Y, Taylor J, Garvin M. Measuring resilience of human-spatial systems to disasters: framework combining crowdsourced spatial-network analysis and fisher information. *Journal*

Revised 12-8-21

of Management in Engineering. 2020; 36(4). DOI:  
[https://doi.org/10.1061/\(ASCE\)ME.19435479.0000782](https://doi.org/10.1061/(ASCE)ME.19435479.0000782)

5. Wang Y, Taylor J. Coupling sentiment and human mobility in natural disasters: a twitter-based study of the 2014 south Napa earthquake. *Natural Hazards*. 2018; 92:907–925. DOI:  
<https://doi.org/10.1007/s11069-018-3231-1>

#### **Other Significant Products, Whether or Not Related to the Proposed Project**

1. Hao H, Wang Y. Hurricane damage assessment with multi-, crowd-sourced image data: A case study of Hurricane Irma in the city of Miami. *ISCRAM 2020 Conference Proceedings-17th International Conference on Information Systems for Crisis Response and Management*. 2020; :825837. Available from: <http://idl.iscram.org>
2. Yao F, Wang Y. Domain-specific sentiment analysis for tweets during hurricanes (DSSA-H): A domain-adversarial neural-network-based approach. *Computers, Environment and Urban Systems*. 2020; 83:101522. DOI: <https://doi.org/10.1016/j.compenvurbsys.2020.101522>
3. Wang Y, Rahimi-Golkhandan A, Chen C, Taylor JE, Garvin M. Measuring the impact of transportation diversity on disaster resilience in urban communities: Case study of Hurricane Harvey in Houston TX. *ASCE International Conference on Computing in Civil Engineering*. 2019; DOI: <https://doi.org/10.1061/9780784482445.071>
4. Yao F, Wang Y. Tracking urban geo-topics based on dynamic topic model. *Computers, Environment and Urban Systems*. 2019; 79:101419.
5. Wang Y, Wang Q, Taylor J. Aggregated responses of human mobility to severe winter storms: An empirical study. *PloS ONE*. 2017; 12(12):e0188734.

#### **(d) SYNERGISTIC ACTIVITIES**

1. Developing data-driven computational methodologies for intelligent disaster and pandemic response (2015-current). UF PI of NSF RAPID Sub award, Discovering Crises within Crises – Real-Time Detection, Tracking, and Visualization of Emergent Crises in Hurricanes (2017-2019). PI of NSF RAPID project on Dynamic Interactions between Human and Information in Complex Online Environments Responding to SARS-COV-2 (2020-2021).
2. Promoting data equity in disaster impact mitigation research (2016-current). PI of Examining Digital Vulnerability to Flooding Among Subsidized Housing Residents in Florida funded by Natural Hazards Center Mitigation Matters Research Program (2020-2021).
3. Concerning resilience and safety in building smart communities. (2015-current) Co-PI. NSF SCCPG: Coordinated Safety Management Across Smart Communities (2020-2021). PI of UF-funded project on Towards Responsive & Resilient Cities: BETerms for Crowdsourcing Perceived Built Environment funded by UF DCP Research Initiative SEED Grant (past).
4. Teaching and mentoring. Teaching Geographic Information System (GIS) in the Department of Urban and Regional Planning (2018-current); Advising two women STEM PhD students as the committee chair (2018-current). Mentored two doctoral students and two underrepresented students with multi-disciplinary backgrounds (2016-2018).
5. Serving broad academic communities (2015-Present). Reviewing top-ranked journals with focuses on disaster and computing including *Journal of Computing in Civil Engineering* and *International Journal of Disaster Risk Reduction*; Being Member of Association of Collegiate Schools of Planning, American Planning Association, and American Society of Civil Engineers.

**BIOGRAPHICAL SKETCH****NAME: Tepe, Emre****ORCID: 0000-0001-8575-2401****POSITION TITLE & INSTITUTION: Assistant Professor, University of Florida****(a) PROFESSIONAL PREPARATION**

| INSTITUTION                   | LOCATION       | MAJOR / AREA OF STUDY       | DEGREE (if applicable) | YEAR YYYY |
|-------------------------------|----------------|-----------------------------|------------------------|-----------|
| Istanbul Technical University | Istanbul       | Urban and Regional Planning | BS                     | 2007      |
| Istanbul Technical University | Istanbul       | Urban Planning              | MS                     | 2010      |
| The Ohio State University     | Columbus, Ohio | City and Regional Planning  | MS                     | 2013      |
| The Ohio State University     | Columbus, Ohio | City and Regional Planning  | PhD                    | 2016      |

**(b) APPOINTMENTS**

|                |   |
|----------------|---|
| 2019 - present | Assistant Professor, University of Florida, Urban and Regional Planning, Gainesville, Florida |
| 2017 – 2019    | Assistant Professor, Gebze Technical University, City and Regional Planning, Kocaeli          |
| 2017 – 2017    | Adjunct Faculty, Kadir Has University, Real Estate and Asset Valuation, Istanbul              |
| 2016 – 2017    | Adjunct Faculty, Cankaya University, City and Regional Planning, Ankara                       |

**(c) PRODUCTS**

1. Tepe E, Guldmann J. Spatial and temporal modeling of parcel-level land dynamics. Computers, Environments and Urban Systems. 2017 March 09; 64:204-214. Available from: <https://www.sciencedirect.com/science/article/pii/S0198971516301880> DOI: <https://doi.org/10.1016/j.compenvurbsys.2017.02.005>
2. Tepe E, Guldmann J. Spatio-temporal multinomial autologistic modeling of land-use change: A parcel-level approach. Environment and Planning B: Urban Analytics and City Science. 2020 March 01; 47(3):473-488. Available from: <https://journals.sagepub.com/doi/full/10.1177/2399808318786511> DOI: <https://doi.org/10.1177/2399808318786511>
3. Berkoz L, Tepe E. The Intra-Metropolitan Location of Banks in Istanbul: Location of Banks. Saarbrücken/Germany: VDM Verlag Dr. Müller; 2011. 64p.
4. Berkoz L, Tepe E. The Impacts of the Gated Residential Areas on The Urban Sprawl of Istanbul. Academic Research International. 2013 May 01; 3(1):1-17.

**(d) SYNERGISTIC ACTIVITIES**

1. Review manuscripts on spatial-temporal modeling and land-use change modeling in the following journals: Computers, Environment and Urban Systems; Journal of Planning Literature; Annals of Regional Science, Remote Sensing; Forests; Sustainability.

## Shenhao Wang

Assistant Professor in Urban Artificial Intelligence  
Department of Urban and Regional Planning, University of Florida  
Email: [shenhaowang@ufl.edu](mailto:shenhaowang@ufl.edu)

### EDUCATION

---

- 2020 Interdepartmental Ph.D. in Computer and Urban Science, MIT  
Dissertation: Deep neural networks for choice analysis
- 2017 Master in City Planning and Master of Science in Transportation, MIT
- 2014 B.A. in Economics, Peking University
- 2012 B.A. in Architecture and Law, Master in Architecture, Tsinghua University

### ACADEMIC EXPERIENCE

---

- 2022 - Assistant Professor in Urban Artificial Intelligence, Department of Urban and Regional Planning, University of Florida
- 2021 - 2022 Research Scientist, Urban Mobility Lab (50%) and Human Dynamics Group (50%), Media Lab, Massachusetts Institute of Technology
- 2020 – 2021 Postdoctoral Associate, Human Dynamics Group, Media Lab, MIT
- 2019 – 2021 Postdoctoral Associate, Urban Mobility Lab, Massachusetts Institute of Technology
- 2019 – 2020 Research Fellow, Zoba

### JOURNAL PUBLICATIONS<sup>1</sup>

---

- J14. 2022 D. Zhuang, S. Wang\*, H. Koutsopoulos, and J. Zhao, “Uncertainty quantification of sparse trip demand prediction with spatial-temporal graph neural networks”, (*Proceedings of the 28<sup>th</sup> ACM SIGKDD International Conference on Knowledge Discovery & Data Mining*; acceptance rate: 14.99%; Oral presentation, acceptance rate: 9.2%)
- J13. 2022 S. Cranenburgh\*, S. Wang, A. Vij, F. Pereira, and J. Walker, “Choice modeling in an age of machine learning – discussion paper”, (*Journal of Choice Modeling*: 100340) [IF: 3.1]
- J12. 2021 H. Kong, P. Meredith-Karam, S. Wang, J. Zhao\*, “The relationship between transportation network companies and public transit in Chicago: a comparison before and after COVID-19 shutdowns”, *Journal of Transport Geography* 97: 103219 [IF: 2.7]
- J11. 2021 Y. Zheng, S. Wang\*, and J. Zhao, “Equality of opportunity in travel demand prediction with deep neural networks and discrete choice models”, *Transportation Research Part C: Emerging Technologies*. 132: 103410. [IF: 8.1]
- J10. 2021 S. Wang, Q. Wang, N. Bailey, and J. Zhao\*. “Deep neural networks for choice analysis: A statistical learning theory perspective”, *Transportation Research Part B: Methodological*: 148: 60-81. [IF: 5.6]
- J9. 2021 Y. Zheng, J. Moody, S. Wang, and J. Zhao\*. “Measuring policy leakage of Beijing’s car ownership restriction”, *Transportation Research Part A: Policy and Practice*: 148: 223-236. [IF: 5.6]
- J8. 2021 S. Wang\*, B. Mo, and J. Zhao, “Theory-based residual neural networks: A synergy of discrete choice models and deep neural networks”, *Transportation Research Part B: Methodological*: 146: 333-358. [IF: 5.6]
- J7. 2020 S. Wang\*, Q. Wang and J. Zhao. “Multitask learning deep neural networks to combine revealed and stated preference data”, *Journal of Choice Modelling*: 100236 (Best Ph.D. paper award in *International Choice Modeling Conference* 2019) [IF: 3.1]
- J6. 2020 S. Wang, Q. Wang and J. Zhao\*. “Deep neural networks for choice analysis: Extracting complete economic information for interpretation”, *Transportation research part C: emerging technologies*, 118: 102701. [IF: 8.1]
- J5. 2020 S. Wang, J. Moody, and J. Zhao\*. “What prompts the adoption of car restriction policies among Chinese cities”, *International Journal of Sustainable Transportation*: 1-12. [IF: 3.9]
- J4. 2020 S. Wang, B. Mo, and J. Zhao\*. “Deep neural network for choice analysis: Architecture design with alternative-specific utility functions”, *Transportation Research Part C: Emerging Technologies*, 112, 234-251. [IF: 8.1]
- J3. 2019 S. Wang and J. Zhao\*. “Risk preference and adoption of autonomous vehicles.” *Transportation Research Part A: Policy and Practice*, 126, 215-229. [IF: 5.6]
- J2. 2019 J. Moody, S. Wang, J. Chun, X. Li and J. Zhao\*. “Transportation policy profiles of Chinese city clusters: A mixed methods approach”, *Transportation Research Interdisciplinary Perspectives*, 2, 100053 [IF: 1.8]

---

<sup>1</sup> \*: corresponding author; §: co-first author.



- J1. 2017 S. Wang and J. Zhao\*. "The distributional effects of lotteries and auctions – License plate regulations in Guangzhou." *Transportation Research Part A: Policy and Practice*, 106, 473-483. [IF: 5.6]

## AWARDS AND HONORS

---

- 2021 Dan and Eva Roos Ph.D. Dissertation Prize, MIT Mobility Initiative  
2020 Eric Pas Dissertation Prize, Honorable Mention for one of the top two dissertations, awarded by International Association for Travel Behavior Research  
2020 Outstanding Ph.D. Dissertation Award, Honorable Mention, Department of Urban Studies and Planning, MIT  
2019 Best Ph.D. Paper Award, International Choice Modeling Conference  
2019 Best Presentation Award in Doctoral Research Workshop, Transportation Research Board 98<sup>th</sup> Annual Conference  
2014 Departmental Fellowship, Department of Urban Studies and Planning in MIT  
2011 Outstanding Graduation Thesis, Tsinghua University  
2009 Ni Tianzen Fellowship, Tsinghua University  
2008 China National Fellowship, Tsinghua University

## RESEARCH FUNDING

---

- 2020 – 2024 **Co-PI & Lead Researcher for MIT:** Transit-centric smart mobility system for high-growth urban activity centers: Improving energy efficiency through machine learning. (Collaboration with Northeastern University and National Renewable Energy Laboratory)  
Funding Amount: **\$875,000 (50% of total \$1,750,000)**  
Sponsor: United States Department of Energy  
2019 - 2020 **Lead Researcher:** Spatiotemporal demand analysis of micro mobility with deep learning.  
Funding Amount: **\$35,000 (100%)**  
Sponsor: Zoba

## INVITED TALKS

---

- 2021 "Deep neural networks for choice analysis." Virtual talk for the Eric Pas Dissertation Prize in the seminar of International Association for Travel Behavior Research, Nov 29.  
2021 "Deep neural networks for choice analysis." Virtual talk. Next generation transportation systems seminar. University of Michigan, Nov 11.  
2021 "Deep neural networks for choice analysis." Virtual talk for the acceptance of Dan and Eva Roos Ph.D. Dissertation Prize. MIT Mobility Initiative. October 29.  
2020 "Urban mobility with artificial intelligence and big data", Virtual Talk. CoMotion LA. November 17.  
2020 "Deep neural networks for choice analysis." Virtual talk. Choice Modelling Centre, University of Leeds. June 2.  
2020 "Deep learning in travel behavioral modeling." Virtual talk. Computer Science & Artificial Intelligence Laboratory, MIT. April 13.

## TEACHING EXPERIENCE

---

- 2019 Co-instructor, Deep Learning for Transportation, Fall, MIT;  
2018 Teaching Assistant, Behavior and Policy: Connections in Transportation, Spring, MIT;



**Board of Governors, State University System of Florida  
REQUEST TO OFFER A NEW DEGREE PROGRAM**

In Accordance with BOG Regulation 8.011

(Please do not revise this proposal format without prior approval from Board staff)

University of Florida  
Institution Submitting Proposal

Fall 2023  
Proposed Implementation Term

Herbert Wertheim College of Engineering  
Name of College(s) or School(s)

Engineering Education  
Name of Department(s)/Division(s)

Artificial Intelligence  
Academic Specialty or Field

Master of Science with a major in Artificial Intelligence Systems  
Complete Name of Degree

11.0102  
Proposed CIP Code (2020 CIP)

The submission of this proposal constitutes a commitment by the university that, if the proposal is approved, the necessary financial resources and the criteria for establishing new programs have been met prior to the initiation of the program.

\_\_\_\_\_  
Date Approved by the University Board of Trustees

  
\_\_\_\_\_  
President's Signature Date

\_\_\_\_\_  
Board of Trustees Chair's Signature Date

Joseph Glover 4/21/2023 | 11:16 AM EDT  
\_\_\_\_\_  
Provost's Signature Date

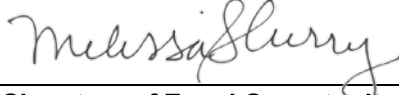
**PROJECTED ENROLLMENTS AND PROGRAM COSTS**

Provide headcount (HC) and full-time equivalent (FTE) student estimates for Years 1 through 5. HC and FTE estimates should be identical to those in Appendix A – Table 1. Indicate the program costs for the first and the fifth years of implementation as shown in the appropriate columns in Appendix A – Table 3A or 3B. Calculate an Educational and General (E&G) cost per FTE for Years 1 and 5 by dividing total E&G by FTE.

| Implementation Timeframe | HC | FTE | E&G Cost per FTE | E&G Funds | Contract & Grants Funds | Auxiliary/ Philanthropy Funds | Total Cost |
|--------------------------|----|-----|------------------|-----------|-------------------------|-------------------------------|------------|
| Year 1                   | 20 | 14  | \$9,783          | \$136,964 | 0                       | 0                             | \$136,964  |
| Year 2                   | 40 | 28  |                  |           |                         |                               |            |
| Year 3                   | 60 | 42  |                  |           |                         |                               |            |
| Year 4                   | 80 | 56  |                  |           |                         |                               |            |
| Year 5                   | 80 | 56  | \$7,340          | \$411,039 | 0                       | 0                             | \$411,039  |

## Additional Required Signatures

I confirm that I have reviewed and approved Need and Demand Section III.F. of this proposal.



\_\_\_\_\_  
Signature of Equal Opportunity Officer

10/10/2022

\_\_\_\_\_  
Date

I confirm that I have reviewed and approved Non-Faculty Resources Section VIII.A. and VIII.B. of this proposal.



\_\_\_\_\_  
Signature of Library Dean/Director

6/28/2021

\_\_\_\_\_  
Date

*Joseph Glover*

## Introduction

### I. Program Description and Relationship to System-Level Goals

**A. Describe within a few paragraphs the proposed program under consideration, and its overall purpose, including:**

- **degree level(s)**
- **majors, concentrations, tracks, specializations, or areas of emphasis**
- **total number of credit hours**
- **possible career outcomes for each major (provide additional details on meeting workforce need in Section III)**

The proposed program under consideration is a non-thesis Master of Science with a major in Artificial Intelligence Systems degree program.

The Master of Science with a major in Artificial Intelligence Systems will consist of a set of 6 core courses (18 credit hours), one project course (3 credit hours), and 3 elective options selected from Table 1 (9 credit hours). The students will also have the option to have a committee chair/program faculty advisor reflected in UF GIMS.

The total number of credits for the degree will be 30.

This M.S. degree program is intended for students with strong analytical and computing backgrounds. For example, students with strong computing backgrounds and B.S. degrees in areas such as computer engineering or science, industrial and systems engineering, or physics would qualify to pursue this degree. Students working toward a Ph.D. in other engineering fields, such as agricultural and biological, biomedical, civil and coastal, chemical, electrical, environmental, mechanical, and aerospace and materials science engineering, may also be interested in and qualified to pursue this degree. Engineers are driving AI into a wide range of systems, including autonomous vehicles, aircraft engines, industrial plants, and wind turbines. These are complex, multidomain systems where behavior of the AI model has a substantial impact on the overall system performance. In this world, developing an AI model is not the finish line. It is merely a step along the way. [1]

Domains that are searching for AI engineers include conservation, education, industry, information management, marketing, medicine, military activities, robotics, and space travel.

Reference:

[1] 2020: Five Artificial Intelligence Trends For Engineers And Scientists (analyticsindiamag.com)

**If the proposed program qualifies as a Program of Strategic Emphasis, as described in the Florida Board of Governors 2025 System Strategic Plan, please indicate the category.**

- **Critical Workforce**
  - Education
  - Health
  - Gap Analysis
- **Economic Development**
  - Global Competitiveness
  - Science, Technology, Engineering, and Math (STEM)
  - Does not qualify as a Program of Strategic Emphasis.

## **II. Strategic Plan Alignment, Projected Benefits, and Institutional Mission and Strength**

**A. Describe how the proposed program directly or indirectly supports the following:**

- **System strategic planning goals (see link to the 2025 System Strategic Plan on the [New Program Proposals & Resources](#) webpage)**
- **the institution's mission**
- **the institution's strategic plan**

By preparing engineering students to work in industry, pursue advanced studies in related AI areas, and reskilling and upskilling the engineering workforce in the State of Florida, the proposed Master of Science with a major in Artificial Intelligence Systems aligns with the State University System of Florida institutional mission statement to provide undergraduate, graduate and professional education, research, and public service of the highest quality through a coordinated system of institutions of higher learning, each with its own mission and collectively dedicated to serving the needs of a diverse state and global society. It also aligns with Goal 2 of the University of Florida Strategic Plan to provide an outstanding and accessible education that prepares students for work, citizenship, and life. The program also aligns well with UF Strategic Goal 3 (faculty recognized as preeminent by their students and peers) by utilizing new talent from the UF 500 and AI 100 hiring programs (ongoing), including preeminence hiring, increasing the institutional visibility and, in turn, helping attract new talent.

As AI is a technology and innovations driver in the multitude of industries in Florida's economy, the knowledge and skills acquired in this degree program will be instrumental to student's professional success, particularly as they contribute their expertise to addressing the systemic challenges facing the society and economy in Florida and beyond. By increasing student interest in and strengthening of the STEM core, the program will contribute to the BOG mission of achieving excellence in the tripartite mission of its state universities - teaching, research, and public service - for the benefit of Florida's citizens, their communities, and the state economy, by helping transform it to a knowledge economy. Specifically to UF, the program will help leverage AI technology to develop cutting-edge knowledge in agricultural, human, and natural resources and to make that knowledge accessible to sustain and enhance the quality of human life in Florida and beyond through training of the new generation of the tech workforce.

**B. Describe how the proposed program specifically relates to existing institutional strengths. This can include:**

- existing related academic programs
- existing programs of strategic emphasis
- institutes and centers
- other strengths of the institution

The proposed Master of Science with a major in Artificial Intelligence Systems leverages existing institutional strengths in the Herbert Wertheim College of Engineering and the University of Florida, including the new Data Science and Information Technology (DSIT) Building. Data science and analytics are boosted by the AI initiative, which includes the AI-centric data center at the University of Florida that houses the world's fastest AI supercomputer in higher education.

**C. Provide the date the pre-proposal was presented to the Council of Academic Vice Presidents Academic Program Coordination (CAVP ACG). Specify whether any concerns were raised and if so, provide a narrative explaining how each concern has been or will be addressed.**

The CAVP Academic Coordinating review group approved the pre-proposal for the Master of Science with a major in Artificial Intelligence Systems on November 9, 2021.

**D. In the table below, provide a detailed overview and narrative of the institutional planning and approval process leading up to the submission of this proposal to the Board office. Include a chronology of all activities, providing the names and positions of both university personnel and external individuals who participated in these activities.**

- If the proposed program is a bachelor's level, provide the date the program was entered into the APPRiSe system, and, if applicable, provide narrative responding to any comments received from APPRiSe.
- If the proposed program is a doctoral-level program, provide the date(s) of the external consultant's review in the planning table. Include the external consultant's report and the institution's responses to the report as Appendix B.

## Planning Process

| Date       | Participants   | Planning Activity   |
|------------|--|---|
| 09/24/2019 | CAVP Academic Coordinating Group   | Approval of the pre-proposal for the MS in Artificial Intelligence Systems.   |
| 09/09/2020 | Paul Gader, chair (CISE, ESSIE), Alina Zare (ECE), David Hibbitts (CHE), Hongcheng Liu (ISE), Michael Tonks (MSE), Nikolay Bliznyuk, co-Chair (ABE), Parisa Rashidi (BME), Ricardo Bevilacqua (MAE), Xilei Zhao (CCE), and Brenda Krames (Admin) | Committee purpose stated Introduction of members, all members are given access to Microsoft TEAM files, Nikolay Bliznyuk volunteers to Co-chair, Committee members are to suggest core and elective courses for the next meeting. |

|            |  |   |
|------------|--|---|
| 09/15/2020 | Gader, Bevilacqua, Bliznyuk, Hibbits, Hongcheng, Tonks, Zhao, and Krames             | General core with flexible paths of study with related electives, reviewed and discussed core and elective courses suggested by members, need more core suggestions.  |
| 9/21/2020  | Bliznyuk, Hibbits, Hongcheng, Tonks, Zare, Zhao, and Krames                          | Core courses to consider, Parisa Rashidi created a new template for courses to discuss, suggested tables organize courses that can be mixed and matched as desired, next meeting's goal is to finalize core.  |
| 10/05/2020 | Gader, Bliznyuk, Hibbits, Hongcheng, Tonks, Zare, Zhao, and Krames                   | Review of Core Courses: Ethics, Foundations of ML, ML, Advanced ML, Statistical ML offered as choices for ML core requirement, AI Systems – Rashidi will define the syllabus and bring a motion during the next meeting for core courses.   |
| 10/13/2020 | Bevilaqua, Bliznyuk, Gader, Tonks, and Krames  | Meeting was cut short, a brief description of ML syllabi and electives, committee member Hongcheng Liu will be replaced by Alexander Semenov.   |
| 10/19/2020 | Bevilaqua, Bliznyuk, Gader, Hibbits, Rashidi, Semenov (ISE), Tonks, Zare, and Krames | Ai Systems syllabus presented and edited, voted unanimously as a core course, ML course options passed unanimously as a core path of 3 options, Ethics voted unanimously as core option, more discussion about Deep Learning at next meeting.   |
| 10/26/2020 | Gader, Rashidi, Reisi (ISE), Tonks, Zare, and Krames                                 | Alexander Semenov is replaced by Mostafa Reisi, considering refreshing CAP 6615 for Deep Learning, Paul Gader will contact CISE about cross-listing, discussed topics of DL: transformers & muppets, vote delayed for syllabus development.   |
| 11/02/2020 | Bevilaqua, Bliznyuk, Gader, Hibbits, Rashidi, Reisi, Tonks, Zare, and Krames         | Applied Deep Learning syllabus discussed and edited, approved by unanimous vote as a core course, bringing the total to 4 core courses, discussion of elective concentrations or general requirements: grade, admission and graduation requirements will be discussed next meeting.               |
| 11/10/2020 | Bevilaqua, Bliznyuk, Gader, Hibbits, Rashidi, Reisi, Tonks, Zare, and Krames         | Weekly meeting was cancelled, but committee members suggested elective courses by email to discuss at the next meeting.   |
| 11/16/2020 | Bliznyuk, Rashidi, Reisi, Tonks, Zare, Zhao, and Krames                              | Electives were narrowed into 2 tables; a few courses will be evaluated for overlap with the core courses.   |
| 11/23/2020 | Bliznyuk, Gader, Hibbits, Rashidi, Reisi, Tonks, Zare, Zhao, and Krames              | The following tasks were divided up among committee members to complete for the next meeting: electives language, project course options/syllabus, contacting CISE, Deep Learning Course (core), admission requirements, and graduation requirements.   |
| 11/30/2020 | Bevilaqua, Bliznyuk, Gader, Hibbits, Rashidi, Reisi, Tonks, Zare, and Krames         | Consensus on electives language, consensus on requiring Ethics course prior to the project, project syllabus proposed, tables 1 and 2 were checked for overlap. Courses will be checked for teaching status, project syllabus will be finalized, and CISE will be contacted about cross-coverage. |
| 12/7/2020  | Bevilaqua, Bliznyuk, Gader, Hibbits, Rashidi, Reisi, Tonks, Zare, and Krames         | Consensus on graduation requirements for core and elective courses: 3.0 GPA, consensus that the transfer of credits only be allowed as a rare exception. Agreed to add optimization courses to Table 1 of electives before the next meeting.  |
| 12/14/2020 | Bliznyuk, Rashidi, Reisi, Tonks, Zare, and Krames                                    | Consensus on credit transfers, consensus on courses offered in Table 1 of electives, final meeting of committee members.  |
| 1/21/2021  | Paul Gader zoomed with Dean Abernathy  | Reviewed proposed curriculum. Dean suggested edits to the core courses. Another committee meeting will need to be planned to discuss and make changes to the required courses.  |

|           |   |  |
|-----------|---|--|
| 2/3/2021  | Bliznyuk, Gader, Hibbits, Rashidi, Reisi, Tonks, Zare, and Krames | Committee met to discuss broadening the core. Consensus was reached on developing 4 buckets/blocks of electives. Nikolay Bliznyuk will create a spreadsheet for committee members to sort electives.   |
| 2/19/2021 | Gader, Dean Abernathy   | Reviewed curriculum core and elective courses. Consensus: Computer Vision needs to be in the core. Edits will be presented to the committee.   |
| 3/9/2021  | Bliznyuk, Gader, Rashidi, Zare, Zhao, and Krames                  | Dean Abernathy's revision requests were updated in the curriculum and discussed by the committee. Dr. Zhao will check on the status of a new autonomous vehicle course and offer to upload it with the new courses. Committee members will submit revisions to Table 2 to be discussed and voted upon. Members agreed to meet next week. |
| 3/16/2021 | Bliznyuk, Gader, Rashidi, Zare, Zhao, and Krames                  | Committee approved Dr. Rashidi's Table 2 concept., adjusted Table 1's suggested course.  |
| 3/23/2021 | Gader, Dean Abernathy   | Curriculum edits.  |
| 3/31/2021 | Gader, Dean Abernathy   | Curriculum edits.  |
| 4/9/2021  | Gader, Dean Abernathy   | Curriculum edits.  |

**E. Provide a timetable of key events necessary for the implementation of the proposed program following approval of the program by the Board office or the Board of Governors, as appropriate, and the program has been added to the State University System Academic Degree Program Inventory.**

**Events Leading to Implementation**

Please see page 10.



| Date       | Implementation Activity  |
|------------|--|
| 4/19/2021  | Curriculum and Artificial Intelligence Systems were uploaded into the Academic Approval System.  |
| 4/30/21    | Curriculum Committee approves moving forward with Conditions of defining the Project Course and obtaining a favorable consult with CISE.   |
| 5/4/2021   | Project in Artificial Intelligence Systems syllabus was uploaded into the Academic Approval System.  |
| 5/7/2021   | Dr. Nishida, Dr. Gader and Brenda meet to debrief and formulate a plan for moving forward towards the Fall 2021 Curriculum Committee.  |
| 5/20/2021  | Dr. Nishida, Dr. Gader and Brenda meet to review changes made to the proposal. Dr. Gader will reach out to Christina Gardner-McCune with CISE for a consult. Brenda will contact Kim Jacobs requesting permission to incorporate her study on data demand for artificial intelligence as part of Section II: Need and Demand. Weekly meetings are set up to maintain momentum.   |
| 6/29/2021  | Library Resource Evaluation received, with signature of Library Director   |
| 9/14/2021  | Syllabi for Applied Deep Learning and Project in Artificial Intelligence Systems were sent to Serdar Kirli and Hans van Oostrom for review.  |
| 9/30/2014  | As advised, revisions were made to syllabi for Applied Deep Learning and Project in Artificial Intelligence Systems by Dr. Rashidi.  |
| 10/1/2021  | Revised syllabi for Applied Deep Learning and Project in Artificial Intelligence Systems were uploaded to the Academic Approval site.  |
| 10/06/2021 | Favorable consult received from Arunava Banjerjee in CISE for Artificial Intelligence Systems. Projects in AI Systems and Applied Deep Learning new course proposals were tabled. Formal request for a consult from ECE about Projects in AI Systems and Applied Deep Learning was requested by Curriculum Committee.  |
| 11/23/2021 | Committee members meet to discuss changes. Dr. Rashidi is assigned as Chair, relieving Dr. Gader due to family bereavement. New course, Machine Learning for AI Systems, was uploaded into the approval system.  |
| 12/06/2021 | Favorable ECE Consult for Machine Learning for AI Systems.   |
| 12/08/2021 | New course description provided by Dr. Silva for EGN 5XXX Machine Learning for AI Systems was uploaded into the approval system.   |
| 12/15/2021 | Favorable CISE Consult for Machine Learning for AI Systems.  |
| 12/20/2021 | ECE Consult for Applied Deep Learning uploaded to approval system with suggested edits to Applied-Deep-Learning.   |
| 12/20/2021 | Applied-Deep-Learning's requested revisions uploaded.  |
| 1/7/2022   | Machine Learning for AI Systems approved by College of Engineering   |
| 1/10/2022  | Artificial Intelligence Systems was recycled for Dept-level Re-review<br>Project in Artificial Intelligence Systems was recycled for Dept-level Re-review<br>Master of Science with a degree in Artificial Intelligence Systems was recycled for Dept-level Re-review  |
| 1/18/2022  | Machine Learning for AI Systems approved by HWCOE Curriculum Committee and Faculty Council   |
| 1/21/2022  | Artificial Intelligence Systems - Approved by EED<br>Project in Artificial Intelligence Systems - Approved by EED<br>Applied Deep Learning - Approved by EED<br>Master of Science with a degree in Artificial Intelligence Systems conditionally Approved, needs one slight modification in the representations of the degree program paths at end of document to make sure those choosing the ABE course have a path to completion. |
| 2/21/2022  | Curriculum Committee requested clarification on suggested course sequences about a realistic number of prerequisites.  |
| 3/7/2022   | Curriculum-3-7-2022 uploaded to approval system with clarification on prerequisites.   |
| 3/10/2022  | Overall Review with the Engineering Faculty Council (EFC)  |
| 4/6/2022   | Master of Science with a major in Artificial Intelligence Systems is approved by College Curriculum Committee and at College Spring Faculty Meeting  |

|           |  |
|-----------|--|
| 5/2/2022  | Graduate Curriculum Committee recommends updates to new course proposals 16463, 16106, & 16182                       |
| 8/12/2022 | EGN 5216 Machine Learning for Artificial Intelligence Systems was approved.  |
| 9/6/2022  | Dr. Nishida met with Ginger to help populate Appendix A.   |
| 9/9/2023  | Graduate Curriculum Committee approves updates to new course proposals 16463 & 16182 and these courses move forward. |

## Institutional and State Level Accountability

### III. Need and Demand

**A. Describe the workforce need for the proposed program. The response should, at a minimum, include the following:**

- **current state workforce data as provided by Florida’s Department of Economic Opportunity**
- **current national workforce data as provided by the U.S. Department of Labor’s Bureau of Labor Statistics**
- **requests for the proposed program from agencies or industries in your service area**
- **any specific needs for research and service that the program would fulfill**

An occupational data search on the Florida Department of Economic Opportunity (DEO) website projects a growth rate of 20.6% for Computer and Information Systems managers, including artificial intelligence. At the time of the search (6/11/2022), there were 17,028 openings with a median income of \$65.61/hour. <https://floridajobs.org/economic-data/employment-projections/occupational-data-search>

The U.S. Department of Labor and Statistics Occupational Outlook Handbook found at <https://www.bls.gov/ooh/> projects that employment in computer and information (artificial intelligence) technology occupations will grow 13 percent from 2020 to 2030, with about 667,600 new jobs. This is faster than the average for all occupations.

The interdisciplinary M.S. in AI Systems degree is part of an industry aligned and designed AI outreach and workforce development strategy. An industry survey of AI Workforce Needs sought direct feedback on desired skills, competencies, and credentials in new hires. Among 127 responses, 42% of the respondents indicated AI skills are a factor in hiring decisions, climbing to 72% in 2-5 years. The same survey further elaborated that the AI enabled workforce must be very knowledgeable in critical data analysis (86%), database navigation (71%), and integration with cloud-based systems (65%). The program will help meet industry needs for a workforce that is trained in AI systems.

The proposed Master of Science with a major in Artificial Intelligence Systems would support a large increase in the number of incoming graduate students interested in AI applications. In addition to an increase in graduate student interest, there is an interest in incorporation of AI methods in research across the university. The proposed program would help to train graduate students who could contribute to those research efforts.

**B. Provide and describe data that support student demand for the proposed program. Include questions asked, results, and other communications with prospective students.**

A recent survey compiled based on responses from eight different industry sectors found 72% anticipate that AI skills will be a factor in hiring decisions within the next 2-5 years. Several computing skills were considered as moderately to extremely important among the workforce, including familiarity with data privacy principles (90.7%), cybersecurity principles (90.9%), IoT (75%), and computer networks (80%). When asked to indicate the degree to which their AI-enabled workforce needs to be knowledgeable, the following were cited as moderately to extremely important: the ability to critically analyze data (93.9%), integration with cloud systems (81%), and data storage, integrity, validation (78.4%).

Demand for artificial intelligence-related graduate courses is very high. Enrollment in the introductory artificial intelligence-related graduate courses at the University of Florida in Computer & Information Science & Engineering (CISE) and Electrical and Computer Engineering (ECE) has been as high as 120 and 160 students per class. Many of these students are from engineering departments other than CISE and ECE. The CISE and ECE students are interested in the underlying theory and computational methods, whereas other engineering students are interested in best practices in artificial intelligence using software and analyzing the products produced by the software. Therefore, other engineering students would be much more likely to take application-oriented courses, including working professional engineers, in fields such as agricultural and biological engineering, biomedical engineering, civil engineering, environmental engineering, and transportation engineering.

**C. Complete Appendix A – Table 1 (1-A for undergraduate and 1-B for graduate) with projected student headcount (HC) and full-time equivalents (FTE).**

- Undergraduate FTE must be calculated based on 30 credit hours per year
- Graduate FTE must be calculated based on 24 credit hours per year

**In the space below, provide an explanation for the enrollment projections. If students within the institution are expected to change academic programs to enroll in the proposed program, describe the anticipated enrollment shifts and impact on enrollment in other programs.**

The annual headcount/FTE projections are 20/14, 40/28, 60/42, 80/56, and 80/56 for the next 5 years. As stated in Section B, the demand for artificial intelligence-related graduate courses is extremely high. Enrollment in the introductory machine learning-related graduate courses at the University of Florida in Computer & Information Science & Engineering (CISE) and Electrical and Computer Engineering (ECE) has been as high as 120 and 160 students per class.

Since this M.S. is an interdisciplinary program, it will not cause a reduction in the enrollment rate in the home departments. The new degree program will lead to increased enrollments for new Master of Science engineering graduate students in the home departments who seek a working knowledge of artificial intelligence techniques/software and discipline-specific applications of artificial intelligence for building AI systems in industry-relevant engineering applications. These new graduate students include individuals with strong computing backgrounds who have recently graduated from preceding degree programs at UF and from preceding degree programs at other Florida public universities and professional engineers from agencies/industries in the service area seeking to up-skill/reskill.

See page 35 for Appendix A.

**D. Describe the anticipated benefit of the proposed program to the university, local community, and the state. Benefits of the program should be described both quantitatively and qualitatively.**

There is a growing demand for artificial intelligence systems in engineering fields, with at least 180,000 new jobs projected to be created by 2028 (section I.A). Data science, machine learning, and artificial intelligence fields together are expected to add an annual average contribution to global productivity growth of about 1.2 percent, according to the report by the McKinsey Global Institute [5]. Thus, students graduating with a M.S. degree with a major in Artificial Intelligence Systems are expected to be successfully employed in related positions in industry. This will include companies in different sectors such as tech, consumer products, aerospace, defense, pharmaceutical, and manufacturing, including Google, Amazon, IBM, Procter & Gamble, General Electric (GE), Lockheed Martin, among others. Within the state of Florida, there are jobs available at companies such as L3Harris Technologies (Melbourne, FL), CAE USA OPIE Software (Gainesville, FL), as well as local and regional startup companies. Beyond the economic benefits, program graduates in specialization

areas such as environmental engineering or agricultural and biological engineering can impact the state and local community by utilizing data science in sustainability and conservation projects such as coastal aquatic resource management, which is vital to the Florida economy and environment.

Reference:

[5] Bughin, Jacques, Jeongmin Seong, James Manyika, Michael Chui, and Raoul Joshi. "Notes from the AI frontier: Modeling the impact of AI on the world economy." McKinsey Global Institute (2018).

**E. If other public or private institutions in Florida have similar programs that exist at the four- or six-digit CIP Code or in other CIP Codes where 60 percent of the coursework is comparable, identify the institution(s) and geographic location(s). Summarize the outcome(s) of communication with appropriate personnel (e.g., department chairs, program coordinators, deans) at those institutions regarding the potential impact on their enrollment and opportunities for possible collaboration in the areas of instruction and research.**

At the CIP code 11.102 artificial intelligence, there are two approved M.S. degrees in the Currently Approved Program Inventory of the State University System by FAU (Artificial Intelligence, MS) and UCF (Computer Vision, MS). The MS program at UCF is solely focused on Computer Vision and thus is not providing an encompassing training in AI systems. The MS program at FAU is focused on foundation of AI for computer science students and is not directed at building encompassing and full-stack AI systems. It is noted that FAU also has a Master of Science in "Data Science and Analytics" (CIP 30.0601), jointly administered between Charles E. Schmidt College of Science, the College of Engineering & Computer Science, the College of Business, and the Dorothy F. Schmidt College of Arts & Letters. It includes a specialization in Data Science and Engineering. However, the courses in the Data Science and Engineering specialization are not associated with applications to non-computing engineering fields, e.g., agricultural and biological engineering, biomedical engineering, civil engineering, environmental engineering, and transportation engineering. Similarly, existing M.S. degrees in Data Science have specializations in predominantly CS areas, with some also including business or biostatistics. The proposed M.S. with a major in Artificial Intelligence Systems is unique in its sole focus on building encompassing and full-stack AI systems for engineering applications.

**F. Describe the process for the recruitment and retention of a diverse student body in the proposed program. If the proposed program substantially duplicates a program at FAMU or FIU, provide a letter of support from the impacted institution(s) addressing how the program will impact the institution's ability to attract students of races different from that which is predominant on the FAMU or FIU campus. The institution's Equal Opportunity Officer shall review this Section of the proposal, sign, and date the additional signatures page to indicate that all requirements of this section have been completed.**

The applicant pool for the Master of Science with a major in Artificial Intelligence Systems will consist of students with strong computing backgrounds and B.S. degrees in areas such as computer engineering or science, industrial and systems engineering, or physics.

Students working toward a Ph.D. in other engineering fields, such as agricultural and

biological, biomedical, civil, and coastal, chemical, electrical, environmental, mechanical, and aerospace, and materials science engineering may also be interested in and qualified to pursue this degree.

Diverse students will be recruited through the Engineering National Graduate Institutional Name Exchange (ENGINE), the national McNair Scholars list, GEM Consortium Membership, engineering student societies (i.e., American Indian Science and Engineering Society (AISES), National Society of Black Engineers (NSBE), Out in Science, Technology, Engineering, and Mathematics (oSTEM), Society of Hispanic Professional Engineers (SHPE), Society of Women Engineers (SWE), etc.), GRE Search Service, National Name Exchange, and State of Florida Public University student access.

The diversity of students in non-computing engineering fields is greater than in computing engineering fields which will help to increase the diversity of students trained in artificial intelligence. This program is not a duplication of a program at FAU or UCF, and, therefore, the program will not compete with FAU or UCF, but instead, it will work directly with these institutions to grow underrepresented students' participation in artificial intelligence in the SUS.

## IV. Curriculum

### A. Describe all admission standards and all graduation requirements for the program. Hyperlinks to institutional websites may be used to supplement the information provided in this subsection; however, these links may not serve as a standalone response. For graduation requirements, please describe any additional requirements that do not appear in the program of study (e.g., milestones, academic engagement, publication requirements).

To be admitted into the M.S. program, students must have a B.S. in Engineering from an ABET-accredited program (or equivalent technical background such as physics, math, or statistics), a strong computing background with proficiency in one or more modern programming languages such as Python, and meet these general graduate school requirements:

GPA: Minimum of 3.0 for all upper-level courses

GRE: Waived

International applicants are exempt from the English proficiency requirement after completing one academic year at a recognized, regionally accredited university or college in a country where English is the official language. Students will have to meet all requirements of the University of Florida Graduate School Admissions and the following requirements:

TOEFL: 550 on paper-based; (213 on computer-based; 80 on Internet-based)

TOEFL may be substituted with IELTS: 6 or MELAB: 77

Transfer of credits from another institution or program to count towards the M.S. degree is only accepted "under extraordinary circumstances" through a formal petition process. It will be subject to the limits and conditions set forth by the UF Graduate School and Herbert Wertheim College of Engineering. Petitions for transfer of credit should be made during the student's first term of enrollment in the M.S. program. No more than nine credits (earned with a grade of A, A-, B+, or B) may be transferred from institutions approved for this purpose. Only graduate-level (5000-

7999) work is eligible for transfer of credit. Acceptance of credit transfer requires the approval of the M.S. committee and the Dean of the Graduate School.

The appropriate grade point requirements for graduation are:

1. A minimum grade of 3.00 (B or higher) in each core course (in the absence of the qualifying exam)
2. An overall GPA of 3.00 (truncated) or higher across all eligible courses applied to the M.S. degree
3. A major GPA of 3.00 (truncated) or higher
4. A minor GPA of 3.00 (truncated) or higher, if appropriate.

**B. Describe the specific expected student learning outcomes associated with the proposed program. If the proposed program is a baccalaureate degree, include a hyperlink to the published Academic Learning Compact and the document itself as Appendix C.**

Student Learning Outcomes (SLOs) for the Master of Science with a major in Artificial Intelligence Systems Program. For the program to meet the outcome, it is expected that >70% of students score 80% or higher.

| Learning Outcomes   | Assessment Method/Measure  |
|---|--|
| SLO 1: To analyze, design, implement, and evaluate an AI systems solution to meet a given set of system requirements.                                       | Successful completion of the final assignment in the “Artificial Intelligence Systems” course.           |
| SLO 2: 3. To recognize professional responsibilities and make informed decisions when developing AI systems based on legal, ethical, and policy principles. | Successful completion of the final assignment in “AI, Machine Learning and Ethics in Law and Regulation” |
| SLO 3: 3. To function effectively as a member of a team engaged to develop an AI systems solution.  | Successful presentation of the final project in the “Project in Artificial intelligence Systems” course. |

The Master of Science with a major in Artificial Intelligence Systems degree will provide students with a working knowledge of techniques and software commonly used in Artificial Intelligence Systems. The degree is designed for students with strong analytical and computing backgrounds. For example, students with strong computing backgrounds and B.S. degrees in areas such as computer engineering or science, industrial and systems engineering, or physics would qualify to pursue this degree. Students working toward a Ph.D. in other engineering fields, such as agricultural and biological, biomedical, civil and coastal, chemical, electrical, environmental, mechanical, and aerospace and materials science engineering, may also be interested in and qualified to pursue this degree.

**C. If the proposed program is an AS-to-BS capstone, provide evidence that it adheres to the guidelines approved by the Articulation Coordinating Committee for such programs, as outlined in [State Board of Education Rule 6A-10.024](#). Additionally, please list the prerequisites, if any, and identify the specific AS degrees that may transfer into the proposed program.**

**Not applicable to this program because it is not an AS-to-BS Capstone.**

**D. Describe the curricular framework for the proposed program, including the following information where applicable:**

- **total number of semester credit hours for the degree**
- **number of credit hours for each course**
- **required courses, restricted electives, and unrestricted electives**
- **a sequenced course of study for all majors, concentrations, tracks, or areas of emphasis**

The proposed Master of Science with a major in Artificial Intelligence Systems is a 30- credit hour, non-thesis degree that consists of a set of 6 core courses (18 credit hours), one project course (3 credit hours), and 3 elective options selected from Table 1 (9 credit hours). The students will also have the option to have a committee chair/program faculty advisor reflected in UF GIMS.

The 6 core courses are in the following areas:

- AI Systems – course number pending at the Office of the Registrar
- Deep Learning – e.g., EGN 6217 , EEE 5502
- Ethics - LAW 6930
- Fundamental Machine Learning - e.g., EGN 5216, EEE 5776, EEE 677
- Security - e.g., CIS 6930 , EEL 5739 , EEE 6561, EEE 6512
- Sensing and Analysis - e.g., EEL 5406 , EEE 6512

The selection of 3 elective options must include at least 1 course from one of the following areas:

- Advanced Machine Learning and Data Driven Modeling - e.g., BME 6938, CAP 6617, EEL 5840, EEL 6814, EEL 6825, EEE 6504, ESI 6355, ESI 6492, STA 6703
- Autonomy, Robotics, and Human-Centered Computing - e.g., ABE 6005, CAP 5108, CEN 5726, EML 6351

***Three Suggested Course Sequences:***

- Table A.1 Autonomy, Robotics, and Human-Centered Computing, p. 17
- Table A.2 Computer Vision and Deep Learning, p. 18
- Table A.3 Machine Learning and Data Analytics, p. 18

Some of the suggested elective courses might require additional prerequisites; students are advised to consult with academic advisors before taking such courses.



*Table A.1: A Suggested Sequence for M.S. Core and Elective Courses that focuses on  
Autonomy, Robotics, and Human-Centered Computing*

This sample sequence is fulfilled without the need to take additional electives EEE 5502 and EML 6350.

|               | <b>Term 1</b>   | <b>Term 2</b>  |
|---------------|---|--|
| <b>Year 1</b> | <b>Core: Machine Learning</b><br><b>EGN 5216</b> Machine Learning for Artificial Intelligence Systems                                   | <b>Core: Sensing and Analysis</b><br><b>EEL 5406</b> Computational Photography   |
|               | <b>Core: Security</b><br><b>EEL 5739</b> IoT Security and Privacy   | <b>Core: Deep Learning:</b><br><b>EGN 6217</b> Applied Deep Learning   |
|               |   | <b>Core:</b><br><b>LAW 6930</b> AI, Machine Learning and Ethics in Law and Regulation  |
| <b>Year 2</b> | <b>Elective: (AR-HCC)</b><br><b>CAP 5108</b> Research Methods for Human Centered Computing  | <b>Project:</b><br>Project in Artificial Intelligence Systems*   |
|               | <b>Elective: (AML-DDM)</b><br><b>STA 6703</b> Statistical Machine Learning <i>or</i><br><b>EEL 5840</b> Foundations of Machine Learning | <b>Elective: (AR-HCC)</b><br><b>CEN 5726</b> Natural User Interaction: <i>or</i><br><b>Elective: (AR-HCC)</b><br><b>ABE 6005</b> Applied Control for Automation and Robotics |
|               | <b>Core:</b><br>Artificial Intelligence Systems*  |  |

\*Indicates new course currently pending in the UF Academic Approval process.

*Table A.2: A Suggested Sequence for M.S. Core and Elective Courses that focuses on Computer Vision and Deep Learning.*

|        | Term 1   | Term 2  |
|--------|--|---|
| Year 1 | <b>Core: Deep Learning</b><br><b>EGN 6217</b> Applied Deep Learning<br><b>EEE 5502</b> Digital Signal Processing | <b>Core:</b><br><b>LAW 6930</b> AI, Machine Learning and Ethics in Law and Regulation   |
|        | <b>Core: Machine Learning</b><br><b>EGN 5216</b> Machine Learning for Artificial Intelligence Systems            | <b>Core: Sensing and Analysis</b><br><b>EEE 6512</b> Image Processing and Computer Vision   |
|        | <b>Elective: Sensing and Analysis</b><br><b>EEL 5406</b> Computational Photography                               | <b>Core:</b><br>Artificial Intelligence Systems*  |
| Year 2 | <b>Core: Security</b><br><b>EEE 6561</b> Fundamentals of Biometric Identification                                | <b>Project:</b><br>Project in Artificial Intelligence Systems*  |
|        | <b>Elective: (AML-DDM)</b><br><b>EEL 6814</b> Deep Learning  | <b>Elective: (AR-HCC)</b><br><b>CEN 5726</b> Natural User Interaction or<br><b>ABE 6005</b> Applied Control for Automation and Robotics |

\*Indicates new course currently pending in the UF Academic Approval process.

*Table A.3: A Suggested Sequence for M.S. Core and Elective Courses that focuses on Machine Learning and Data Analytics.*

|        | Term 1  | Term 2  |
|--------|---|---|
| Year 1 | <b>Core: Security</b><br><b>CIS 6930</b> Trustworthy Machine Learning                                     | <b>Core:</b><br><b>LAW 6930</b> AI, Machine Learning and Ethics in Law and Regulation   |
|        | <b>Core: Machine Learning</b> <u><b>EGN 5216</b></u> Machine Learning for Artificial Intelligence Systems | <b>Elective: (AML-DDM)</b><br><u><b>STA 6703</b></u> Statistical Machine Learning <u>or</u><br><u><b>EEL 5840</b></u> Foundations of Machine Learning |
|        | <b>Elective: (AML-DDM)</b><br><b>EEL 6825</b> Pattern Recognition and Intelligent Systems                 | <b>Core: Deep Learning</b><br><b>EGN 6217</b> Applied Deep Learning   |
| Year 2 | <b>Elective: (AML-DDM)</b><br><b>BME 6938</b> Biomedical Data Science                                     | <b>Project:</b><br>Project in Artificial Intelligence Systems*  |
|        | <b>Elective: (AR-HCC)</b><br><b>CAP 5108</b> Research Methods for Human Centered Computing                | <b>Core:</b><br>Artificial Intelligence Systems*<br>New Course currently in Academic Approval System  |

\*Indicates new course currently pending in the UF Academic Approval process.

## E. Provide a brief description for each course in the proposed curriculum.

### Core Course Descriptions:

#### Ethics:

- LAW 6930 AI, Machine Learning and Ethics in Law and Regulation: (3 credit hours)

Prerequisite: None

Description: Introduces students to the legal, policy, and ethical dimensions of AI, big data, predictive analytics, and related techniques.

#### Fundamental Machine Learning:

- EGN 5216 Machine Learning for Artificial Intelligence Systems: (3 credit hours)

Prerequisites: General knowledge of calculus, probability and statistics, linear algebra, and familiarity with at least one programming language.

Description: This course aims to provide a framework to develop real-world machine learning systems that are deployed, reliable, and scalable. The focus of this course is to introduce basic modules of machine learning systems, namely, data management, data engineering, approaches to model selection, training, scaling, monitoring, and deploying to machine learning systems.

#### Deep Learning: (Select 1 of these 2 options)

- CAP 6615 Neural Networks for Computing: (3 credit hours)

Prerequisite: CAP 5635, familiarity with basic concepts in calculus, linear algebra, and probability theory

Description: Neural network models and algorithms. Adaptive behavior, associative learning, competitive dynamics, and biological mechanisms.

- EGN 6217 Applied Deep Learning: (3 credit hours)

Prerequisite: EGN 5216

Description: Covers the concepts, frameworks, and tools used for building deep learning models. It will also examine applications of deep learning systems in computer vision and natural language processing (NLP).

#### Artificial Intelligence Systems:

- Artificial Intelligence Systems\*: (3 credit hours)

Prerequisite: EGN 5216

Description: Apply the concepts, frameworks, and tools used for building Artificial Intelligence (AI) systems in the real world. Examines the life cycle of AI systems and how such systems can be successfully deployed at scale and can be monitored in production.

**\*New course currently pending in UF's Academic Approval System process.**

#### Sensing and Analysis: (Select 1 of these 3 options)

- CAP 5416 Computer Vision: (3 credit hours)

Prerequisites: MAC 2312 or Equivalent, COT 4501 or equivalent, and Proficiency in MATLAB or C++, or Java. Description: Introduction to image formation and analysis. Monocular imaging system projections, camera model calibration, and binocular imaging. Low-level vision techniques, segmentation and representation techniques, and high-level vision.

- EEE 6512 Image Processing and Computer Vision: (3 credit hours)

Prerequisites: EEE 5502

Description: Pictorial data representation; feature encoding; spatial filtering; image enhancement; image segmentation; cluster seeking; two-dimensional z-transforms; scene analysis; picture description language; object recognition; pictorial database; interactive graphics; picture understanding machine.

- EEL 5406 Computational Photography: (3 credit hours)

Prerequisite: EEL 3135 or equivalent

Description: Basics of computational photography, as it relates to applications in computer vision, graphics, and imaging. Teaches how models of light from radiometry and optics can be used to understand scene information from images, build novel sensors and create new photographs.

### Security: (Select 1 of these 3 options):

- CIS 6930 Trustworthy Machine Learning: (3 credit hours)

Prerequisite: EGN 5216

Description: Introduces foundational concepts and recent developments at the intersection of machine learning with security and privacy.

- EEE 6561 Fundamentals of Biometric Identification: (3 credit hours)

Prerequisite: EEE 6512, Image Processing and Computer Vision.

Description: Methods and principles for the automatic identification/authentication of individuals. Technologies include fingerprint, face, and iris biometrics. Additional topics include biometric system design, performance evaluation, multi-modal biometric systems, and biometric system security.

- EEL 5739 IoT Security and Privacy: (3 credit hours)

Prerequisites: Programming experience and basic C programming

Description: Introduces the advanced topics of IoT security and privacy challenges and will systematically analyze IoT security from hardware, communication, and system perspectives.

### Project:

- Project in Artificial Intelligence Systems\*: (3 credit hours)

Prerequisites: EGN 6615, LAW 6930, EGN 5216, and Artificial Intelligence Systems\*

Description: Students will learn to work as a team to identify problems that can be addressed using artificial intelligence (AI) systems, will design practical solutions to such problems, and will apply AI concepts, frameworks, and tools successfully to implement system solutions, while upholding ethical AI considerations.

**\*New course currently pending in UF's Academic Approval System process.**

### Electives:

Table 1: Elective Course Options

Select 3 courses; selections must include at least 1 course from Group 1 and 1 course from Group 2:

- Group 1: AML-DDM: Advanced Machine Learning and Data-Driven Modeling,
- Group 2: AR-HCC: Autonomy, Robotics, and Human-Centered Computing,
- Group 3: UT: unrestricted technical electives. This group allows the students to take a technical elective course for greater curriculum flexibility. For example, a student interested in computer vision or robotics may take EEE 5502 (Foundations of Digital Signal Processing) or EML 6350 (Nonlinear Control) to expand the available course options for core and elective

courses. The technical elective courses in this group must be chosen in coordination with the graduate advisor to ensure prerequisite fulfillment and to optimize for achieving student career goals (e.g., courses related to entrepreneurship).

This list is not an exhaustive list and may be subject to change. Some of the elective courses might require additional prerequisites; students are advised to consult with academic advisors before taking such courses.

|  |   |
|--|---|
| <b>Advanced Machine Learning and Data Driven Modeling</b><br>(AML-DDM) | <b><u>BME 6938</u></b> Biomedical Data Science  |
|  | <b><u>CAP 6617</u></b> Advanced Machine Learning  |
|  | <b><u>EEL 5840</u></b> Elements of Machine Intelligence or<br><b><u>STA 6703</u></b> Statistical Machine Learning |
|  | <b><u>EEL 6814</u></b> Deep Learning  |
|  | <b><u>EEL 6825</u></b> Pattern Recognition and Intelligent Systems  |
|  | <b><u>ESI 6492</u></b> Global Optimization  |
|  | <b><u>EEE 6504</u></b> Machine Learning for Time Series   |
|  | <b><u>ESI 6355</u></b> Decision Support Systems for Industrial & Systems Engineering                              |
| <b>Autonomy, Robotics, and Human-Centered Computing</b><br>(AR-HCC)    | <b><u>ABE 6005</u></b> Applied Control for Automation and Robotics  |
|  | <b><u>CAP 5108</u></b> Research Methods for Human Centered Computing  |
|  | <b><u>CEN 5726</u></b> Natural User Interaction   |
|  | <b><u>EML 6351</u></b> Adaptive Control   |

### Brief Course Descriptions of Electives:

**ABE 6005 Applied Control for Automation and Robotics:** (3 credit hours)

Prerequisites: EML 5311, equivalent, or consent.

Description: Introduction to industrial controls, programmable logic controllers, and manipulator application programming in agricultural and biological engineering. Kinematics, dynamics, and control strategies for serial link manipulators in agricultural applications.

**BME 6938 Biomedical Data Science:** (3 credit hours)

Prerequisite: None

Description: Covers the fundamental frameworks and tools used for applying data science techniques to biomedical problems.

**CAP 5108 Research Methods for Human-Centered Computing:** (3 Credit hours)

Prerequisites: working knowledge of basic concepts in probability and statistics with applications in electrical, mechanical, and civil engineering; discrete structures applications; basic concepts in probability and statistics with engineering applications; and data structures and algorithms

Description: Introduces the fundamental methods and techniques to evaluate technologies and collect data from humans, including experimental design, types of variables, types of errors, hypothesis testing,

survey design, behavioral and psychophysical methods.

**CAP 6617 Advanced Machine Learning:** (3 credit hours)

Prerequisite: CAP 6610

Description: Advanced concepts in developing computer programs that learn and improve with experience. Emphasis on methods based on probability, statistics, and optimization.

**CEN 5726 Natural User Interaction:** (3 credit hours)

Prerequisite: working knowledge of data structures and algorithms

Description: Introducing design, development, and evaluation of Natural User Interaction technologies. Key concepts include hardware-to-software NUI pipeline and considerations in NUI software.

**EEE 5502 Deep Signal Processing:** (3 credit hours)

Prerequisites: EEL 3135 or equivalent

Description: Explores how to transform data into new representations to better understand, compress, and leverage it. Includes a rigorous review of tools from Signals and Systems: sampling, convolution, and Fourier representations.

**EEE 6504 Machine Learning for Time Series:** (3 credit hours)

Prerequisites: EEL 5840

Description: Theory of adaptation with stationary signals; performance measures; LMS, RLS algorithms; Implementation issues and applications.

**EEL 5840 Elements of Machine Intelligence:** (3 credit hours)

Prerequisites: None

Description: Engineering and hardware concepts pertaining to the design of intelligent computer systems.

**EEL 6814 Deep Learning:** (3 credit hours)

Prerequisite: EEL 5840

Description: Nonlinear modeling in neural networks and kernel spaces. Gradient descent learning in the additive neural model. Statistical Learning Concepts. Information theoretic cost functions. Convolution neural networks. Recurrent neural networks. Foundations of Deep Learning. Importance of Deep learning for representation. Current models for image and speech recognition. Challenges of Deep Learning.

**EEL 6825 Pattern Recognition and Intelligent Systems:** (3 credit hours)

Prerequisites: undergraduate-level signals and systems, undergraduate-level probability theory/stochastic processes, some exposure to MATLAB and C programming language, knowledge of basic matrix theory helpful, but not necessary

Description: Impart a working knowledge of several important and widely used pattern recognition topics to the students through a mixture of motivational applications and theory.

**EML 6351 Adaptive Control:** (3 credit hours)

Prerequisites: EML 6350

Description: Students will be introduced to topics including repetitive learning control, model reference adaptive control, Lyapunov-based adaptive control, Neural Network function approximation methods, composite and modular adaptive control, concurrent learning, and adaptive critic-based reinforcement learning control.

**ESI 6355 Decision Support Systems for Industrial & Systems Engineering:** (4 credit hours)

Prerequisite: Programming course in C++ or Java and operations research.

Description: Applications of decision support systems: developing and implementing systems arising in industrial and systems engineering using popular database management and spreadsheet software.

ESI 6492 Global Optimization: (3 credit hours)

Prerequisites: Linear and Nonlinear Programming or any equivalent

Description: Introduces the main concepts and techniques of global optimization. Topics to be covered include Properties of Nonconvex Functions, Convex Envelopes, Duality, Complexity, Applications and Software Issues, Algorithms for Quadratic Programming, Concave Minimization, D.C. Programming, Lipschitz Optimization, Nonconvex Network Flow Problems and Decomposition Algorithms.

**STA 6703 Statistical Machine Learning:** (3 credit hours)

Prerequisites: Knowledge of linear algebra, multivariate calculus, calculus-based probability, and basic programming

Description: Methodology and application of tools of statistical ML, emphasizing statistical approaches to machine learning while prioritizing application and the intuition behind statistical methods rather than formal derivations and justification of the procedures.

**For degree programs in medicine, nursing, and/or allied health sciences, please identify the courses that contain the competencies necessary to meet the requirements identified in [Section 1004.08, Florida Statutes](#). For teacher preparation programs, identify the courses that contain the competencies necessary to meet the requirements outlined in [Section 1004.04, Florida Statutes](#).**

**Not applicable to this program because the program is not a medicine, nursing, allied health sciences, or teacher preparation program.**

- F. Describe any potential impact on related academic programs or departments, such as an increased need for general education or common prerequisite courses or increased need for required or elective courses outside of the proposed academic program. If the proposed program is a collaborative effort between multiple academic departments, colleges, or schools within the institution, provide letters of support or MOUs from each department, college, or school in Appendix D.**

Since the proposed Master of Science with a major in Artificial Intelligence Systems is interdisciplinary within the Herbert Wertheim College of Engineering, the potential impacts of increased graduate student enrollment will be shared across its 11 departments.

- G. Identify any established or planned educational sites where the program will be offered or administered. If the proposed program will only be offered or administered at a site(s) other than the main campus, provide a rationale.**

Traditional delivery on campus.

- H. Describe the anticipated mode of delivery for the proposed program (e.g., face-to-face, distance learning, hybrid). If the mode(s) of delivery will require specialized services or additional financial support, please describe the projected costs below and discuss how they are reflected in Appendix A – Table 3A or 3B.**

Anticipated mode: Face-to-face

- I. Provide a narrative addressing the feasibility of delivering the proposed program through collaboration with other institutions, both public and private. Cite any specific queries made of other institutions with respect to shared courses, distance/distributed learning technologies, and joint-use facilities for research or internships.**

This proposed degree program will be traditional delivery on campus. There will not be collaborations at this point with other institutions.

- J. Describe any currently available sites for internship and/or practicum experiences. Describe any plans to seek additional sites in Years 1 through 5.**

- Not applicable to this program because the program does not require internships or practicums.**

Local internship opportunities may be found at these websites:

**Gator CareerLink** – [Sign in \(symplicity.com\)](#)

**Career Connections Center** – [Career Connection Center Main – career.ufl.edu](#)

**Infotech** – <https://www.infotechinc.com/student-opportunities>

**UF Innovate** – <https://innovate.research.ufl.edu/tech-licensing/fellows-program/>

**UF Information Technology (UFIT)** <https://es.ufl.edu/internship-program/>

National/international internship opportunities include:

**Amazon** – [Amazon.jobs](#) – Search Intern

**Apple** – <https://www.apple.com/jobs/us/students.html>

**Chegg** – [Traits AI, Inc. – Machine Learning Intern | Chegg Internships](#)

**Facebook** – [The Artificial Intelligence \(AI\) Residency Program – Facebook AI](#)

**Google** – <https://careers.google.com/students/engineering-and-technical-jobs/>

**IBM** Intern – [IBM Careers U.S. – Internships & Co-Ops](#)

**Intel** Internships – <https://jobs.intel.com/page/show/internships>

**Microsoft** Internship Opportunities for Students: <https://careers.microsoft.com/students/us/en>

**Oracle** Students and Grads – <https://www.oracle.com/corporate/careers/students-grads/college/>

**Verizon** – [Full-Time Students – Internships & Co-Op Jobs | About Verizon](#)

**Virtual Internships** Practicum Digital – <https://sites.google.com/view/practicum-digital/welcome>



## V. Program Quality Indicators – Reviews and Accreditation

- A. List all accreditation agencies and learned societies that would be concerned with the proposed program. If the institution intends to seek specialized accreditation for the proposed program, as described in [Board of Governors Regulation 3.006](#), provide a timeline for seeking specialized accreditation. If specialized accreditation will not be sought, please provide an explanation.**

Specialized accreditation is available from ABET, Inc. While ABET accreditation is crucial for undergraduate engineering programs, very few graduate engineering programs seek accreditation. None of UF's engineering graduate programs are accredited by ABET. There is no need for specialized accreditation for licensure or certification for professional practice. We do not plan to seek specialized accreditation for this program.

- B. Identify all internal or external academic program reviews and/or accreditation visits for any degree programs related to the proposed program at the institution, including but not limited to programs within academic unit(s) associated with the proposed degree program. List all recommendations emanating from the reviews and summarize the institution's progress in implementing those recommendations.**

The Electrical Engineering undergraduate program, which is a feeder for this M.S. program, was visited and reviewed in 2017 by ABET. No deficiencies, weaknesses, or concerns were found.

- C. For all degree programs, discuss how employer-driven or industry-driven competencies were identified and incorporated into the curriculum. Additionally, indicate whether an industry or employer advisory council exists to provide input for curriculum development, student assessment, and academic-force alignment. If an advisory council is not already in place, describe any plans to develop one or other plans to ensure academic-workforce alignment.**

The compiled information from EMSI, the Labor Market Analytics & Economic tool, was used to understand the educational needs of graduating students. EMSI data primarily focused on AI-related skills and understanding the job market needs. The committee also examined the 2020 HWCOE survey results of industry partners located in Florida and neighboring states to identify high demand AI skills by industry.

## VI. Faculty Participation

- A. Use Appendix A – Table 2 to identify existing and anticipated full-time faculty who will participate in the proposed program through Year 5, excluding visiting or adjunct faculty. Include the following information for each faculty member or position in Appendix A – Table 2:**
- the faculty code associated with the source of funding for the position
  - faculty member's name
  - highest degree held
  - academic discipline or specialization
  - anticipated participation start date in the proposed program

- **contract status (e.g., tenure, tenure-earning, or multi-year annual [MYA])**
- **contract length in months**
- **percent of annual effort that will support the proposed program (e.g., instruction, advising, supervising)**

**This information should be summarized below in narrative form. Additionally, please provide the curriculum vitae (CV) for each identified faculty member in Appendix E.**

It is anticipated that the following tenured faculty members will participate in the proposed program: Parisa Rashidi (Chair, BME), Paul Gader (CISE, ESSIE), Nikolay Bliznyuk (ABE), Alina Zare (ECE), Michael Tonks (MSE), and David Hibbits (CHE). Tenure-Track faculty, including Mostafa Reisi (ISE) and Xilei Zhao (CCE, ESSIE), and Non-Tenure lecturer, Catia Silva (ECE), are also anticipated to participate through Year 5.

**B. Provide specific evidence demonstrating that the academic unit(s) associated with the proposed program have been productive in teaching, research, and service. Such evidence may include trends over time for average course load, FTE productivity, student HC in major or service courses, degrees granted, external funding attracted, and other qualitative indicators of excellence (e.g., thesis, dissertation, or research supervision).**

Collectively, the list of achievements and awards received by the associated faculty members includes the Google Faculty Research Award, the National Institute of Health Trailblazer Award, National Science Foundation Faculty Early Career Development Program Award, National Academy of Engineering Frontiers of Engineering Award, Mitchell Max Award Finalist, IEEE Fellow, and University of Florida Research Foundation Professor and over 16 Patents.

The combined funded research awards for the 2020-2021 academic year are approximately \$8.1 million by the following sponsors: National Science Foundation, UF Founders, US Department of Energy, PA State University, Cornell University, Argonne National Lab, UF Foundation, USC, National Institute of Health NIA, UF Division of Sponsored, US Army Research Office, Everglades National Park, Advanced Technology International, US Department of Agriculture National Institute of Food and Agriculture, Wilfred Laurier University, Woods Hole dba Woodwell Climate Research Center, Earth Science Information Partners, UF Division of Sponsored Research Strategic Initiative, and the UF Division of Sponsored Research Matching Funds.

The associated faculty members have served as M.S. and Ph.D. advisors. They collectively advised well over 50 Ph.D. students to graduation. The faculty have also taught major and service courses ranging from small class sizes (under 10) to classes of over 150 students in size.

## VII. Budget

- A. Use Appendix A – Table 3A or 3B to provide projected costs and associated funding sources for Year 1 and Year 5 of program operation. In narrative form, describe all projected costs and funding sources for the proposed program(s). Data for Year 1 and Year 5 should reflect snapshots in time rather than cumulative costs.
- B. Use Appendix A – Table 4 to show how existing Education & General (E&G) funds will be reallocated to support the proposed program in Year 1. Describe each funding source identified in Appendix A – Table 4, and provide a justification below for the reallocation of resources. Describe the impact the reallocation of financial resources will have on existing programs, including any possible financial impact of a shift in faculty effort, reallocation of instructional resources, greater use of adjunct faculty and teaching assistants, and explain what steps will be taken to mitigate such impacts.
- C. If the institution intends to operate the program through continuing education, seek approval for market tuition rate, or establish a differentiated graduate-level tuition, as described in [Board of Governors Regulation 8.002](#), provide a rationale and a timeline for seeking Board of Governors' approval.
- Not applicable to this program because the program will not operate through continuing education, seek approval for market tuition rate, or establish a differentiated graduate-level tuition
- D. Provide the expected resident and non-resident tuition rate for the proposed program for both resident and non-resident students. The tuition rates should be reported on a per credit hour basis, unless the institution has received approval for a different tuition structure. If the proposed program will operate as a continuing education program per [Board of Governors Regulation 8.002](#), please describe how the tuition amount was calculated and how it is reflected in Appendix A – Table 3B.
- E. Describe external resources, both financial and in-kind support, that are available to support the proposed program, and explain how this amount is reflected in Appendix A – Table 3A or 3B.

## VIII. Non-Faculty Resources

**A. Describe library resources currently available to implement and/or sustain the proposed program through Year 5 below, including but not limited to the following:**

- **the total number of volumes and serials available in the discipline and related disciplines**
- **all major journals that are available to the university's students**

**The Library Director must sign the additional signatures page to indicate that they have review Sections VIII.A. and VIII.B.**

The Libraries of the University of Florida form the largest information resource system in the state of Florida. The libraries hold over 6.7M print volumes, 1.5M e-books, and provide access to over 148K full-text print and electronic journals, as well as over 1992 electronic databases. The George

A. Smathers Libraries of the University of Florida, a system of six research libraries, includes libraries for sciences, humanities & social sciences, architecture & fine arts, education, and health sciences. Additional library resources are available in two specialized libraries, the UF Digital Collections and the Special & Area Studies Collection. Books and periodicals related to artificial intelligence and machine learning are primarily online resources. Any print resources are located primarily in the Marston Science Library.

Electronic books, journals, and many key databases, such as ACM Digital Library, IEEE Explore Digital Library, Web of Science, Proquest SciTech Collection, and others, are available via the internet to UF students, faculty, and staff. Many relevant databases are multidisciplinary and are funded centrally. The UF Libraries expend over \$12.2 million annually on electronic resources. Listed below is a selection of the important journals available through UF Libraries for use by students pursuing a master's in Artificial Intelligence Systems:

- **Artificial intelligence**
- **Artificial Intelligence Review**
- **Big Data Research**
- **Foundations and Trends in Machine Learning**
- **International Journal of Data Science and Analytics**
- **Machine Learning**
- **SIGKDD Exploration**
- **ACM Transactions on Knowledge Discovery from Data**
- **IEEE Transactions on Fuzzy Systems**
- **IEEE Transactions on Neural Networks and Learning Systems**
- **IEEE Transactions on Pattern Analysis and Machine Intelligence**
- **Information Visualization**
- **Intelligent Data Analysis**

- **Journal of Data Mining and Knowledge Discovery**
- **Journal of Data Science**
- **Journal of Intelligent Information Systems**
- **Journal of Machine Learning Research**
- **Nature Machine Intelligence**
- **Pattern Recognition**
- **KAIS: Knowledge and Information Systems: An International Journal**

In addition, there are a small yet growing number of open-access journals in the field; the content of these journals is freely available to readers and discoverable through the UF libraries catalog and journal databases. Here are three open-access journals related to data science:

- **Journal of Robotics, Networking and Artificial Life**
- **Journal of Big Data (Springer Open)**
- **Transactions on Machine Learning and Data Mining**

The Libraries hold memberships in a number of consortia and in institutions such as the Center for Research Libraries, ensuring access to materials not held locally. “Uborrow” service allows UF patrons to easily borrow materials from any other Florida state university or college library. Materials not held in UF collections and unavailable via Uborrow are procured through Interlibrary Loan. Interlibrary Loan requests are fulfilled at no cost to the library patron; participation in this library collection exchange program is paid for by the UF Libraries. All students, faculty, and staff may use interlibrary loan services.

With monies allocated through the Provost and the UF budgeting process, the library materials budget is determined by the Dean of Libraries in consultation with the Senior Associate Dean for Scholarly Resources & Research Services and subject specialist librarians. Standing subscriptions to journal literature and databases make up the majority of purchasing. Online research guides for all UF disciplines and many specific topics are available from the library website <http://library.ufl.edu>. Many online tutorials for specific databases are also available. Additionally, the UF Libraries offer consultations, workshops, and events throughout the year.

**B. Discuss any additional library resources that are needed to implement and/or sustain the program through Year 5. Describe how those costs are reflected in Appendix A – Table 3A or 3B.**

**Not applicable to this program because no additional library resources are needed to implement or sustain the proposed program.**

A subscription to the O’Reilly Safari electronic platform is recommended, though not mandated. Safari provides a comprehensive collection of artificial intelligence and data science resources,

including content from other leading publishers in this field. The platform is also interactive, with hands-on learning experiences to support student acquisition of technical skills and knowledge. An annual subscription to Safari would be approximately \$71,000. While the subscription is recommended, it is not included in the budget for years 1-5.

InCites Journal Citation Report curates a list of the highest-ranked 137 journals in the category of Computer Science and Artificial Intelligence. Although the library subscribes to most of the top journals on its list, we do not currently subscribe to the following:

- **Foundations and Trends in Machine Learning (\$740 annually)**
- **Big Data (\$3,351 annually)**
- **International Journal of Business Intelligence and Data Mining (\$1,195 annually)**

While our present journal subscriptions will support the proposed major as currently defined, adding these journals to our eJournal collection would be helpful long term.

**C. Describe any specialized equipment and space currently available to implement and/or sustain the proposed program through Year 5.**

The proposed Master of Science with a major in Artificial Intelligence Systems degree program will use the extensive Graphics Processing Unit (GPU) resources provided by the Research Computing center. Research Computing operates HiPerGator, UF's supercomputer, a cluster-based system with a combined capacity of about 46,000 cores in multi-core servers. The servers are part of an integrated InfiniBand fabric. The clusters share over 7 PetaBytes of distributed storage via the Lustre parallel file system. In addition, Research Computing houses about 2.8 PB of storage for the High Energy Physics collaboration of the Compact Muon Solenoid (CMS) experiment. The system includes 80 NVIDIA K80 GPUs for simulation, 560 NVIDIA GeForce RTX 2080ti, and 48 NVIDIA Quadro RTX 6000 GPUs for machine learning, deep learning, Artificial Intelligence, and simulation and modeling, available for exploratory and production research, as well as for training and teaching.

**D. Describe any additional specialized equipment or space that will be needed to implement and/or sustain the proposed program through Year 5. Include any projected Instruction and Research (I&R) costs of additional space in Appendix A – Table 3A or 3B. Costs for new construction should be provided in response to Section X.E. below.**

**Not applicable to this program because no new I&R costs are needed to implement or sustain the program through Year 5**

**E. If a new capital expenditure for instructional or research space is required, indicate where this item appears on the university's fixed capital outlay priority list. Appendix A – Table 3A or 3B includes only I&R costs. If non-I&R costs, such as indirect costs affecting libraries and student services, are**

**expected to increase as a result of the program, describe and estimate those expenses in narrative form below. It is expected that high enrollment programs, in particular, would necessitate increased costs in non-I&R activities.**

**Not applicable to this program because no new capital expenditures are needed to implement or sustain the program through Year 5.**

**F. Describe any additional special categories of resources needed to operate the proposed program through Year 5, such as access to proprietary research facilities, specialized services, or extended travel, and explain how those projected costs of special resources are reflected in Appendix A – Table 3A or 3B.**

**Not applicable to this program because no additional special categories of resources are needed to implement or sustain the program through Year 5.**

**G. Describe fellowships, scholarships, and graduate assistantships to be allocated to the proposed program through Year 5, and explain how those are reflected in Appendix A – Table 3A or 3B.**

**Not applicable to this program because no fellowships, scholarships and/or graduate assistantships will be allocated to the proposed program through Year 5.**

## IX. Required Appendices

The appendices listed in tables 1 & 2 below are required for all proposed degree programs except where specifically noted. Institutions should check the appropriate box to indicate if a particular appendix is included to ensure all program-specific requirements are met. Institutions may provide additional appendices to supplement the information provided in the proposal and list them in Table 4 below.

**Table 1. Required Appendices by Degree Level**

| Appendix | Appendix Title   | Supplemental Instructions  | Included? Yes/No | Required for Degree Program Level |                     |                        |
|----------|--|--|------------------|-----------------------------------|---------------------|------------------------|
|          |  |  |                  | Bachelors                         | Masters/ Specialist | Doctoral/ Professional |
| A        | Tables 1-4   |  |                  | X                                 | ✓                   | X                      |
| B        | Consultant's Report and Institutional Response           |  |                  |                                   |                     | X                      |
| C        | Academic Learning Compacts                               | Include a copy of the approved or proposed Academic Learning Compacts for the program  |                  | X                                 |                     |                        |
| D        | Letters of Support or MOU from Other Academic Units      | Required only for programs offered in collaboration with multiple academic units within the institution  |                  | X                                 | ✓                   | X                      |
| E        | Faculty Curriculum Vitae                                 |  |                  | X                                 | ✓                   | X                      |
| F        | Common Prerequisite Request Form                         | This form should also be emailed directly to the BOG Director of Articulation prior to submitting the program proposal to the Board office for review. |                  | X                                 |                     |                        |
| G        | Request for Exemption to the 120 Credit Hour Requirement | Required only for baccalaureate degree programs seeking approval to exceed the 120 credit hour requirement   |                  | X                                 |                     |                        |
| H        | Request for Limited Access Status                        | Required only for baccalaureate degree programs seeking approval for limited access status   |                  | X                                 |                     |                        |



**Table 2. Additional Appendices**

| <b>Appendix</b> | <b>Appendix Title</b> | <b>Description</b> |
|-----------------|-----------------------|--------------------|
|                 |                       |                    |
|                 |                       |                    |
|                 |                       |                    |

**APPENDIX A**  
**TABLE 1-A**  
**PROJECTED HEADCOUNT FROM POTENTIAL SOURCES**  
**(Baccalaureate Degree Program)**

| <b>Source of Students<br/>(Non-duplicated headcount in any given<br/>year)*</b>   | <b>Year 1 HC</b> | <b>Year 1<br/>FTE</b> | <b>Year 2 HC</b> | <b>Year 2<br/>FTE</b> | <b>Year 3 HC</b> | <b>Year 3<br/>FTE</b> | <b>Year 4 HC</b> | <b>Year 4<br/>FTE</b> | <b>Year 5 HC</b> | <b>Year 5<br/>FTE</b> |
|---|------------------|-----------------------|------------------|-----------------------|------------------|-----------------------|------------------|-----------------------|------------------|-----------------------|
| Upper-level students who are transferring from other majors within the university**   | 0                | 0                     | 0                | 0                     | 0                | 0                     | 0                | 0                     | 0                | 0                     |
| Students who initially entered the university as FTIC students and who are progressing from the lower to the upper level*** | 0                | 0                     | 0                | 0                     | 0                | 0                     | 0                | 0                     | 0                | 0                     |
| Florida College System transfers to the upper level***  | 0                | 0                     | 0                | 0                     | 0                | 0                     | 0                | 0                     | 0                | 0                     |
| Transfers to the upper level from other Florida colleges and universities***  | 0                | 0                     | 0                | 0                     | 0                | 0                     | 0                | 0                     | 0                | 0                     |
| Transfers from out of state colleges and universities***  | 0                | 0                     | 0                | 0                     | 0                | 0                     | 0                | 0                     | 0                | 0                     |
| Other (Explain)***  | 0                | 0                     | 0                | 0                     | 0                | 0                     | 0                | 0                     | 0                | 0                     |
| <b>Totals</b>   | <b>0</b>         | <b>0</b>              | <b>0</b>         | <b>0</b>              | <b>0</b>         | <b>0</b>              | <b>0</b>         | <b>0</b>              | <b>0</b>         | <b>0</b>              |

\* List projected annual headcount of students enrolled in the degree program. List projected yearly cumulative ENROLLMENTS instead of admissions.

\*\* If numbers appear in this category, they should go DOWN in later years.

\*\*\* Do not include individuals counted in any PRIOR CATEGORY in a given COLUMN.

**APPENDIX A**  
**TABLE 1-B**  
**PROJECTED HEADCOUNT FROM POTENTIAL SOURCES**  
**(Graduate Degree Program)**

| Source of Students<br>(Non-duplicated headcount in any given year)*                              | Year 1 HC | Year 1 FTE | Year 2 HC | Year 2 FTE | Year 3 HC | Year 3 FTE | Year 4 HC | Year 4 FTE | Year 5 HC | Year 5 FTE |
|--|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| Individuals drawn from agencies/industries in your service area (e.g., older returning students) | 5         | 3.5        | 10        | 7          | 15        | 10.5       | 20        | 14         | 20        | 14         |
| Students who transfer from other graduate programs within the university**                       | 0         | 0          | 0         | 0          | 0         | 0          | 0         | 0          | 0         | 0          |
| Individuals who have recently graduated from preceding degree programs at this university        | 10        | 7          | 10        | 7          | 15        | 10.5       | 20        | 14         | 20        | 14         |
| Individuals who graduated from preceding degree programs at other Florida public universities    | 5         | 3.5        | 10        | 7          | 10        | 7          | 15        | 10.5       | 15        | 10.5       |
| Individuals who graduated from preceding degree programs at non-public Florida institutions      | 0         | 0          | 0         | 0          | 0         | 0          | 0         | 0          | 0         | 0          |
| Additional in-state residents***   | 0         | 0          | 0         | 0          | 0         | 0          | 0         | 0          | 0         | 0          |
| Additional out-of-state residents***   | 0         | 0          | 5         | 3.5        | 10        | 7          | 10        | 7          | 10        | 7          |
| Additional foreign residents***  | 0         | 0          | 5         | 3.5        | 10        | 7          | 15        | 10.5       | 15        | 10.5       |
| Other (Explain)***   | 0         | 0          | 0         | 0          | 0         | 0          | 0         | 0          | 0         | 0          |
| <b>Totals</b>  | <b>20</b> | <b>14</b>  | <b>40</b> | <b>28</b>  | <b>60</b> | <b>42</b>  | <b>80</b> | <b>56</b>  | <b>80</b> | <b>56</b>  |

\* List projected annual headcount of students enrolled in the degree program. List projected yearly cumulative ENROLLMENTS instead of admissions.

\*\* If numbers appear in this category, they should go DOWN in later years.

\*\*\* Do not include individuals counted in any PRIOR category in a given COLUMN.

For assistance with FTE calculation, check with UF Office of Institutional Research

**APPENDIX A**  
**Table 2**  
**Anticipated Faculty Participation**

| Faculty Code | Faculty Name or "New Hire" Highest Degree Held Academic Discipline or Specialty | Rank                | Contract Status | Initial Date for Participation in Program | Mos. Contract Year 1 | FTE Year 1 | % Effort for Prg. Year 1 | PY Year 1   | Mos. Contract Year 5 | FTE Year 5 | % Effort for Prg. Year 5 | PY Year 5   |
|--------------|---|---------------------|-----------------|---|----------------------|------------|--------------------------|-------------|----------------------|------------|--------------------------|-------------|
| A            | Parisa Rashidi, PhD   | Associate Professor | Tenured         | Fall 2023                                 | 9                    | 0.75       | 0.25                     | 0.19        | 9                    | 0.75       | 0.25                     | 0.19        |
|              | BME   | Chair               |                 |   |                      |            |                          |             |                      |            |                          |             |
| A            | Paul Gader, PhD   | Professor           | Tenured         | Fall 2023                                 | 9                    | 0.75       | 0.00                     | 0.00        | 9                    | 0.75       | 0.25                     | 0.19        |
|              | CISE, ESSIE   |                     |                 |   |                      |            |                          |             |                      |            |                          |             |
| A            | Nikolay Bliznyuk, PhD   | Associate Professor | Tenured         | Fall 2023                                 | 9                    | 0.75       | 0.00                     | 0.00        | 9                    | 0.75       | 0.25                     | 0.19        |
|              | ABE   | Co-Chair            |                 |   |                      |            |                          |             |                      |            |                          |             |
| A            | Michael Tonks, PhD  | Associate Professor | Tenured         | Fall 2023                                 | 9                    | 0.75       | 0.00                     | 0.00        | 9                    | 0.75       | 0.25                     | 0.19        |
|              | MSE   |                     |                 |   |                      |            |                          |             |                      |            |                          |             |
| A            | David Hibbits, PhD  | Assistant Professor | Tenured         | Fall 2023                                 | 9                    | 0.75       | 0.00                     | 0.00        | 9                    | 0.75       | 0.25                     | 0.19        |
|              | CHE   |                     |                 |   |                      |            |                          |             |                      |            |                          |             |
| A            | Mostafa Reisi, PhD  | Assistant Professor | Tenure-Track    | Fall 2023                                 | 9                    | 0.75       | 0.25                     | 0.19        | 9                    | 0.75       | 0.25                     | 0.19        |
|              | ISE   |                     |                 |   |                      |            |                          |             |                      |            |                          |             |
| A            | Catia Silva, PhD  | Lecturer            | Non-Tenured     | Spring 2024                               | 9                    | 0.75       | 0.25                     | 0.19        | 9                    | 0.75       | 0.25                     | 0.19        |
|              | ECE   |                     |                 |   |                      |            |                          |             |                      |            |                          |             |
| A            | Alina Zare, PhD   | Professor           | Tenure          | Fall 2023                                 | 9                    | 0.75       | 0.00                     | 0.00        | 9                    | 0.75       | 0.25                     | 0.19        |
|              | ECE   |                     |                 |   |                      |            |                          |             |                      |            |                          |             |
| A            | Xilei Zhao, PhD   | Assistant Professor | Tenure-Track    | Fall 2023                                 | 9                    | 0.75       | 0.25                     | 0.19        | 9                    | 0.75       | 0.25                     | 0.19        |
|              | CCE,ESSIE   |                     |                 |   |                      |            |                          |             |                      |            |                          |             |
|              |   |                     |                 |   |                      |            |                          |             |                      |            |                          |             |
|              |   |                     |                 |   |                      |            |                          |             |                      |            |                          |             |
|              | <b>Total Person-Years (PY)</b>  |                     |                 |   |                      |            |                          | <b>0.75</b> |                      |            |                          | <b>1.69</b> |

| Faculty Code              | Code Description  | Source of Funding                   | PY Workload by Budget Classification |             |
|---------------------------|---|-------------------------------------|--------------------------------------|-------------|
|                           |   |                                     | Year 1                               | Year 5      |
| A                         | Existing faculty on a regular line  | Current Education & General Revenue | 0.75                                 | 1.69        |
| B                         | New faculty to be hired on a vacant line  | Current Education & General Revenue | 0.00                                 | 0.00        |
| C                         | New faculty to be hired on a new line   | New Education & General Revenue     | 0.00                                 | 0.00        |
| D                         | Existing faculty hired on contracts/grants  | Contracts/Grants                    | 0.00                                 | 0.00        |
| E                         | New faculty to be hired on contracts/grants                                       | Contracts/Grants                    | 0.00                                 | 0.00        |
| F                         | Existing faculty on endowed lines   | Philanthropy & Endowments           | 0.00                                 | 0.00        |
| G                         | New faculty on endowed lines  | Philanthropy & Endowments           | 0.00                                 | 0.00        |
| H                         | Existing or New Faculty teaching outside of regular/tenure-track line course load | Enterprise Auxiliary Funds          | 0.00                                 | 0.00        |
| <b>Overall Totals for</b> |   |                                     | <b>0.75</b>                          | <b>1.69</b> |

**APPENDIX A**  
**TABLE 3**  
**PROJECTED COSTS AND FUNDING SOURCES**

| Budget Line Item              | Reallocated Base* (E&G) Year 1 | Enrollment Growth (E&G) Year 1 | New Recurring (E&G) Year 1 | New Non-Recurring (E&G) Year 1 | Contracts & Grants (C&G) Year 1 | Philanthropy / Endowments Year 1 | Enterprise Auxiliary Funds Year 1 | Subtotal Year 1  | Continuing Base** (E&G) Year 5 | New Enrollment Growth (E&G) Year 5 | Other*** (E&G) Year 5 | Contracts & Grants (C&G) Year 5 | Philanthropy / Endowments Year 5 | Enterprise Auxiliary Funds Year 5 | Subtotal Year 5  |
|-------------------------------|--------------------------------|--------------------------------|----------------------------|--------------------------------|---------------------------------|----------------------------------|-----------------------------------|------------------|--------------------------------|------------------------------------|-----------------------|---------------------------------|----------------------------------|-----------------------------------|------------------|
| Faculty Salaries and Benefits | 136,964                        | 0                              | 0                          | 0                              | 0                               | 0                                | 0                                 | \$136,964        | 411,039                        | 0                                  | 0                     | 0                               | 0                                | 0                                 | \$411,039        |
| A & P Salaries and Benefits   | 0                              | 0                              | 0                          | 0                              | 0                               | 0                                | 0                                 | \$0              | 0                              | 0                                  | 0                     | 0                               | 0                                | 0                                 | \$0              |
| USPS Salaries and Benefits    | 0                              | 0                              | 0                          | 0                              | 0                               | 0                                | 0                                 | \$0              | 0                              | 0                                  | 0                     | 0                               | 0                                | 0                                 | \$0              |
| Other Personal Services       | 0                              | 0                              | 0                          | 0                              | 0                               | 0                                | 0                                 | \$0              | 0                              | 0                                  | 0                     | 0                               | 0                                | 0                                 | \$0              |
| Assistantships & Fellowships  | 0                              | 0                              | 0                          | 0                              | 0                               | 0                                | 0                                 | \$0              | 0                              | 0                                  | 0                     | 0                               | 0                                | 0                                 | \$0              |
| Library                       | 0                              | 0                              | 0                          | 0                              | 0                               | 0                                | 0                                 | \$0              | 0                              | 0                                  | 0                     | 0                               | 0                                | 0                                 | \$0              |
| Expenses                      | 0                              | 0                              | 0                          | 0                              | 0                               | 0                                | 0                                 | \$0              | 0                              | 0                                  | 0                     | 0                               | 0                                | 0                                 | \$0              |
| Operating Capital Outlay      | 0                              | 0                              | 0                          | 0                              | 0                               | 0                                | 0                                 | \$0              | 0                              | 0                                  | 0                     | 0                               | 0                                | 0                                 | \$0              |
| Special Categories            | 0                              | 0                              | 0                          | 0                              | 0                               | 0                                | 0                                 | \$0              | 0                              | 0                                  | 0                     | 0                               | 0                                | 0                                 | \$0              |
| <b>Total Costs</b>            | <b>\$136,964</b>               | <b>\$0</b>                     | <b>\$0</b>                 | <b>\$0</b>                     | <b>\$0</b>                      | <b>\$0</b>                       | <b>\$0</b>                        | <b>\$136,964</b> | <b>\$411,039</b>               | <b>\$0</b>                         | <b>\$0</b>            | <b>\$0</b>                      | <b>\$0</b>                       | <b>\$0</b>                        | <b>\$411,039</b> |

\*Identify reallocation sources in Table 3.

\*\*Includes recurring E&G funded costs ("reallocated base," "enrollment growth," and "new recurring") from Years 1-4 that continue into Year 5.

\*\*\*Identify if non-recurring.

**Faculty and Staff Summary**

| Total Positions        | Year 1 | Year 5 |
|------------------------|--------|--------|
| Faculty (person-years) | 0.75   | 1.69   |
| A & P (FTE)            | 0      | 0      |
| USPS (FTE)             | 0      | 0      |

**Calculated Cost per Student FTE**

|                    | Year 1    | Year 5    |
|--------------------|-----------|-----------|
| Total E&G Funding  | \$136,964 | \$411,039 |
| Annual Student FTE | 14        | 56        |
| E&G Cost per FTE   | \$9,783   | \$7,340   |

**Table 2 Column Explanations**

|                             |    |  |
|-----------------------------|----|--|
| Reallocated Base* (E&G)     | 1  | E&G funds that are already available in the university's budget and will be reallocated to support the new program. Please include these funds in the Table 3 – Anticipated reallocation of E&G funds and indicate their source.   |
| Enrollment Growth (E&G)     | 2  | Additional E&G funds allocated from the tuition and fees trust fund contingent on enrollment increases.  |
| New Recurring (E&G)         | 3  | Recurring funds appropriated by the Legislature to support implementation of the program.  |
| New Non-Recurring (E&G)     | 4  | Non-recurring funds appropriated by the Legislature to support implementation of the program. Please provide an explanation of the source of these funds in the budget section (section III. A.) of the proposal. These funds can include initial investments, such as infrastructure. |
| Contracts & Grants (C&G)    | 5  | Contracts and grants funding available for the program.  |
| Philanthropy Endowments     | 6  | Funds provided through the foundation or other Direct Support Organizations (DSO) to support the program.  |
| Enterprise Auxiliary Funds  | 7  | Use this column for continuing education or market rate programs and provide a rationale in section III.B. in support of the selected tuition model.   |
| Continuing Base** (E&G)     | 9  | Includes the sum of columns 1, 2, and 3 over time.   |
| New Enrollment Growth (E&G) | 10 | See explanation provided for column 2.   |
| Other*** (E&G)              | 11 | These are specific funds provided by the Legislature to support implementation of the program.   |
| Contracts & Grants (C&G)    | 12 | See explanation provided for column 5.   |
| Philanthropy Endowments     | 13 | See explanation provided for column 6.   |
| Enterprise Auxiliary Funds  | 14 | Use this column for continuing education or market rate programs and provide a rationale in section III.B. in support of the selected tuition model.   |

**APPENDIX A**  
**TABLE 4**  
**ANTICIPATED REALLOCATION OF EDUCATION GENERAL FUNDS\***

| <b>Program and/or E&amp;G account from which current funds will be reallocated during Year 1</b> | <b>Base before reallocation</b> | <b>Amount to be reallocated</b> | <b>Base after reallocation</b> |
|--|---------------------------------|---------------------------------|--------------------------------|
| 19xx-xxxx-101-CRRNT, Department E&G Teaching Faculty Salary Funds                                | 1,045,459                       | 46,705                          | <b>\$998,754</b>               |
| 19xx-xxxx-107-CRRNT, UF Preeminence Funds Teaching Faculty Salary                                | 598,696                         | 90,259                          | <b>\$508,437</b>               |
|  | 0                               | 0                               | <b>\$0</b>                     |
|  | 0                               | 0                               | <b>\$0</b>                     |
|  | 0                               | 0                               | <b>\$0</b>                     |
|  | 0                               | 0                               | <b>\$0</b>                     |
|  | 0                               | 0                               | <b>\$0</b>                     |
|  | 0                               | 0                               | <b>\$0</b>                     |
| <b>Totals</b>  | \$1,644,155                     | \$136,964                       | <b>\$1,507,191</b>             |

\* If not reallocating E&G funds, please submit a zeroed Table 4

## Appendix D

### Departmental Consults

|  |         |
|--|---------|
| CISE for 16106 - AI Systems            | page 41 |
| CISE for 16182 - Project in AI Systems | page 45 |
| CISE for 16819 - ML for AI Systems     | page 46 |
| ECE for 16463 - Applied Deep Learning  | page 49 |
| ECE for 16819 - ML for AI Systems      | page 51 |

**Krames,Brenda**

---

**From:** Banerjee,Arunava  
**Sent:** Thursday, August 26, 2021 5:19 PM  
**To:** Nishida,Toshi; Gader,Paul D; Gilbert,Juan E; Rangarajan,Anand  
**Cc:** Krames,Brenda; Jacoby,Kelly  
**Subject:** Re: Consult for AI Systems course

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

Hi Toshi:

We have discussed this and are happy for it to move forward.

Thank you

-Arunava

---

**From:** Nishida,Toshi <nishida@eng.ufl.edu>  
**Sent:** Thursday, August 26, 2021 11:20 AM  
**To:** Banerjee,Arunava <arunava@ufl.edu>; Gader,Paul D <paul.gader@essie.ufl.edu>; Gilbert,Juan E <juan@ufl.edu>; Rangarajan,Anand <anand@cise.ufl.edu>  
**Cc:** Krames,Brenda <bkrames@phhp.ufl.edu>; Jacoby,Kelly <kajacoby@ufl.edu>  
**Subject:** Re: Consult for AI Systems course

Would it be possible to receive a reply by tomorrow, 8/27? The original consult request occurred on June 1.

Best,  
Toshi

---

T. Nishida, Ph.D.  
Associate Dean for Academic Affairs, Herbert Wertheim College of Engineering  
Professor, Department of Electrical and Computer Engineering  
Director, NSF Multi-functional Integrated System Technology (MIST) Center  
Member, Interdisciplinary Microsystems Group  
University of Florida  
Gainesville, FL 32611  
nishida@ufl.edu  
<http://www.img.ufl.edu> and <http://mist-center.org>

---

**From:** Banerjee,Arunava <arunava@ufl.edu>  
**Sent:** Wednesday, August 25, 2021 11:06 AM  
**To:** Nishida,Toshi <nishida@eng.ufl.edu>; Gader,Paul D <paul.gader@essie.ufl.edu>; Gilbert,Juan E <juan@ufl.edu>; Rangarajan,Anand <anand@cise.ufl.edu>  
**Cc:** Krames,Brenda <bkrames@phhp.ufl.edu>; Jacoby,Kelly <kajacoby@ufl.edu>  
**Subject:** Re: Consult for AI Systems course

Thanks. Will do.



-Arunava

---

**From:** Nishida,Toshi <nishida@eng.ufl.edu>  
**Sent:** Wednesday, August 25, 2021 11:02 AM  
**To:** Gader,Paul D <paul.gader@essie.ufl.edu>; Gilbert,Juan E <juan@ufl.edu>; Rangarajan,Anand <anand@cise.ufl.edu>; Banerjee,Arunava <arunava@ufl.edu>  
**Cc:** Krames,Brenda <bkrames@phhp.ufl.edu>; Jacoby,Kelly <kajacoby@ufl.edu>  
**Subject:** Re: Consult for AI Systems course

Dear Arunava, cc: Juan,

I am forwarding an email that was sent to Christina that should be sent to you since you are taking over as CISE representative to the HWCOE Curriculum Committee while Christina is on sabbatical.

Could you please take a look at the email string below?

Thanks,  
Toshi

---

T. Nishida, Ph.D.  
Associate Dean for Academic Affairs, Herbert Wertheim College of Engineering  
Professor, Department of Electrical and Computer Engineering  
Director, NSF Multi-functional Integrated System Technology (MIST) Center  
Member, Interdisciplinary Microsystems Group  
University of Florida  
Gainesville, FL 32611  
nishida@ufl.edu  
<http://www.img.ufl.edu> and <http://mist-center.org>

---

**From:** Nishida,Toshi <nishida@eng.ufl.edu>  
**Sent:** Wednesday, August 25, 2021 9:49 AM  
**To:** Gader,Paul D <paul.gader@essie.ufl.edu>; Gardner-McCune,Christina <gmccune@ufl.edu>; Gilbert,Juan E <juan@ufl.edu>; Rangarajan,Anand <anand@cise.ufl.edu>  
**Cc:** Krames,Brenda <bkrames@phhp.ufl.edu>; Jacoby,Kelly <kajacoby@ufl.edu>  
**Subject:** Re: Consult for AI Systems course

Dear Christina, Juan,

I wanted to follow up since the first curriculum committee meeting is coming up soon next week.

Could you please reply to the consult request for the Artificial Intelligence Systems course (syllabus attached)? The main purpose of the consult is receive feedback that could improve the course. The systems aspect of the AI Systems course should make the course complementary.

Thanks,  
Toshi

---

T. Nishida, Ph.D.  
Associate Dean for Academic Affairs, Herbert Wertheim College of Engineering  
Professor, Department of Electrical and Computer Engineering  
Director, NSF Multi-functional Integrated System Technology (MIST) Center

Member, Interdisciplinary Microsystems Group  
University of Florida  
Gainesville, FL 32611  
nishida@ufl.edu  
<http://www.img.ufl.edu> and <http://mist-center.org>

---

**From:** Gader,Paul D <paul.gader@essie.ufl.edu>  
**Sent:** Wednesday, June 16, 2021 12:32 PM  
**To:** Gardner-McCune,Christina <gmccune@ufl.edu>; Gilbert,Juan E <juan@ufl.edu>; Rangarajan,Anand <anand@cise.ufl.edu>  
**Cc:** Nishida,Toshi <nishida@eng.ufl.edu>; Krames,Brenda <bkrames@php.ufl.edu>  
**Subject:** Re: Consult for AI Systems course

Hi Christina, Juan, and Anand,

I can't find an email responding to this. We are all busy in the summer but I hope we can get the consult finalized. I'd be happy to talk with someone about it in the next 1.5 weeks. After that I'll be in North Carolina for 3 week.

Thanks and hope you are having a great summer!

---

Paul Gader, IEEE Fellow  
Dean's Harris Endowed Professor  
Computer & Info Sci & Eng (CISE)  
Eng School Sustainable Infrastructure & Environment (ESSIE)  
University of Florida

Office: Weil Hall 575L  
Email: [pgader@ufl.edu](mailto:pgader@ufl.edu)  
Website: <https://faculty.eng.ufl.edu/computing-for-life>  
(C) 352-262-4267

---

---

**From:** Gader,Paul D <paul.gader@essie.ufl.edu>  
**Date:** Tuesday, June 1, 2021 at 10:13  
**To:** Gardner-McCune,Christina <gmccune@ufl.edu>, Gilbert,Juan E <juan@ufl.edu>, Rangarajan,Anand <anand@cise.ufl.edu>  
**Cc:** Nishida,Toshi <nishida@eng.ufl.edu>, Krames,Brenda <bkrames@php.ufl.edu>, Zare, Alina <azare@ece.ufl.edu>, Rashidi,Parisa <parisa.rashidi@bme.ufl.edu>  
**Subject:** Re: Consult for AI Systems course

Forgot to attach documents...

---

Paul Gader, IEEE Fellow  
Dean's Harris Endowed Professor  
Computer & Info Sci & Eng (CISE)  
Eng School Sustainable Infrastructure & Environment (ESSIE)  
University of Florida

Office: Weil Hall 575L

Email: [pgader@ufl.edu](mailto:pgader@ufl.edu)  
Website: <https://faculty.eng.ufl.edu/computing-for-life>  
(C) 352-262-4267

---

---

**From:** Gader,Paul D <paul.gader@essie.ufl.edu>  
**Date:** Tuesday, June 1, 2021 at 09:54  
**To:** Gardner-McCune,Christina <gmccune@ufl.edu>, Gilbert,Juan E <juan@ufl.edu>, Rangarajan,Anand <anand@cise.ufl.edu>  
**Cc:** Nishida,Toshi <nishida@eng.ufl.edu>, Krames,Brenda <bkrames@phhp.ufl.edu>, Zare, Alina <azare@ece.ufl.edu>, Rashidi,Parisa <parisa.rashidi@bme.ufl.edu>  
**Subject:** Consult for AI Systems course

Good morning Christina, Juan, and Anand,

Please see attached for the requested consult and supporting documents.  
Thank you

---

Paul Gader, IEEE Fellow  
Dean's Harris Endowed Professor  
Computer & Info Sci & Eng (CISE)  
Eng School Sustainable Infrastructure & Environment (ESSIE)  
University of Florida

Office: Weil Hall 575L  
Email: [pgader@ufl.edu](mailto:pgader@ufl.edu)  
Website: <https://faculty.eng.ufl.edu/computing-for-life>  
(C) 352-262-4267

---

**Krames, Brenda**

---

**From:** Banerjee,Arunava  
**Sent:** Tuesday, October 12, 2021 4:06 PM  
**To:** Krames,Brenda; Gilbert,Juan E  
**Cc:** Jacoby,Kelly; Gader,Paul D; Nishida,Toshi  
**Subject:** Re: Follow-Up: Requesting Consult for Project in AI Systems

The CISE curriculum committee has looked at the course "*Project in Artificial Intelligence Systems*". It has no concerns.

Sincerely,

-Arunava

---

**From:** Krames,Brenda <bkrames@phhp.ufl.edu>  
**Sent:** Tuesday, October 12, 2021 11:16 AM  
**To:** Banerjee,Arunava <arunava@ufl.edu>; Gilbert,Juan E <juan@ufl.edu>  
**Cc:** Jacoby,Kelly <kajacoby@ufl.edu>; Gader,Paul D <paul.gader@essie.ufl.edu>; Nishida,Toshi <nishida@eng.ufl.edu>  
**Subject:** Follow-Up: Requesting Consult for Project in AI Systems

*On behalf of Paul Gader*

To: Arunava Banerjee, Juan Gilbert  
 Fm: Paul Gader, Chair M.S. in Artificial Intelligence Systems  
 Re: Consult for Project in Artificial Intelligence Systems

As you know, a college-wide committee was formed this academic year to create a curriculum for an M.S. in Applied Artificial Intelligence. The degree program requires a project course to develop problem solving skills related to building AI systems.

I am writing on behalf of the committee to request a consult with CISE's department on a new course titled, *Project in Artificial Intelligence Systems*. The proposed curriculum is attached for your review.

Thank you!

---

Paul Gader, IEEE Fellow  
 Dean's Harris Endowed Professor  
 Computer & Info Sci & Eng (CISE)  
 Eng School Sustainable Infrastructure & Environment (ESSIE)  
 University of Florida

Office: Weil Hall 575L  
 Email: [pgader@ufl.edu](mailto:pgader@ufl.edu)  
 Website: <https://faculty.eng.ufl.edu/computing-for-life>  
 (C) 352-262-4267

---

**Krames,Brenda**

---

**From:** Rashidi,Parisa  
**Sent:** Wednesday, December 15, 2021 9:31 AM  
**To:** Krames,Brenda  
**Subject:** RE: Consult for Machine Learning for AI Systems

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Brenda,  
 We have not heard anyone having any issues, so let's include this email as our consultation evidence.  
 Thanks,  
 Parisa

**Parisa Rashidi**

Associate Professor, UF Term Professor,  
 Pruitt Family Endowed Fellow,  
 Co-Director, Intelligent Critical Care Center (IC3),  
 Director, Intelligent Health Lab,  
 PO Box 116130, Gainesville, FL 32611  
 New Engineering Building (NEB), 459  
 Office: (352)-392-9469  
 Pronouns: She/her  
 Website: <http://www.bme.ufl.edu/labs/rashidi/>  
 Google Scholar: <https://scholar.google.com/citations?user=Rtej0FIAAAAJ&hl=en>

---

**From:** Gilbert,Juan E <juan@ufl.edu>  
**Sent:** Wednesday, December 8, 2021 11:08 AM  
**To:** Rashidi,Parisa <parisa.rashidi@bme.ufl.edu>  
**Cc:** Rangarajan,Anand <anand@cise.ufl.edu>; Gardner-McCune,Christina <gmccune@ufl.edu>; Nishida,Toshi <nishida@eng.ufl.edu>; Krames,Brenda <bkrames@php.ufl.edu>; Banerjee,Arunava <arunava@ufl.edu>; Huang,Kejun <kejun.huang@ufl.edu>; Bindschaedler, Vincent <vbindschaedler@ufl.edu>  
**Subject:** Re: Consult for Machine Learning for AI Systems

Parisa, I haven't gotten any feedback. CISE folks, if you have any feedback, please share it now. Otherwise, I don't think we have any issues.

Thanks,

—  
 Juan E. Gilbert, Ph.D.  
 Andrew Banks Family Preeminence Endowed Professor & Chair  
 Computer & Information Science & Engineering Department  
 Herbert Wertheim College of Engineering  
 University of Florida  
 P.O. Box 116120

Gainesville, FL 32611  
352.392.1527 (V)  
352.273.0738 (F)  
[juan@ufl.edu](mailto:juan@ufl.edu)  
Twitter: @DrJuanGilbert  
<http://www.juangilbert.com/>

On Dec 8, 2021, at 10:46 AM, Rashidi,Parisa <[parisa.rashidi@bme.ufl.edu](mailto:parisa.rashidi@bme.ufl.edu)> wrote:

Hi Juan,

I hope all is well. I wanted to follow up on the consultation request. Please let us know if you need anything on our side so we can move this forward.

Best,  
Parisa

---

**From:** Gilbert,Juan E <[juan@ufl.edu](mailto:juan@ufl.edu)>  
**Sent:** Monday, November 29, 2021 2:10 PM  
**To:** Rashidi,Parisa <[parisa.rashidi@bme.ufl.edu](mailto:parisa.rashidi@bme.ufl.edu)>  
**Cc:** Rangarajan,Anand <[anand@cise.ufl.edu](mailto:anand@cise.ufl.edu)>; Gardner-McCune,Christina <[gmcune@ufl.edu](mailto:gmcune@ufl.edu)>; Nishida,Toshi <[nishida@eng.ufl.edu](mailto:nishida@eng.ufl.edu)>; Krames,Brenda <[bkrames@phhp.ufl.edu](mailto:bkrames@phhp.ufl.edu)>; Banerjee,Arunava <[arunava@ufl.edu](mailto:arunava@ufl.edu)>; Huang,Kejun <[kejun.huang@ufl.edu](mailto:kejun.huang@ufl.edu)>; Bindschaedler, Vincent <[vbindschaedler@ufl.edu](mailto:vbindschaedler@ufl.edu)>  
**Subject:** Re: Consult for Machine Learning for AI Systems

Hi Parisa! It's good to hear from you. I hope you are doing well.

We will take a look at this and get back with you.

Thanks,

--

Juan E. Gilbert, Ph.D.  
Andrew Banks Family Preeminence Endowed Professor & Chair  
Computer & Information Science & Engineering Department  
Herbert Wertheim College of Engineering  
University of Florida  
P.O. Box 116120  
Gainesville, FL 32611  
352.392.1527 (V)  
352.273.0738 (F)  
[juan@ufl.edu](mailto:juan@ufl.edu)  
Twitter: @DrJuanGilbert  
<http://www.juangilbert.com/>

On Nov 29, 2021, at 1:37 PM, Rashidi,Parisa <[parisa.rashidi@bme.ufl.edu](mailto:parisa.rashidi@bme.ufl.edu)> wrote:

Hi Christina, Juan, and Anand,

As you know, we are working towards the approval process of the curriculum for M.S. in Applied Artificial Intelligence. On behalf of the committee, I am seeking your advice on a new course, entitled "Machine Learning for AI Systems." The course will be one of the core courses. The focus of the course is an introduction to "applied" machine learning. Please see attached for the requested consult and supporting documents. Thanks for your support!

Best,  
Parisa

**Parisa Rashidi**

Associate Professor, UF Term Professor,  
Pruitt Family Endowed Fellow,  
Co-Director, Intelligent Critical Care Center (IC3),  
Director, Intelligent Health Lab,  
PO Box 116130, Gainesville, FL 32611  
New Engineering Building (NEB), 459  
Office: (352)-392-9469

Pronouns: She/her

Website: <http://www.bme.ufl.edu/labs/rashidi/>

Google Scholar: <https://scholar.google.com/citations?user=Rtej0FIAAAAJ&hl=en>

**Krames,Brenda**

---

**From:** Harris,John Gregory  
**Sent:** Friday, December 17, 2021 12:13 PM  
**To:** Rashidi,Parisa  
**Cc:** Fox,Robert M; Zare, Alina; Nishida,Toshi; Krames,Brenda  
**Subject:** Re: Request for consult on revised Syllabus for proposed Applied Deep Learning

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Dear Parisa,

Thank you for leading the charge on the AI systems MS degree and these new courses. Your work is much appreciated!

ECE is OK with this course with the one caveat that the prerequisite be the newly proposed Applied ML course and not:

Prereq: One (1) of three ML course options: CAP 6610, EEL 5840, or ABE 6933 Coreq: - N/A

My faculty already pointed out the recursive vs. recurrent typo. Finally, as you know, our faculty suggest that the course should be less ambitious and include fewer topics. This is just a suggestion and you can do with it what you like.

John

**John G. Harris, Professor and Chair**  
 Department of Electrical and Computer Engineering  
 216 Larsen Hall, P.O. Box 116200  
 University of Florida, Gainesville, FL 32611-6200  
[www.ece.ufl.edu](http://www.ece.ufl.edu), [harris@ece.ufl.edu](mailto:harris@ece.ufl.edu), (352) 392-0913

On Dec 6, 2021, at 8:29 AM, Krames,Brenda <[bkrames@php.ufl.edu](mailto:bkrames@php.ufl.edu)> wrote:

*On behalf of Dr. Parisa Rashidi, Chair of MS in Artificial Intelligence Systems*

**To:** Robert Fox, Alina Zare, John J. Harris

**Re: Consult for course**

Thank you so much for your valued input on the proposed Applied Deep Learning course. Based upon previous discussions, the committee has revised the syllabus for EGN-6XXX Applied Deep Learning and seeks ECE's course approval.

When compared to the theoretically grounded introduction of deep learning courses currently offered by ECE/CISE, the purpose of this new course is to offer an "applied" perspective on deep learning with an emphasis on using tools and libraries and real-world use cases. Students can choose one of several courses - with Fundamentals of ML being just one many options. A list of available instructors has been added to the syllabus.

The description is below, and the syllabus is attached.



We look forward to your response!

***Course Description***

Covers the concepts, frameworks, and tools used for building deep learning models. It will also examine applications of deep learning systems in AI involving topics such as computer vision, natural language processing (NLP), speech recognition, sensor signal analysis, and security. (3 credit hours)

***Course Pre-Requisites / Co-Requisites***

Prereq: One (1) of three ML course options: CAP 6610, EEL 5840, or ABE 6933

Coreq: - N/A

**Brenda Krames**

Administrative Assistant II

352.273.6155 | HPNP 3152 | [bkrames@php.ufl.edu](mailto:bkrames@php.ufl.edu)

<image002.jpg>

<EGN-6XXX-Applied-Deep-Learning-Revised (1).pdf>

**Krames,Brenda**

---

**From:** Harris,John Gregory  
**Sent:** Friday, December 3, 2021 6:07 PM  
**To:** Rashidi,Parisa  
**Cc:** Fox,Robert M; Zare, Alina; Nishida,Toshi; Krames,Brenda; Catia S. Silva  
**Subject:** Re: Consult for Machine Learning for AI Systems

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Hi Parisa,

ECE approves this course. Thank you for leading this effort. I CCed Catia on this email since she may be the one who will end up teaching it.

One optional suggestion is to avoid listing particular algorithms in the course description since this list will change over time. It may be better to list general categories since these are less likely to change. Catia suggested the following course description:

(3 credits) This course aims to provide an iterative framework to develop real-world machine learning systems that are deployed, reliable, and scalable. The focus of this course is to introduce basic modules of machine learning systems, namely, data management, data engineering, approaches to model selection, training, scaling, monitoring and deploying to ML systems.

In any case, this is only a suggestion. Do with it what you wish. We approve this course.

John

**John G. Harris, Professor and Chair**  
Department of Electrical and Computer Engineering  
216 Larsen Hall, P.O. Box 116200  
University of Florida, Gainesville, FL 32611-6200  
[www.ece.ufl.edu](http://www.ece.ufl.edu), [harris@ece.ufl.edu](mailto:harris@ece.ufl.edu), (352) 392-0913

On Nov 29, 2021, at 1:41 PM, Rashidi,Parisa <[parisa.rashidi@bme.ufl.edu](mailto:parisa.rashidi@bme.ufl.edu)> wrote:

Hi John, Rob,

As you know, we are working towards the approval process of the curriculum for M.S. in Applied Artificial Intelligence. Based on our previous discussions, we have developed the syllabus for a new course, entitled "Machine Learning for AI Systems." The focus of the course is an introduction to "applied" machine learning.

Alina has already reviewed the syllabus, but a formal consult response must also be included in the approval system. Please see attached for the requested consult and supporting documents. Thank you!

Best,  
Parisa

**Parisa Rashidi**

Associate Professor, UF Term Professor,  
Pruitt Family Endowed Fellow,  
Co-Director, Intelligent Critical Care Center (IC3),  
Director, Intelligent Health Lab,  
PO Box 116130, Gainesville, FL 32611  
New Engineering Building (NEB), 459  
Office: (352)-392-9469

Pronouns: She/her

Website: <http://www.bme.ufl.edu/labs/rashidi/>

Google Scholar: <https://scholar.google.com/citations?user=Rtej0FIAAAAJ&hl=en>

<Consult-Machine Learning for AI Systems-ECE.pdf><EGN 5XXX Machine Learning for AI Systems.pdf>

## Appendix E

### Committee Member CV's

|                   |          |
|-------------------|----------|
| Bliznyuk, Nikolay | page 54  |
| Gader, Paul       | page 56  |
| Hibbitts, David   | page 94  |
| Rashidi, Parisa   | page 96  |
| Reisi, Mostafa    | page 132 |
| Silva, Catia      | page 136 |
| Tonks, Michael    | page 138 |
| Zare, Alina       | page 140 |
| Zhao, Xilei       | page 142 |

Revised 05/01/2020

## NSF BIOGRAPHICAL SKETCH

OMB-3145-0058

NAME: Nikolay Bliznyuk

POSITION TITLE &amp; INSTITUTION: Associate Professor of Statistics, University of Florida

**A. PROFESSIONAL PREPARATION**(see [PAPPG Chapter II.C.2.f.\(i\)\(a\)](#))

| INSTITUTION                     | LOCATION    | MAJOR/AREA OF STUDY | DEGREE<br>(if applicable) | YEAR<br>(YYYY) |
|---------------------------------|-------------|---------------------|---------------------------|----------------|
| George Mason University         | Fairfax, VA | Economics           | B.S.                      | 2001           |
| Cornell University              | Ithaca, NY  | Operations Research | M.S.                      | 2007           |
| Cornell University              | Ithaca, NY  | Operations Research | Ph.D.                     | 2008           |
| Harvard School of Public Health | Boston, MA  | Biostatistics       | Postdoc                   | 2009           |

**B. APPOINTMENTS**(see [PAPPG Chapter II.C.2.f.\(i\)\(b\)](#))

| From - To     | Position Title, Organization and Location   |
|---------------|---|
| 2018-present: | Associate Professor of Statistics (tenured), Department of Agricultural and Biological Engineering, University of Florida, Gainesville, FL  |
| 2015-present: | Affiliate/Courtesy Professor, University of Florida Informatics Institute, Gainesville, FL  |
| 2014-present: | Affiliate/Courtesy Professor, Department of Statistics, University of Florida, Gainesville, FL  |
| 2012-present: | Affiliate/Courtesy Professor, Department of Biostatistics, University of Florida, Gainesville, FL   |
| 2012-present: | Affiliate/Courtesy Professor, School of Natural Resources & Environment (Interdisciplinary Ecology), University of Florida, Gainesville, FL |
| 2014-18:      | Assistant Professor of Statistics, Department of Agricultural and Biological Engineering, University of Florida, Gainesville, FL            |
| 2011-14:      | Assistant Professor, Department of Statistics, University of Florida, Gainesville, FL   |
| 2009-11:      | Research Assistant Professor, Department of Statistics, Texas A&M University, College Station, TX   |
| 2008-09:      | Postdoctoral Fellow, Department of Biostatistics, Harvard School of Public Health, Boston, MA   |

BS-1 of 2

**C. PRODUCTS**(see [PAPPG Chapter II.C.2.f.\(i\)\(c\)](#))**Products Most Closely Related to the Proposed Project**

1. Tang, X., Yang, Y., Yu, H., Liao, Q., and Bliznyuk, N. (2019+) "A Spatio-Temporal Model for Transmission of Multiple Pathogens with Applications to Hand, Foot, and Mouth Disease in China," *Journal of the American Statistical Association*, (A&CS), 114:528, 1561-1573, doi.org/10.1080/01621459.2019.1585250
2. Merrill, H.R, Tang, X., Bliznyuk, N. (2019), "Spatio-Temporal Additive Regression Model Selection for Urban Water Demand", *Stochastic Environmental Research & Risk Assessment*, 33, doi.org/10.1007/s00477-019-01682-2
3. Duerr, I., Merrill, H.R., Wang, C., Bai, R., Boyer, M.J, Dukes, M.D., Bliznyuk N. (2018), "Forecasting Urban Household Water Demand with Statistical and Machine Learning Methods Using Large Space-Time Data: a Comparative Study", *Environmental Modelling & Software*, 102, 29-38, <http://doi.org/10.1016/j.envsoft.2018.01.002>
4. Taylor-Rodriguez, D., Womack, A.J., Fuentes, C.M., Bliznyuk, N. (2017), "Intrinsic Bayesian Analysis for Occupancy Models", *Bayesian Analysis*, 12(3), 855-877, DOI: 10.1214/16-BA1014.
5. Taylor-Rodriguez, D., Womack, A., and Bliznyuk, N. (2016), "Bayesian Variable Selection on Model Spaces Constrained by Heredity Conditions", *Journal of Computational & Graphical Statistics*, 25(1), 515-535, DOI: 10.1080/10618600.2015.1056793

**Other Significant Products, Whether or Not Related to the Proposed Project**

1. Merrill, H.R., Grunwald, S., Bliznyuk, N. (2017), "Semiparametric regression models for spatial prediction and uncertainty quantification of soil attributes", *Stochastic Environmental Research & Risk Assessment*, 31(10), 2691-2703, doi:10.1007/s00477-016-1337-0.
2. Bliznyuk, N., Paciorek, C., Schwartz, J., and Coull, B. A. (2014), Nonlinear Latent Process Models for Integrating Spatio-Temporal Exposure Data from Multiple Sources, minor revision requested, *Annals of Applied Statistics*, 8(3), 1538–1560, DOI: 10.1214/14-AOAS737
3. Bliznyuk, N., Ruppert, D., Shoemaker, C. A. (2012), "Local Derivative-Free Approximation of Computationally Expensive Posterior Densities", *Journal of Computational & Graphical Statistics*, 12(2), 476-495.
4. Bliznyuk, N., Ruppert, D., Shoemaker, C. A. (2011), "Efficient Interpolation of Computationally Expensive Posterior Densities with Variable Parameter Costs", *Journal of Computational & Graphical Statistics*, 20, 636-655.
5. Bliznyuk, N., Ruppert, D., Shoemaker, C. A., Regis, R., Wild, S., Mugunthan, P. (2008), "Bayesian Calibration

**D. SYNERGISTIC ACTIVITIES**(see [PAPPG Chapter II.C.2.f.\(i\)\(d\)](#))

- I co-chaired the curriculum committee for a new MS degree in Artificial Intelligence Systems at UF
- I developed, revised and distributed UF HPC tutorials specifically aimed at large-scale deployment and application of computationally intensive statistical methods.
- I maintain a web page to facilitate dissemination of my research, including published articles, preprints, software products and training materials (e.g., UF HPC tutorials mentioned above).
- I developed a 9-day workshop "Boot Camp in Statistical Methods for Genetics" that I taught twice, in 2012-13
- Since Fall 2011, I have been extensively involved in statistical consulting across UF helping with experimental design and data analytic, predictive modeling and computational strategies.

BS-2 of 2

**PAUL D. GADER**  
**IEEE Fellow**  
**Dean's Harris Professor**  
**University of Florida Research Foundation Professor (2012 – 2015)**

[pgader@ufl.edu](mailto:pgader@ufl.edu)

**EDUCATION**

**Ph.D. in Mathematics**, University of Florida, August 1986.

Dissertation: *Image Algebra Techniques for Parallel Computation of Discrete Fourier and General Linear Transforms*

**M.S. in Mathematics**, University of Florida, May 1983.

**B.S. in Mathematics**, University of Central Florida, August 1981, *magna cum laude*.

**POSITIONS HELD**

- 2003-Present    **Professor** of Computer & Information Science & Engineering  
University of Florida.
- 2016-Present    **Affiliate Professor**, Environmental Engineering Sciences  
University of Florida
- 08/15-06/16    **Visiting Professor** of Computer Science and Geography  
University of California, Santa Barbara
- 05/12 – 05/15    **Chair and Professor** of Computer & Information Science & Engineering  
University of Florida
- 2001-2003      **Associate Professor** of Computer & Information Science & Engineering  
University of Florida.
- 1991-2001      **Assistant / Associate / Full Professor** of Computer Engineering & Computer Science,  
(formerly Electrical & Computer Engineering), University of Missouri-Columbia.
- 1994            **Summer Research Fellow**, Image Processing Laboratory, Eglin AFB FL.
- 1991-1994      **Consultant**, Environmental Research Institute of Michigan (ERIM).
- 1989-1991      **Section Head and Research Engineer**, Image & Pattern Analysis Section, ERIM.
- 1988            **Summer Research Fellow**, Institute for Mathematics and Its Applications,  
Summer Program on Signal Processing, University of Minnesota.
- 1987-1988      **Assistant Professor** of Mathematics, University of Wisconsin-Oshkosh.
- 1986-1988      **Senior Research Scientist**, Machine Vision Technology Section,  
Honeywell Systems and Research Center.
- 1986-1988      **Honorary Fellow**, Department of Mathematics, University of Wisconsin-Madison.
- 1986            **Visiting Assistant Professor** of Mathematics, University of Wisconsin-Oshkosh.
- 1984-1986      **Graduate Research Assistant**, Computer & Information Science Department,  
University of Florida.
- 1984            **Summer Research Fellow**, Image Processing Laboratory, Eglin AFB, FL.
- 1981-1984      **Graduate Teaching Assistant**, Department of Mathematics, University of Florida.

## Table of Contents

|  |                              |
|--|------------------------------|
| <b>PUBLICATIONS</b> .....  | <b>3</b>                     |
| <b>REFEREED JOURNAL ARTICLES (103 published/accepted)</b> .....            | <b>3</b>                     |
| <b>JOURNAL COMMENTS</b> .....  | <b>11</b>                    |
| <b>BOOK CHAPTERS</b> .....   | <b>11</b>                    |
| <b>CONFERENCE PAPERS (220 accepted/published)</b> .....                    | <b>12</b>                    |
| <b>CONFERENCE PRESENTATIONS</b> .....                                      | <b>29</b>                    |
| <b>FUNDED RESEARCH Total = \$15,005,399</b> .....                          | <b>32</b>                    |
| <b>Research Funding at the University of Florida</b> .....                 | Error! Bookmark not defined. |
| <b>Co-Investigator at the University of Florida</b> .....                  | Error! Bookmark not defined. |
| <b>University of Missouri</b> .....  | Error! Bookmark not defined. |
| <b>TEACHING</b> .....  | <b>33</b>                    |
| <b>Ph.D. Dissertations Supervised (22)</b> .....                           | <b>33</b>                    |
| <b>Post-Doctoral Associates Supervised</b> .....                           | <b>34</b>                    |
| <b>COURSES TAUGHT AT THE UNIVERSITY OF MISSOURI</b> .....                  | <b>35</b>                    |
| <b>COURSES TAUGHT / DEVELOPED WHILE AT THE UNIVERSITY OF FLORIDA</b> ..... | <b>35</b>                    |
| <b>National / International SERVICE</b> .....                              | <b>36</b>                    |



## PUBLICATIONS

### REFEREED JOURNAL ARTICLES (110 published/accepted)

- (J1) P. Chen, Y. Liang, X. Shi, L. Yang, **P. Gader**, “Automatic Whole Slide Pathology Image Diagnosis Framework via Unit Stochastic Selection and Attention Fusion”, *Neurocomputing* (Accepted, May 2020)
- (J2) P. Chen, X. Shi, Y., Liang, Y. Li, L. Yang, **P. Gader**, “Interactive thyroid whole slide image diagnostic system using deep representation”, *Computer Methods and Programs in Biomedicine*, 195, 105630 (2020), <https://doi.org/10.1016/j.cmpb.2020.105630>
- (J3) Dennison, P. E., Qi, Y., Meerdink, S. K., Kokaly, R. F., Thompson, D. R., Daughtry, C. S. T., Quemada, M., Roberts, D.A., **Gader, P.D.**, Wetherley, E.B., Numata, I., & Roth, K. L. (2019). “Comparison of methods for modeling fractional cover using simulated satellite hyperspectral imager spectra”, *Remote Sensing*, 11(2072), 1–23. <https://doi.org/10.3390/rs11182072>
- (J4) Meerdink, S.K., Roberts, D.A., Roth, K.L., King, J.Y., **Gader, P.D.**, & Koltunov, A “Classifying California plant species temporally using airborne hyperspectral imagery”, *Remote Sensing of Environment*, 232, . (2019). <https://doi.org/10.1016/j.rse.2019.111308>
- (J5) Y. Zhou, E. Wetherley, and **P. D. Gader**, “Unmixing urban hyperspectral imagery using probability distributions to represent endmember variability”, (accepted), *Remote Sensing of Environment*, April 2020.
- (J6) Y. Zhou, A. Rangarajan and **P. D. Gader**, "A Gaussian Mixture Model Representation of Endmember Variability in Hyperspectral Unmixing," in *IEEE Transactions on Image Processing*, vol. 27, no. 5, pp. 2242-2256, May 2018. doi: 10.1109/TIP.2018.2795744.
- (J7) M. Shuaib, W. Lee, **P.D. Gader**, J. Schueller, “Unsupervised Hyperspectral Band Selection for Apple Marssonina Blotch Detection”, *Computers and Electronics in Agriculture*, vol. 148, May 2018, Pages 45-53.
- (J8) S. E. Yuksel, S. Kucuk and **P. D. Gader**, "SPICEE: An Extension of SPICE for Sparse Endmember Estimation in Hyperspectral Imagery," *IEEE Geoscience and Remote Sensing Letters*, vol. 13, no. 12, pp. 1910-1914, Dec. 2016.
- (J9) S. E. Yuksel and **P. D. Gader**, "Context-based classification via mixture of hidden Markov model experts with applications in landmine detection," *IET Computer Vision*, vol. 10, no. 8, pp. 873-883, 12 2016.
- (J10) Y. Zhou, A. Rangarajan, and **P. D. Gader**, “A spatial compositional model for linear unmixing and endmember uncertainty estimation”, *IEEE Transactions on Image Processing*, vol. 25, no. 12, Dec. 2016, pp. 5987 - 6002,
- (J11) L. Kalantari, **P. D. Gader**, S. Graves, S. Bohlman, "One-Class Gaussian Process for Possibilistic Classification Using Imaging Spectroscopy", *IEEE Geoscience and Remote Sensing Letters* 13.7 June 2016, 967-971.
- (J12) R. Heylen, A. Zare, **P. D. Gader** and P. Scheunders, "Hyperspectral Unmixing With Endmember Variability via Alternating Angle Minimization," *IEEE Transactions on Geoscience and Remote Sensing*, vol. 54, no. 8, pp. 4983-4993, May 2016.
- (J13) S. Yuksel, J. Bolton, **P. D. Gader**, “Multiple Instance Hidden Markov Models with Applications to Landmine Detection”, *IEEE Transactions Geoscience and Remote Sensing*, vol. 53, no. 12, Dec. 2015

- (J14) Nia, M. S., Wang, D. Z., Bohlman, S. A., **Gader, P.**, Graves, S. J., & Petrovic, M. (2015), "Impact of atmospheric correction and image filtering on hyperspectral classification of tree species using support vector machine". *Journal of Applied Remote Sensing*, 9(1), Nov. 2015.
- (J15) T. Glenn, A. Zare, **P. D. Gader**, "Bayesian Fuzzy Clustering," *IEEE Transactions on Fuzzy Systems*, vol. 23, no. 5, Oct. 2015.
- (J16) R. Heylen, P. Scheunders, **P. D. Gader**, and A. Rangarajan, "Nonlinear unmixing by using different metrics in a linear unmixing chain", *IEEE-JSTARS, Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, vol.8, no.6, pp.2655-2664, June 2015.
- (J17) Rob Heylen and **P. D. Gader**, "Nonlinear Spectral Unmixing With a Linear Mixture of Intimate Mixtures Model," *IEEE Geoscience & Remote Sensing Letters*, vol. 7, no. 11, pp:1195-1199, July 2014.
- (J18) A. Zare, J. Bolton, J. Chanussot, **P.D. Gader**, "Foreword to the Special Issue on Hyperspectral Image and Signal Processing," *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, vol. 7, no. 6, pp. 1841-1843, June 2014.
- (J19) R. Heylen, M. Parente, **P.D. Gader**, "A Review of Nonlinear Hyperspectral Unmixing Methods," *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, vol.7, no. 6, pp. 1844-1868, June 2014.
- (J20) Xiaoxiao Du, A. Zare, **P.D. Gader**, D. Dranishnikov, "Spatial and Spectral Unmixing Using the Beta Compositional Model," *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, vol. 7, no. 6, June 2014
- (J21) R. Close; **P. D. Gader**; J. Wilson, "Hyperspectral unmixing using macroscopic and microscopic mixture models", *J. Appl. Remote Sens.* 8 (1), 083642, April 2014; doi: 10.1117/1.JRS.8.08364
- (J22) Xuping Zhang, J.Bolton, **P. D. Gader**, "A New Learning Method for Continuous Hidden Markov Models for Subsurface Landmine Detection in Ground Penetrating Radar," *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, vol.7, no.3, pp.813:819, March 2014
- (J23) Wing-Kin Ma, J.M. Bioucas-Dias, J. Chanussot, **P.D. Gader**, "Signal and Image Processing in Hyperspectral Remote Sensing [From the Guest Editors]," *IEEE Signal Processing Magazine*, vol.31, no. 1, pp. 22-23, Jan. 2014.
- (J24) Ma, W.-K.; Bioucas-Dias, J.M.; Tsung-Han Chan; Gillis, N.; **P. D. Gader**, P.; Plaza, A.J.; Ambikapathi, A.; Chong-Yung Chi, "A Signal Processing Perspective on Hyperspectral Unmixing: Insights from Remote Sensing," *IEEE Signal Processing Magazine*, vol.31, no.1, pp.67,81, Jan. 2014.
- (J25) Yang, Ce, Won Suk Lee, and **P. D. Gader**. "Hyperspectral band selection for detecting different blueberry fruit maturity stages." *Computers and Electronics in Agriculture* 109 (2014): 23-31.
- (J26) Alina Zare, **P. D. Gader**, O. Bchir, and H., Frigui "Piece-wise Convex Multiple Model Endmember Detection and Spectral Unmixing", *IEEE Trans. Geoscience and Remote Sensing*, vol. 51, no. 5, pp. 2853 - 2862, July, 2013.
- (J27) Seniha Esen Yuksel, Thierry Dubroca, Rolf E. Hummel, and **P.D. Gader**. "Differential reflection spectroscopy: A novel method for explosive detection." *Acta Phys. Pol. A* 123, no. 2 (2013): 263-264.
- (J28) Alina Zare, **P. D. Gader**, G. Casella, "Sampling Piece-wise Convex Unmixing and Endmember Extraction", *IEEE Trans. Geoscience and Remote Sensing*, vol.51, no. 3, 2013, pp. 1655-1665, March, 2013.

- (J29) Achmed Abdallah, H. Frigui, **P. D. Gader**, “Adaptive Local Fusion with Fuzzy Integrals”, *IEEE Trans. Fuzzy Systems*, vol. 20, no. 5, pp. 849-864, Oct. 2012.
- (J30) S. Yuksel, J. Wilson, and **P. D. Gader**, "Twenty Years of Mixture of Experts", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 23, no. 8, p.1177-1193, May, 2012.
- (J31) Alina Zare, **P. D. Gader**, and K. S. Gurumoorthy, “Directly Measuring Material Proportions Using Hyperspectral Compressive Sensing”, *Geoscience and Remote Sensing Letters*, vol.9, no.3, pp.323-327, May 2012
- (J32) H. Frigui, L. Zhang, **P. D. Gader**, Joseph N. Wilson, K C Ho, and Andres Mendez-Vazquez “An Evaluation of Several Fusion Algorithms for Anti-tank Landmine Detection and Discrimination”, *Information Fusion* Vol. 13, Issue 2, April 2012, Pages 161–174.
- (J33) J. Bioucas-Dias, A. Plaza, N. Dobigeon, M. Parente, Q. Due, **P. D. Gader**, J. Chanussot, “Hyperspectral Unmixing Overview: Geometrical, Statistical, and Sparse Regression-Based Approaches”, *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, Vol. 5, No. 2, pp: 354 – 379, April, 2012.
- (J34) J. Bolton and **P. D. Gader**, “Application of Multiple Instance Learning for Hyperspectral Image Analysis”, *Geoscience and Remote Sensing Letters*, Vol. 8, No. 5, Sept. 2011, pp. 889-893.
- (J35) J. Bolton, **P. D. Gader**, Hichem Frigui, Pete Torrione, “Random Set Framework for Multiple Instance Learning”, *Journal of Information Sciences*, Volume 181, Issue 11, 1 June 2011, Pages 2061-2070.
- (J36) O. Missaoui, H. Frigui, and **P. D. Gader**, “Landmine Detection with Ground Penetrating Radar using Multi-Stream Discrete Hidden Markov Models”, *IEEE Trans. Geoscience and Remote Sensing*, Volume 49, Issue 6, June 2011, pp. 2080-2099
- (J37) G. Heo, **P. D. Gader**, “Robust Kernel Discriminant Analysis using Fuzzy Memberships”, *Pattern Recognition*, Volume 44, Issue 3, March 2011, Pages 716-723.
- (J38) Alina Zare and **P. D. Gader**, “PCE: Piece-wise Convex Endmember Detection” *IEEE Trans. Geoscience and Remote Sensing*, Vol. 48, No. 6, June 2010, pp. 2620-2632.
- (J39) H. Frigui, L. Zhang, **P. D. Gader**, “Context Dependent Multi-Sensor Fusion and its Application to Land Mine Detection”, *IEEE Trans. Geoscience and Remote Sensing*, Vol. 48, No. 6, June 2010, pp. 2528 – 2543.
- (J40) G. Ramachandran, **P. D. Gader**, J. N. Wilson, “GRANMA: Gradient Angle Model Algorithm on Wideband EMI data for Landmine Detection”, *Geoscience and Remote Sensing Letters*, Vol. 7, No. 3, July 2010, pp. 535-539.
- (J41) J. Bolton, **P. D. Gader**, “Random Set Framework for Context-Based Classification with Hyperspectral Imagery”, *IEEE Trans. Geoscience and Remote Sensing*, Vol. 47, No. 11, Nov. 2009, Page(s): 3810-3821.
- (J42) J. McElroy and **P. D. Gader**, “Generalized Encoding and Decoding Operators for Lattice Based Associative Memories” *IEEE Transactions on Neural Networks*, Vol. 20, No. 10, October 2009, Page(s): 1674-1679.
- (J43) R. Mazhar, **P. D. Gader**, J. N. Wilson, “Matching Pursuits Dissimilarity Measure for Shape-Based Comparison and Classification of High-dimensional Data”, *IEEE Trans. Fuzzy Systems*, Vol. 17, No. 5, Oct. 2009, Page(s): 1175-1189.

- (J44) G. Heo, **P. D. Gader**, and H. Frigui, "RKF-PCA: Robust kernel fuzzy PCA", *Neural Networks*, Vol. 22, No. 5-6, July 2009, Page(s): 642-650.
- (J45) H. Frigui and **P. D. Gader**, "Detection and discrimination of land mines in ground-penetrating radar based on edge histogram descriptors and a Possibilistic K-Nearest Neighbor Classifier", *IEEE Trans. Fuzzy Systems*, Volume 17, Issue 9, March 2009, Page(s) 185-199.
- (J46) J. Bolton, **P. D. Gader**, J. N. Wilson, "Discrete Choquet Integral as a Distance Metric", *IEEE Trans. Fuzzy Systems* Volume 16, Issue 4, Aug. 2008 Page(s):1107 - 1110.
- (J47) Alina Zare and **P. D. Gader**, "Hyperspectral Band Selection and Endmember Detection Using Sparsity Promoting Priors", *IEEE Geoscience and Remote Sensing Letters*, Vol. 5, No. 2, April 2008, pp. 256-261.
- (J48) K. C. Ho, L. Carin, **P. D. Gader**, J. N. Wilson, "An Investigation of Using the Spectral Characteristics from Ground Penetrating Radar for Landmine/Clutter Discrimination", *IEEE Trans. Geoscience and Remote Sensing*, Vol. 46, No. 4, April 2008, pp. 1177-1192.
- (J49) Andres Mendez-Vazquez, **P. D. Gader**, J. M. Keller, K. Chamberlin, "Minimum Classification Error Training for Choquet Integrals with Applications to Landmine Detection", *IEEE Trans. Fuzzy Systems*, Vol. 16, No. 1, Feb. 2008, pp. 225-239.
- (J50) Alina Zare, J. Bolton, **P. D. Gader**, M. Schatten, "Vegetation Mapping for Landmine Detection Using Long-Wave Hyperspectral Imagery", *IEEE Trans. Geoscience and Remote Sensing*, Volume 46, Issue 1, Jan. 2008, pp.:172 – 178.
- (J51) J. N. Wilson, **P. D. Gader**, W.-H. Lee, H. Frigui, and K. C. Ho, "A Large-Scale Systematic Evaluation of Algorithms Using Ground Penetrating Radar for Landmine Detection and Discrimination", *IEEE Trans. Geoscience and Remote Sensing*, Vol. 45, No. 8, pp. 2560-2573, August 2007.
- (J52) Alina Zare and **P. D. Gader**, "Sparsity Promoting Iterated Endmember Detection in Hyperspectral Imagery", *IEEE Geoscience and Remote Sensing Letters*, Vol.4, No. 3, pp. 446-451, July 2007.
- (J53) R. Joe Stanley, K.C. Ho, **P.D.Gader**, J. N. Wilson, James Devaney, "Land Mine and Clutter Object Discrimination Using Wavelet and Time Domain Spatially Distributed Features from Metal Detector and Their Fusion with GPR Features for Hand-Held Units", *Circuits Systems and Signal Processing*, Vol. 26, No. 2, pp. 165-191, April 2007.
- (J54) T. Wang, J. Keller, **P. D. Gader**, and O. Sjahputera, "Frequency Subband Processing and Feature Analysis of Forward-Looking Ground Penetrating Radar Signals for Land Mine Detection", *IEEE Trans Geoscience and Remote Sensing*, Volume 45, Issue 3, pp. 718-729, March 2007.
- (J55) W-H. Lee, **P. D. Gader**, J. N. Wilson, "Optimizing the Area under a Receiver Operating Characteristic Curve with Application to Landmine Detection", *IEEE Trans. Geoscience and Remote Sensing*, vol. 45, No. 2, pp. 389-398, Feb. 2007.
- (J56) M. Popescu, **P. D. Gader**, and J. M. Keller, "Fuzzy Spatial Pattern Processing Using Linguistic Hidden Markov Models", *IEEE Trans. Fuzzy Systems*, Vol. 14, No. 1, pp. 81-92, Feb. 2006.
- (J57) H. Frigui, K.C. Ho and **P. D. Gader**, "Real-time Land Mine Detection with Ground Penetrating Radar using Discriminative and Adaptive Hidden Markov Models" *EURASIP Journal on Applied Signal Processing*, Vol. 2005, No. 12, pp. 1867-1885, July 2005.

- (J58) **P. D. Gader**, W-H Lee, J. N. Wilson, “Detecting Landmines with Ground Penetrating Radar using Feature-Based Rules Order Statistics, and Adaptive Whitening”, *IEEE Trans. Geoscience and Remote Sensing*, vol. 42, No. 11, pp. 2522-2534, Nov. 2004.
- (J59) T. Wang, J. M. Keller, **P. D. Gader**, A. K. Hocaoglu, “Phase Signatures in Acoustic-Seismic Landmine Detection”, *Radio Science*, vol. 39, pp. RS4S02/1-13, July 2004.
- (J60) K. C. Ho, L. M. Collins, L. G. Huettel, **P. D. Gader**, Discrimination Mode Processing for EMI and GPR sensors for Hand-Held Land Mine Detection, *IEEE Trans. Geoscience and Remote Sensing*, Vol. 42, No. 1, pp. 249-263, Jan. 2004.
- (J61) Ali K. Hocaoglu and **P. D. Gader**, “Domain Learning Using Choquet Integral Based Morphological Shared Weight Neural Networks”, *Journal of Image and Vision Computing, special issue on Computer Vision Beyond the Visible Spectrum*, Vol. 21, No. 1, pp. 663-673, July 2003.
- (J62) Y. Zhao, **P. D. Gader**, P. Chen, Y. Zhang, “Training DHMMs of mine and clutter to minimize landmine detection errors”, *IEEE Trans. Geoscience and Remote Sensing*, Vol. 41, No. 5, pp. 1016-1024, May 2003.
- (J63) Jinhui Liu and **P. D. Gader**, “Neural Networks with Enhanced Outlier Rejection Ability for Off-Line Handwritten Word Recognition”, *Pattern Recognition* Vol. 35, No. 10, pp. 2061-2071, October, 2002.
- (J64) D. DeKrugger, J. Hodge, J. C. Bezdek, J. M. Keller, and **P. D. Gader**, “Detecting Mobile Land Targets in LADAR Imagery with Fuzzy Algorithms”, *Journal of Intelligent and Fuzzy Systems*, Vol. 10, No. 3-4, pp. 197-213, October 2002.
- (J65) R. J. Stanley, **P. D. Gader**, D. Ho, “Feature and decision level sensor fusion of electromagnetic induction and ground penetrating radar sensors for landmine detection with hand-held units”, *Information Fusion* 3(3):215-223, September 2002.
- (J66) K. C. Ho and **P. D. Gader**, “A Linear Prediction Land Mine Detection Algorithm for Hand Held Ground Penetrating Radar”, *IEEE Transactions on Geoscience and Remote Sensing*, Vol. 40, No. 6, pp. 1374-1385, June, 2002.
- (J67) Ali K. Hocaoglu, **P. D. Gader**, J. M. Keller, and B. N. Nelson, “Anti-Personnel Land Mine Detection and Discrimination using Acoustic Data”, *Journal of Subsurface Sensing Technologies and Applications*, Vol. 3, No. 2, pp. 75-93, April, 2002.
- (J68) S. Auephanwirayakul, J. Keller, and **P. D. Gader**, “Generalized Choquet Fuzzy Integral Fusion”, *Information Fusion*, Vol. 3, No. 1, pp. 69-85, March 2002.
- (J69) N. Theera-Umpon and **P. D. Gader**, “System-Level Training of Neural Networks for Counting White Blood Cells”, *IEEE Trans. Systems, Man, and Cybernetics*, Vol. 32, No. 1, pp. 48-54, February, 2002.
- (J70) N. Theera-Umpon, E. R. Dougherty, and **P. D. Gader**, Non-Homothetic Granulometric Mixing Theory, *Pattern Recognition*, Vol. 34, No. 12, pp.2547-2560, December 2001.
- (J71) B. Verma, **P. D. Gader** and W. Chen, “Fusion of Multiple Handwritten Word Recognition Techniques”, *Pattern Recognition Letters*, Vol. 22, No. 9, pp. 991-998, July 2001.
- (J72) **P. D. Gader**, M. Mystkowski, Y. Zhao “Landmine Detection with Ground Penetrating Radar using Hidden Markov Models,” *IEEE Trans. Geoscience and Remote Sensing*, Vol. 39, No. 6, pp. 1231-1244, June 2001.

- (J73) **P. D. Gader**, James. M. Keller, Bruce N. Nelson, "Recognition Technology for the Detection of Buried Land Mines," *IEEE Trans. Fuzzy Systems*, Vol. 9, No. 1, pp. 31-43, February 2001.
- (J74) **P. D. Gader**, B. Nelson, H. Frigui, G. Vaillette, J. Keller, "Fuzzy Logic Detection of Landmines with Ground Penetrating Radar," *Signal Processing, Special Issue on Fuzzy Logic in Signal Processing (Invited Paper)*, Vol. 80, No. 6, pp. 1069-1084, June 2000.
- (J75) **P. D. Gader**, M. Khabou, and A. Koldobsky, "Morphological Regularization Neural Networks," *Pattern Recognition, Special Issue on Mathematical Morphology and Its Application*, Vol. 33, No. 6, pp. 935-945, June 2000.
- (J76) M. Khabou, **P. D. Gader**, and J. M. Keller, "LADAR Target Detection Using Morphological Shared-Weight Neural Networks", *Machine Vision and Applications*, Vol. 11 No. 6, pp. 300-305, May 2000.
- (J77) N. Theera-Umpon and **P. D. Gader**, "Counting White Blood Cells Using Morphological Granulometries," *Journal of Electronic Imaging*, Vol. 9, No. 2, pp. 170-177, April 2000.
- (J78) M. Mohamed and **P. D. Gader**, "Generalized Hidden Markov Models Part I: Theoretical Frameworks," *IEEE Trans. Fuzzy Systems*, Vol. 8, No. 1, pp. 67-81, February 2000.
- (J79) M. Mohamed and **P. D. Gader**, "Generalized Hidden Markov Models Part II: Applications to Handwritten Word Recognition," *IEEE Trans. Fuzzy Systems*, Vol. 8, No. 1, pp. 82-95, February 2000.
- (J80) M. Khabou and **P. D. Gader**, "Automatic Target Detection using Entropy-Optimized Shared Weight Neural Networks," *IEEE Trans. Neural Networks*, Vol. 11, No. 1, pp. 186-194, January 2000.
- (J81) M. Popescu, **P. D. Gader**, J. M. Keller, C. Klein, J. Stanley, and C. Caldwell, "Automatic Karyotyping of Metaphase Cells with Overlapping Chromosomes," *Computers in Biology and Medicine*, Vol. 29, No. 1, pp. 61-82, March 1999.
- (J82) M. Khabou, **P. D. Gader**, H. Shi, "Entropy Optimized Morphological Shared-Weight Neural Networks," *Optical Engineering*, Vol. 38, No. 2, pp. 263-273, Feb. 1999.
- (J83) W. Chen, **P. D. Gader**, H. Shi, "Lexicon Driven Handwritten Word Recognition Using Optimal Linear Combinations of Order Statistics," *IEEE Trans. Pattern Analysis and Machine Intelligence*, Vol. 21, No. 1, pp.77-83, Jan. 1999.
- (J84) R. Stanley, J. Keller, **P. D. Gader**, C. Caldwell," Homologue Matching Applications: Recognition of Overlapped Chromosomes," *Pattern Analysis and Applications*, Vol. 1, No. 4, pp. 206-217, 1998.
- (J85) R. Stanley, J. Keller, **P. D. Gader**, C. Caldwell, "Data Driven Homologue Matching for Chromosome Identification," *IEEE Trans Medical Imaging*, Vol. 17, No. 3, pp. 451-463, June 1998.
- (J86) H. Shi, **P. D. Gader**, and W. Chen, "Fuzzy Integral Filters: Properties and Parallel Implementations," *Journal of Real-Time Imaging*, Vol. 4, No. 2, pp. 233-241, April 1998.
- (J87) H. Shi, **P. D. Gader**, and H. Li, "Parallel Mesh Algorithms for Grid Graph Shortest Paths with Application to Separation of Touching Chromosomes," *Journal of Supercomputing; Special Issue on High-Performance Computing and Applications in Computer Graphics, Image Processing and Computer Vision*, Vol. 12, pp. 69-83, 1998.

- (J88) J. Chiang and **P. D. Gader**, "Hybrid Fuzzy-Neural Systems in Handwritten Word Recognition," *IEEE Trans. Fuzzy Systems*, Vol. 5, No. 4, pp. 497-510, Nov. 1997.
- (J89) Y. Won, **P. D. Gader**, and P. C. Coffield, "Shared-Weight Neural Networks based on Mathematical Morphology with Applications to Automatic Target Recognition," *IEEE Trans. Neural Networks*, Vol. 8, No. 5, pp. 1195-1204, Sept. 1997.
- (J90) **P. D. Gader**, J. M. Keller, R. Krishnapuram, J.H. Chiang, and M. Mohamed, "Neural and Fuzzy Methods in Handwriting Recognition," *IEEE Computer*, Vol. 30, No. 2, pp. 79-86, Feb. 1997.
- (J91) **P. D. Gader**, Magdi Mohamed, and Jung-Hsien Chiang, "Handwritten Word Recognition with Character and Inter-Character Neural Networks," *IEEE Trans. Sys. Man Cybernetics*, Vol. 27, No. 1, pp. 158-165, Feb. 1997.
- (J92) Jung-Hsien Chiang and **P. D. Gader**, "Recognition of Handprinted Numerals in VISA® Card Application Forms," *Machine Vision and Applications*, Vol. 10, No. 3, pp. 144-149, Sept. 1997.
- (J93) **P. D. Gader**, and M.A. Khabou, "Automated Feature Generation for Handwritten Digit Recognition," *IEEE Trans. Pattern Analysis and Machine Intelligence*, Vol. 18, No. 12, pp. 1256-1262, Dec. 1996.
- (J94) **P. D. Gader**, M. Mohamed, and J. Keller, "Fusion of Handwritten Word Classifiers," *Pattern Recognition Letters*, Special Issue on Fuzzy Pattern Recognition, Vol. 17, No. 6, pp. 577-584, May 1996.
- (J95) M. Mohamed and **P. D. Gader**, "Handwritten Word Recognition Using Segmentation-Free Hidden Markov Modeling and Segmentation-Based Dynamic Programming Techniques," *IEEE Trans. Pattern Analysis and Machine Intelligence*, Vol. 18, No. 5, pp. 548-554, May 1996.
- (J96) **P. D. Gader**, M. Mohamed, and J. M. Keller, "Dynamic Programming Based Handwritten Word Recognition using the Choquet Fuzzy Integral as the Match Function," *Journal of Electronic Imaging*, Special Issue on Digital Document Imaging, Vol. 5, No. 1, pp. 15-25, Jan 1996.
- (J97) **P. D. Gader**, J. Miramonti, Y. Won, and P. Coffield, "Segmentation Free Shared Weight Networks for Automatic Vehicle Detection," *Neural Networks*, Vol. 8, No. 9, pp. 1457-1475, 1995.
- (J98) **P. D. Gader**, M. Mohamed, and J. Chiang, "Comparison of Crisp and Fuzzy Character Neural Networks in Handwritten Word Recognition," *IEEE Trans. Fuzzy Systems*, Vol. 3, No. 3, pp. 357-364, August 1995.
- (J99) **P. D. Gader**, J. M. Keller, and J. Cai, "A Fuzzy Logic System for Detection and Recognition of Street Number Fields on Handwritten Postal Addresses," *IEEE Trans Fuzzy Systems*, Vol. 3, No. 1, pp. 83-95, Feb 1995.
- (J100) **P. D. Gader**, M. P. Whalen, M. J. Ganzberger, and Dan Hepp, "Handprinted Word Recognition on a NIST Data Set," *Machine Vision and Its Applications*, Vol. 8, pp. 31-40, Jan. 1995.
- (J101) J. M. Keller, **P. D. Gader**, Hossein Tahani, Jung-Hsien Chiang, and Magdi Mohamed, "Advances in Fuzzy Integration for Pattern Recognition," *Fuzzy Sets and Systems*, Vol. 65, pp. 273-283, 1994.
- (J102) S. Takriti and **P. D. Gader**, "Local Decompositions of Gray-Scale Morphological Templates," *Journal of Mathematical Imaging and Vision*, Vol. 2, No. 1, pp. 39-50, 1992.
- (J103) **P. D. Gader**, B. Forester, M. Ganzberger, A. Gillies, B. Mitchell, M. Whalen, and T. Yocum, "Recognition of Handwritten Digits Using Template and Model Matching," *Journal of Pattern Recognition*, Vol. 24, No. 5, pp. 421-431, 1991.

- (J104) **P. D. Gader**, "Separable Decompositions and Approximations of Greyscale Morphological Templates," *Computer Vision, Graphics, and Image Processing-Image Understanding*, Vol. 53, No. 3, pp. 288-296, May 1991.
- (J105) G. Ammar and **P. D. Gader**, "A Variant of the Gohberg-Semencul Formula Involving Circulant Matrices," *SIAM Journal on Matrix Analysis and Applications*, Vol. 12, No. 3, pp. 534-540, July 1991.
- (J106) **P. D. Gader**, "Displacement Operator Based Decompositions of Matrices Using Circulants or Other Group Matrices," *Journal of Linear Algebra and Its Applications*, Vol. 139, October 1990.
- (J107) **P. D. Gader**, "Bidiagonal Factorizations of Fourier Matrices and Systolic Algorithms for Computing Discrete Fourier Transforms," *IEEE Transactions on Acoustics, Speech and Signal Processing*, Vol. 37, No. 8, August 1989.
- (J108) **P. D. Gader**, "Necessary and Sufficient Conditions for the Existence of Local Matrix Decompositions," *SIAM Journal on Matrix Analysis and Applications*, Vol. 9, No. 3, pp. 305-313, July 1989.
- (J109) **P. D. Gader**, "Tridiagonal Factorizations of Fourier Matrices and Applications to Parallel Computations of Discrete Fourier Transforms," *Journal of Linear Algebra and its Applications*, Vol. 102, pp. 1280-1283, April 1988.
- (J110) G. X. Ritter and **P. D. Gader**, "Image Algebra Techniques for Parallel Image Processing," *Journal of Parallel and Distributed Computing: Special Issue on Parallel Image Processing and Pattern Recognition* (invited paper), Vol. 4, No. 5, pp. 7-44, March 1987.



## JOURNAL COMMENTS

**P.D. Gader**, A. Zare, J. Bolton, J. Chanussot, “WHISPERS 2013: 5th Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing [Conference Reports],” *IEEE Geoscience & Remote Sensing Magazine*, vol. 1, no.4, pp. 50-53, December 2013.

**P. D. Gader**, “Guest Editor Foreword to the Special Issue on Recognition Technology”, *IEEE Transactions on Fuzzy Systems*, Vol. 9, No. 1, pp. 1-2, Feb 2001.

A. K. Hocaoglu and **P. D. Gader**, “Comments on Choquet Fuzzy Integral-Based Hierarchical Networks for Decision Analysis,” *IEEE Trans Fuzzy Systems*, Vol. 7, No. 6, pp.767-768, December 1999.

## BOOK CHAPTERS

G. X. Ritter, **P. D. Gader**, “Fixed Points of Lattice Transforms and Lattice Associative Memories”, chapter in *Advances in Imaging and Electron Physics*, P. Hawkes (ed.): Elsevier Press, pp.165-242, 2006.

**P. D. Gader**, “Signal-Processing and Sensor Fusion Methods”, chapter in *Alternatives for Landmine Detection*, J. MacDonald, J. R. Lockwood (eds.): RAND Science and Technology Policy Institute, pp. 311-326, 2003.

**P. D. Gader**, Bruce N. Nelson, A. Koksai Hocaoglu, Sansanee Auephanwiriyaikul, Mohamed A. Khabou, “Neural versus Heuristic Development of Choquet Fuzzy Integral Fusion Algorithms for Land Mine Detection,” chapter in *Neuro-fuzzy Pattern Recognition* H. Bunke, A. Kandel (eds.): World Scientific Publ. Co., pp 205-226, 2000.

J. M. Keller, **P. D. Gader**, and A. K. Hocaoglu, “Fuzzy Integrals in Image Processing and Recognition,” chapter in *Fuzzy Measures and Integrals*, edited by M. Grabisch, T. Murofushi, and M. Sugeno. Berlin: Springer-Verlag, pp. 435-466, 2000.

**P. D. Gader**, “Lexicon-Driven Handwritten Word Recognition,” chapter in *Electronic Imaging Technology*, edited by Edward Dougherty. Bellingham, WA: SPIE Optical Engineering Press, pp. 317-341, 1999.

**P. D. Gader**, J. M. Keller, and J. Cai, “Handwritten Numeric Field Location via Fuzzy Logic,” chapter in *Fuzzy Set Methods in Engineering: A Guided Tour of Applications*, edited by R. Yager, D. Dubois, and H. Prade. New York: John Wiley & Sons, 1996

J. Keller, R. Krishnapuram, **P. D. Gader**, and Y-S. Choi, “Fuzzy Rule-Based Models in Computer Vision,” chapter in *Fuzzy Modeling: Paradigms and Practice*, edited by W. Pedrycz. Norwell, MA: Kluwer Academic Publishers, pp. 353-375, 1996.

**P. D. Gader**, Andres M. Gillies, and D. Hepp, “Handwritten Character Recognition,” chapter in *Digital Image Processing Methods*, edited by Edward Dougherty. New York: Marcel Dekker, pp. 223-261, 1994.

G. Ammar and **P. D. Gader**, “New Decompositions of the Inverse of a Toeplitz Matrix,” chapter in *Signal Processing, Scattering and Operator Theory, and Numerical Methods*, edited by M. A. Kaashoek, J. H. van Schuppen, and A. C. M. Ran. Boston: Birkhauser, 1990.

**CONFERENCE PAPERS (223 accepted/published)**

- (C1) M. Cook, A. Zare, & **P. Gader**, “Outlier Detection through Null Space Analysis of Neural Networks”, International Conference on Machine Learning (ICML) 2020 workshop on Uncertainty and Robustness in Deep Learning (accepted), July 2020.
- (C2) Meerdink, S., Bocinsky, J., Wetherley, E., Zare, A., Mccurley, C., & **Gader, P.** (2019). “Developing spectral libraries using multiple target multiple instance adaptive cosine/coherence estimator”, *10th Workshop Hyperspectral Imaging and Signal Processing: Evolution in Remote Sensing (WHISPERS)*, Sept. 2019, <https://doi.org/10.1109/WHISPERS.2019.8920989>
- (C3) Fick, R., **Gader, P.**, Zare, A., & Meerdink, S.(2019). “Temporal mapping of hyperspectral data”, *10th Workshop Hyperspectral Imaging & Signal Processing: Evolution in Remote Sensing (WHISPERS)*, Sept. 2019, <https://doi.org/10.1109/WHISPERS.2019.8921373>
- (C4) Yuan Zhou, Anand Rangarajan, Paul D. Gader, “Nonrigid registration of hyperspectral and color images with vastly different spatial and spectral resolutions for spectral unmixing and pansharpening”, Proc. Computer Vision and Pattern Recognition (CVPR) Workshop on EarthVision: Large Scale Computer Vision for Remote Sensing Imagery, Honolulu, HI, July 2017.
- (C5) L. Kalantari and P. D. Gader, “Cross-validating Gaussian process methods for hyperspectral data from tree crowns”, IEEE Symposium Geoscience and Remote Sensing (IGARSS 17), July 2017, Forth Worth TX, pp..
- (C6) Ron Fick and **P. D. Gader**, “Dimensionality estimation for manifold-based classification of airborne spectral data acquired over terrestrial regions”, Proc SPIE Conf. Algorithms and Technologies for Multispectral, Hyperspectral, and Ultraspectral Imagery XXIII, Anaheim, CA, (2017).
- (C7) Yuan Zhou, Anand Rangarajan and **P. D. Gader**, “A Gaussian Mixture Model Representation Of Endmember Variability For Spectral Unmixing”, Proc. 8<sup>th</sup> Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS), Los Angeles, CA, August 2016.
- (C8) Rob Heylen, Paul Scheunders, Alina Zare, **P. D. Gader**, “Alternating Angle Minimization Based Unmixing With Endmember Variability”, IEEE Symposium Geoscience and Remote Sensing (IGARSS 17), July 2017. pp. 6974-6977, Beijing, China , July 2016.
- (C9) **P. D. Gader**, L. Kalantari, and Hichem Frigui, “Gaussian processes and self-organizing maps for possibilistic, robust, ambiguity preserving (PRAM) classification and regression with spectral data”, Proc. SPIE Conf. Algorithms and Technologies for Multispectral, Hyperspectral, and Ultraspectral Imagery XXII, Baltimore, MD, April 2016.
- (C10) Zhou, Yuan, Anand Rangarajan, and **P. D. Gader**. "A spatial compositional model (SCM) for linear unmixing and endmember uncertainty estimation." Proc. 7th IEEE Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS 2015), 2 June 2015 - 5 June 2015 (Tokyo, Japan).
- (C11) Ce Yang, Won S. Lee, **P. D. Gader**, “Blueberry Maturity Stage Detection Based on Spectral-Spatial detection of Hyperspectral Image Using Selection Bands”, Proceedings International Workshop on Robotics in Agriculture, May 2015.
- (C12) P. Massoudifar, A. Rangarajan, and **P. D. Gader**. "Superpixel Estimation for Hyperspectral Imagery.", *2014 IEEE Conference on Computer Vision and Pattern Recognition Workshops (CVPRW)*. 2014.

- (C13) L. Kalantari, **P. D. Gader**, S. Graves, S. Bohlman, "Evaluating similarity measures for hyperspectral classification of tree species at Ordway-Swisher Biological Station." *Geoscience and Remote Sensing Symposium (IGARSS), 2014 IEEE International*. IEEE, 2014.
- (C14) **P. Massoudifar, A. Rangarajan, A. Zare, P. D. Gader**, "An integrated graph cuts segmentation and piece-wise convex unmixing approach for hyperspectral imaging." *IEEE GRSS Workshop Hyperspectral Image Signal Processing: Evolution Remote Sensing*. 2014.
- (C15) H. Jenzri, H. Frigui, and **P. D. Gader**. "Context dependent hyperspectral subpixel target detection." Image Processing (ICIP), 2014 IEEE International Conference on Image Processing IEEE, 2014.
- (C16) Dranishnikov, Dmitri; **Gader, Paul**; Zare, Alina; Glenn, Taylor, "Unmixing using a combined microscopic and macroscopic mixture model with distinct endmembers," Proceedings of the 21st European Signal Processing Conference (EUSIPCO), pp.1,5, 9-13 Sept. 2013.
- (C17) Glenn, T.; Dranishnikov, D.; **Gader, P.**; Zare, A, "Subpixel target detection in hyperspectral imagery using piece-wise convex spatial-spectral unmixing, possibilistic and fuzzy clustering, and co-registered LiDAR," IEEE International Geoscience and Remote Sensing Symposium (IGARSS, pp.1063,1066, 21-26 July 2013
- (C18) J. Dula; A. Zare; Dominic Ho; **P. D. Gader**, "Landmine classification using possibilistic K-nearest neighbors with wideband electromagnetic induction data", Proc. SPIE 8709, Detection and Sensing of Mines, Explosive Objects, and Obscured Targets XVIII, 87091F (7 June 2013);
- (C19) H. Jenzri, H. Frigui, **P. D. Gader**, "Context dependent spectral unmixing", 2012 IEEE International Workshop Machine Learning for Signal Processing, Sept. 23-26, 2012, Santander, Spain.
- (C20) S. E. Yuksel, J. Bolton, **P. D. Gader**, "Landmine detection with multiple instance hidden Markov models, 2012 IEEE International Workshop Machine Learning for Signal Processing, Sept. 23-26, 2012, Santander, Spain
- (C21) Alina Zare, Ouiem Bchir, Hichem Frigui, **Paul D. Gader**, "Hyperspectral image analysis with piece-wise convex endmember estimation and spectral unmixing", IEEE Conf. on Image Processing (ICIP), Sept. 30 – Oct. 3, 2012.
- (C22) Ryan Close, **P. D. Gader**, "Estimating the Percentage of Linear and Nonlinear Mixing at the Subpixel Level in Hyperspectral Imaging", *IEEE Geoscience and Remote Sensing Symposium (IGARSS)*, July 23-27, 2012.
- (C23) Seniha E. Yuksel, **P. D. Gader**, "Mixture of HMM experts with applications to landmine detection", *IEEE Geoscience and Remote Sensing Symposium (IGARSS)*, July 23-27, 2012, pp. 6852 - 6855.
- (C24) **P. D. Gader**, D. Dranishnikov, Alina Zare, and J. Chanussot, "A Sparsity Promoting Bilinear Unmixing Model", IEEE Workshop on Hyperspectral Image and Signal Processing – Evolution in Remote Sensing, Shanghai, China, June 2012.
- (C25) Alina Zare, **P. D. Gader**, T. Allgire, D. Dranishnikov, R. Close, "Bootstrapping for piece-wise convex endmember distribution detection", IEEE Workshop on Hyperspectral Image and Signal Processing – Evolution in Remote Sensing, Shanghai, China, June 2012.
- (C26) Seniha E. Yuksel, Thierry A. Dubroca, Rolf E. Hummel, **P. D. Gader**, "An automatic detection software for differential reflection spectroscopy", *SPIE Conf. Algorithms and Technologies for Multispectral, Hyperspectral, and Ultraspectral Imagery XVIII*, April 2012, .

- (C27) Ryan Close, **P. D. Gader**, Joseph Wilson, "Using physics-based macroscopic and microscopic mixture models for hyperspectral pixel unmixing", *SPIE Conf. Algorithms and Technologies for Multispectral, Hyperspectral, and Ultraspectral Imagery XVIII*, April 2012.
- (C28) K. C. Ho and **P. D. Gader**, "On the estimation of target depth using the single-transmit multiple-receive metal detector array", *SPIE Conf Detection and Sensing of Mines, Explosive Objects, and Obscured Targets XVII*, April 2012,
- (C29) Sean Goldberg, Taylor Glenn, Joseph N. Wilson, **P. D. Gader**, "Landmine detection using two-tapped joint orthogonal matching pursuits", *SPIE Conf Detection and Sensing of Mines, Explosive Objects, and Obscured Targets XVII*, April 2012.
- (C30) J. Bolton, **P. D. Gader**, "Conjunctive formulation of the random set framework for multiple instance learning: Application to remote sensing," *Geoscience and Remote Sensing Symposium (IGARSS)*, pp.3582-3585, 24-29 July 2011.
- (C31) R. Close, J. Wilson, **P. D. Gader**, "A Bayesian approach to localized multi-kernel learning using the relevance vector machine," *Geoscience and Remote Sensing Symposium (IGARSS)*, pp.1103-1106, 24-29 July 2011.
- (C32) Alina Zare, **P. D. Gader**, "Piece-wise convex spatial-spectral unmixing of hyperspectral imagery using possibilistic and fuzzy clustering," *IEEE International Conf. on Fuzzy Systems (FUZZ-IEEE)*, pp.741-746, 27-30 June 2011.
- (C33) Alina Zare, **P. D. Gader**, J. Bolton, S. Yuksel, T. Dubroca, R. Close, R. Hummel, "Sub-pixel target spectra estimation and detection using functions of multiple instances," *3rd Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS)*, pp.1-4, 6-9 June 2011.
- (C34) S. E. Yuksel and **P. D. Gader**, "Variational Mixture of Experts For Classification with Applications to Landmine Detection", *Proceedings of 20<sup>th</sup> International Conference on Pattern Recognition, (ICPR 2010)*, Istanbul, Turkey, Aug. 23-26 2010, 2981-2984
- (C35) O. Missaoui, H. Frigui, **P. D. Gader**, "Model level fusion of edge histogram descriptors and gabor wavelets for landmine detection with ground penetrating radar," *IEEE Geoscience and Remote Sensing Symposium (IGARSS)*, pp.3378-3381, 25-30 July 2010.
- (C36) J. Bolton, **P. D. Gader**, "Multiple instance learning for hyperspectral image analysis," *IEEE Geoscience and Remote Sensing Symposium (IGARSS)*, pp.4232-4235, 25-30 July 2010.
- (C37) Alina Zare, **P. D. Gader**, "Robust Endmember detection using L1 norm factorization," *IEEE Geoscience and Remote Sensing Symposium (IGARSS)*, pp.971-974, 25-30 July 2010.
- (C38) Ahmed Chamseddine, A. Abdallah, H. Frigui and **P. D. Gader**, "Local Fusion with Fuzzy Integrals", *Proceedings of IEEE Conference on Fuzzy Systems (FUZZ-IEEE '10)*, Barcelona, Spain, July 18-23 2010, CD.
- (C39) G. Heo and **P. D. Gader**, "An Extension of Global Fuzzy C-means Using Kernel Methods", *Proceedings of IEEE Conference on Fuzzy Systems (FUZZ-IEEE '10)*, Barcelona, Spain, July 18-23 2010, CD.
- (C40) G. Heo, **P. D. Gader**, and H. Frigui, "A Noise Robust Variant of Context Extraction for Local Fusion", *Proceedings of IEEE Conference on Fuzzy Systems (FUZZ-IEEE '10)*, Barcelona, Spain, July 18-23 2010, CD.

- (C41) Alina Zare and **P. D. Gader**, “An Investigation of Likelihoods and Priors for Bayesian Endmember Estimation”, *30th Int’l Workshop on Bayesian Inference and Maximum Entropy Methods in Science and Engineering*, Chamonix, France, July 4-9, 2010 (Invited Paper)
- (C42) Alina Zare, O. Bchir, H. Frigui, and **P. D. Gader**, “Spatially Smooth Piece-wise Convex Endmember Detection”, Proceedings of *IEEE Workshop on Hyperspectral Image and Signal Processing (WHISPERS’10)*, Reykjavik, Iceland, June 2010, CD.
- (C43) J. Bolton and **P. D. Gader**, “Spatial Multiple Instance Learning for Hyperspectral Image Analysis”, Proceedings of *IEEE Workshop on Hyperspectral Image and Signal Processing (WHISPERS’10)*, Reykjavik, Iceland, June 2010, CD.
- (C44) O. Bchir, H. Frigui, Alina Zare, and **P. D. Gader**, “Multiple Model Endmember Detection Based On Spectral And Spatial Information”, Proceedings of *IEEE Workshop on Hyperspectral Image and Signal Processing (WHISPERS’10)*, Reykjavik, Iceland, June 2010, CD.
- (C45) Alina Zare, O. Bchir, H. Frigui, and **P. D. Gader**, “A Comparison Of Deterministic And Probabilistic Approaches To Endmember Representation”, Proceedings of *IEEE Workshop on Hyperspectral Image and Signal Processing (WHISPERS’10)*, Reykjavik, Iceland, June 2010, CD (Invited Paper).
- (C46) Alina Zare, M. Silvius, R. Close, **Paul D. Gader**, “Quantifying the benefit of airborne and ground sensor fusion for target detection”, Alina Zare, Univ. of Florida (USA); Miranda Silvius,
- (C47) Jeremy Bolton, **Paul D. Gader**, Hichem Frigui, “Multiple instance learning for landmine detection in ground penetrating radar data”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XIV*, April 2010, CDROM.
- (C48) Dominic K. Ho, **Paul D. Gader**, Hichem Frigui, “Effect of radar undesirable characteristics on the performance of spectral feature landmine detection technique”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XIV*, April 2010, CDROM.
- (C49) Anis Hamdi, Oualid Missaoui, Hichem Frigui, **Paul D. Gader**, “Landmine detection using ensemble discrete hidden Markov models with context dependent training methods”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XIV*, April 2010, CDROM.
- (C50) Andrew Fadeev, Aledsey Fadeev, Hichem Frigui, **Paul D. Gader**, “Comparison of different classification algorithms for landmine detection using GPR”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XIV*, April 2010, CDROM.
- (C51) Alina Zare and **Paul D. Gader**, “L1-endmembers: a robust endmember detection and spectral unmixing algorithm”, *Proceedings of the SPIE Conference Algorithms and Technologies for Multispectral, Hyperspectral, and Ultraspectral Imagery XVI*, April 2010, CDROM.
- (C52) O. Missaoui, H. Frigui, **P. D. Gader**, “Discriminative Multi-stream Discrete Hidden Markov Models,” Proceedings of *IEEE Conference on Machine Learning and Applications (ICMLA)*, Miami Beach, Dec. 2009, pp. 178-183.
- (C53) L. Zhang, H. Frigui, **P. D. Gader**, “Context-Dependent Fusion of Multiple Algorithms with Minimum Classification Error Learning” Proceedings of *IEEE Conference on Machine Learning and Applications (ICMLA)*, Miami Beach, Dec. 2009, pp. 190-195.

- (C54) Alina Zare and **P. D. Gader**, “Context-dependent fusion for mine detection using airborne hyperspectral imagery”, Proceedings of *IEEE Workshop on Hyperspectral Image and Signal Processing (WHISPERS’09)*, Grenoble, France, Aug. 2009 CDROM.
- (C55) L. Zhang, H. Frigui, **P. D. Gader** and J. Bolton, “Context-dependent fusion for mine detection using airborne hyperspectral imagery” Proceedings of *IEEE Workshop on Hyperspectral Image and Signal Processing (WHISPERS’09)*, Grenoble, France, Aug. 2009 CDROM.
- (C56) J. Bolton and **P. D. Gader**, “A Random Measure Approach for Context Estimation in Hyperspectral Imagery” Proceedings of *IEEE Workshop on Hyperspectral Image and Signal Processing*, Grenoble, France, Aug. 2009 CDROM.
- (C57) G. Heo and **P. D. Gader**, “Fuzzy SVM for Noisy Data: A Robust Membership Calculation Method”, Proceedings *IEEE Conf. on Fuzzy Systems*, Jeju Island, Korea, Aug. 2009, pp. 431-436.
- (C58) Abdallah, H. Frigui, P. D. Gader, “Context extraction for local fusion using fuzzy clustering and feature discrimination,”, Proceedings *IEEE Conf. on Fuzzy Systems*, Jeju Island, Korea, Aug. 2009, pp. 490-495.
- (C59) G. Heo, **P. D. Gader**, H. Frigui, “Robust Kernel PCA using Fuzzy Membership”, *International Joint Conference on Neural Networks(IJCNN)*, Atlanta GA, Jun. 2009 pp. 1213-1220.
- (C60) G. Heo, **P. D. Gader**, “Learning the Number of Gaussian Components Using Hypothesis Test”, *International Joint Conference on Neural Networks(IJCNN)*, Atlanta GA, Jun. 2009, pp. 1206 -1212.
- (C61) H. Frigui, A. S. Fadeev, A. Karem, **P. D. Gader**, “Adaptive edge histogram descriptor for landmine detection using GPR”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XIII*, April 2009, CDROM.
- (C62) H. Frigui, A. Hamdi, O. Missaoui, **P. D. Gader**, “Landmine detection using mixture of discrete hidden Markov models”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XIII*, April 2009, CDROM.
- (C63) D. K. C. Ho, **P. D. Gader**, H. Frigui, “On improving subspace spectral feature technique for the detection of weak scattering plastic antitank landmines,” *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XIII*, April 2009, CDROM.
- (C64) H. Frigui, A. Chamseddine, **P. D. Gader**, “Context-dependent fusion for landmine detection with multisensor systems”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XIII*, April 2009, CDROM.
- (C65) J. N. Wilson, G. Ramachandran, **P. D. Gader**, B. Smock, W. R. Scott, “Wideband EMI pre-screening for landmine detection”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XIII*, April 2009, CDROM.
- (C66) G. Heo, **P. D. Gader**, “Prior-Updating Ensemble Learning for Discrete HMM”, *Proceedings of the International Conference on Pattern Recognition (ICPR)*, Tampa FL, Dec. 2008
- (C67) Alina Zare, **P. D. Gader**, “Endmember Detection using the Dirichlet Process”, *Proceedings of the International Conference on Pattern Recognition (ICPR)*, Tampa FL, Dec. 2008
- (C68) R. Mazhar and **P. D. Gader**, “EK-SVD: Optimized Dictionary Design for Sparse Representations”, *Proceedings of the International Conference on Pattern Recognition (ICPR)*, Tampa FL, Dec. 2008.

- (C69) **P. D. Gader**, J. N. Wilson, D. Ho, S. Yuksel, G. Ramachandran, G. Heo, “Hierarchical methods for landmine detection with wideband electro-magnetic induction and ground penetrating radar multi-sensor systems”, *Proceedings of the IEEE Geoscience and Remote Sensing Symposium*, July 2008.
- (C70) J. Bolton, **P. D. Gader**, “The Benefits of Context Estimation for Target Spectra Detection in Hyperspectral Imagery”, *Proceedings of the IEEE Geoscience and Remote Sensing Symposium*, July 2008.
- (C71) H. Frigui, L. Zhang, **P. D. Gader**, “Context-dependent Multi-Sensor Fusion for Landmine Detection”, *Proceedings of the IEEE Geoscience and Remote Sensing Symposium*, July 2008.
- (C72) R. Mazhar, **P. D. Gader**, J. Wilson, “A Matching Pursuit Based Similarity Measure for Fuzzy Clustering and Classification of Signals”, *Proceedings of the IEEE World Congress on Computational Intelligence*, Hong Kong, China, 1-6 June 2008 Page(s):1950 – 1955.
- (C73) J. Bolton, **P. D. Gader**, “Random Set Model for Context-based Classification”, *Proceedings of the IEEE World Congress on Computational Intelligence*, Hong Kong, China, 1-6 June 2008 Page(s):1999-2006.
- (C74) Andres Mendez-Vazquez, **P. D. Gader**, “Maximum a Posteriori EM MCE Logistic Lasso for Learning Fuzzy Measures”, *Proceedings of the IEEE World Congress on Computational Intelligence*, Hong Kong, China, 1-6 June 2008 Page(s):2007-2013.
- (C75) K. C. Ho, J. N. Wilson, **P. D. Gader**, “On the use of aggregation operators for humanitarian demining using hand-held GPR”, *Proceedings of the IEEE World Congress on Computational Intelligence*, Hong Kong, China, 1-6 June 2008 Page(s):2103-2108.
- (C76) Andres Mendez-Vazquez, **P. D. Gader**, “Learning Fuzzy Measure Parameters by Logistic LASSO”, *Proceedings of the North American Fuzzy Information Processing Society Meeting, NAFIPS 2008*, New York, NY, 19-22 May 2008 Page(s):1 – 7.
- (C77) K. Stone, J. M. Keller, M. Busch, K. C. Ho, **P. D. Gader**, “On the registration of FLGPR and IR data for the forward-looking landmine detection system and its use in eliminating FLGPR false alarms”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XII*, April 2008, (CDROM).
- (C78) J. Bolton, **P. D. Gader**, “Application of context-based classifier to remotely sensed imagery for mine detection”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XII*, April 2008,(CDROM).
- (C79) H. Frigui, O. Missaoui, **P. D. Gader**, “Landmine detection with ground penetrating radar using discrete hidden Markov models with symbol dependent features”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XII*, April 2008, (CDROM).
- (C80) K. C. Ho, **P. D. Gader**, J. N. Wilson, H. Frigui, “Subspace processing of GPR signals for vehicle-based landmine detection system”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XII*, April 2008, (CDROM).
- (C81) H. Frigui, **P. D. Gader**, A. Chamseddine, “A generic framework for context-dependent fusion with application to landmine detection”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XII*, April 2008, (CDROM).

- (C82) Alina Zare, **P. D. Gader**, "Sparsity Promoting Iterated Constrained Endmember Detection with Integrated Band Selection," *Proceedings of the IEEE Geoscience and Remote Sensing Symposium 2007*, Barcelona, Spain, Barcelona, Spain, 23-28 July 2007, Page(s): 4045-4048.
- (C83) R. Mazhar, J. N. Wilson, P. D. Gader "Use of an application-specific dictionary for matching pursuits discrimination of landmines and clutter", *Proceedings of the IEEE Geoscience and Remote Sensing Symposium 2007*, Barcelona, Spain, 23-28 July 2007, Page(s): 26-29.
- (C84) J. Bolton and **P. D. Gader**, "Application of Random Set Based Clustering to Landmine Detection with Hyperspectral Imagery", *Proceedings of the IEEE Geoscience and Remote Sensing Symposium 2007*, Barcelona, Spain, Barcelona, Spain, 23-28 July 2007, Page(s): 2022-2025.
- (C85) K. Ho, **P. D. Gader**, H. Frigui, J. Wilson , "Confidence level fusion of edge histogram descriptor, hidden Markov model, spectral correlation feature, and NUKEv6", *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XI*, Vol. 6553, May 2007, CID: 655368.
- (C86) H. Frigui, L. Zhang, **P. D. Gader**, D. Ho , "Context dependent fusion for landmine detection with ground penetrating radar", *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XI*, Vol. 6553, May 2007, CID: 655369.
- (C87) J. Wilson, **P. D. Gader** , "Use of the Borda count for landmine discriminator fusion", *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XI*, Vol. 6553, May 2007, CID: 655370.
- (C88) X. Zhang, **P. D. Gader**, H. Frigui, "Feature learning for a hidden Markov model approach to landmine detection", *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XI*, Vol. 6553, May 2007, CID: 655374.
- (C89) H. Frigui, O. Missaoui, **P. D. Gader**, "Landmine detection using discrete hidden Markov models with Gabor features", *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XI*, Vol. 6553, May 2007, CID: 655377.
- (C90) P. Ngan, S. Burke, R. Cresci, J. Wilson, **P. D. Gader**, K. Ho, E. Bartosz, H. Duvoisin , "Development of region processing algorithm for HSTAMIDS: status and field test results", *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XI*, Vol. 6553, May 2007, CID: 655380.
- (C91) Alina Zare, **P. D. Gader**, "SPICE: a sparsity promoting iterated constrained endmember extraction algorithm with applications to landmine detection from hyperspectral imagery," *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets XI*, Vol. 6553, May 2007, CID: 655319.
- (C92) Andres Mendez-Vazquez and **P. D. Gader**, "Sparsity Promotion Models for the Choquet Integral", *Proceedings of the 2007 Symposium on Foundations of Computational Intelligence*, Honolulu, HI, April 2007, pp. 454-459.
- (C93) H. Frigui and **P. D. Gader**, "Detection and Discrimination of Land mines based on Edge Histogram Descriptors and Fuzzy K-Nearest Neighbors", *Proceedings of the IEEE International Conference on Fuzzy Systems*, Vancouver, BC, Canada, July 2006.
- (C94) M. Schatten, **P. D. Gader**, J. Bolton, Alina Zare, Andres Mendez-Vazquez, "Sensor fusion for airborne landmine detection", *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets X*, Orlando, FL, April 2006.



- (C95) K. C. Ho, **P. D. Gader**, J. N. Wilson, “Improving spectral features from GPR by exploring depth information”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets X*, Orlando, FL, April 2006.
- (C96) T. Wang, J. M. Keller, M. Busch, **P. D. Gader**, C. Hawkins, J. McElroy, K. C. Ho, “On the confidence level fusion of IR and forward-looking GPR”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets X*, Orlando, FL, April 2006.
- (C97) J. N. Wilson, K. C. Ho, **P. D. Gader**, “An analysis of sweep patterns for a handheld demining system”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets X*, Orlando, FL, April 2006.
- (C98) M. Busch, J. M. Keller, **P. D. Gader**, “A scale-space approach to detect a class of side-attack landmines from SWIR video sequences”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets X*, Orlando, FL, April 2006.
- (C99) H. Frigui, **P. D. Gader**, “Detection and discrimination of landmines in ground-penetrating radar based on edge histogram descriptors”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets X*, Orlando, FL, April 2006.
- (C100) K. C. Ho, **P. D. Gader**, J. N. Wilson, T. Glenn, “On the use of energy density spectra for discriminating between landmines and clutter objects”, *Proceedings of the IEEE Antennas and Propagation Society International Symposium*, Vol. 3B, Washington, D. C. , July 2005, pp. 84-87.
- (C101) **P. D. Gader**, J. McElroy, C. Hawkins, “Side attack mine detection using near infrared imagery”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets X*, Orlando, FL, April 2005, pp. 68-80.
- (C102) T. Wang, O. Sjahputera, J. Keller, **P. D. Gader**, “Landmine detection using forward-looking GPR with object-tracking”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets X*, Orlando, FL, April 2005, pp. 1080-1089.
- (C103) J. N. Wilson, **P. D. Gader**, H. Suh, “Compactometry, the density distribution, and their use in discriminating landmines and clutter”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets X*, Orlando, FL, April 2005, pp. 1132-1141.
- (C104) D. K. Ho, **P. D. Gader**, J. N. Wilson, X. Zhang, T. Glenn, S. Huenefeldt, “Landmine detection using frequency domain features from GPR measurements and their fusion with time domain features”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets X*, Orlando, FL, April 2005, pp. 1141-1151.
- (C105) T. Wang, O. Sjahputera, J. Keller, **P. D. Gader**, “Feature analysis for forward-looking landmine detection using GPR”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets X*, Orlando, FL, April 2005, 1233-1245.
- (C106) W. S. Lee, **P. D. Gader**, J. N. Wilson, R. Weaver, S. Bishop, P. Gugino, and P. Howard, “Ground-tracking for on and off-road detection of landmines with Ground Penetrating Radar”, *Proceedings 24<sup>th</sup> Army Science Conference*, Orlando, FL, November 2004, CDROM.

- (C107) **P. D. Gader**, Andres Mendez-Vasquez, K. Chamberlin, J. Bolton, and Alina Zare, “Multi-Sensor and Algorithm fusion with the Choquet Integral: Applications to Landmine Detection”, *Proceedings IEEE Conference Geo-science and Remote Sensing*, Anchorage, AK, September 2004, CDROM, pp. 1605-1608.
- (C108) K. C. Ho, **P. D. Gader**, J. N. Wilson, “Improving Landmine Detection Using Frequency Domain Features from Ground Penetrating Radar”, *Proceedings IEEE Conference Geo-science and Remote Sensing*, Anchorage, AK, September 2004, CDROM.
- (C109) **P. D. Gader**, Wen-Hsiung Lee, and Andres Mendez-Vasquez, “Continuous Choquet Integrals with respect to random sets with applications to landmine detection”, *Proceedings IEEE Conference Fuzzy Systems*, Budapest, Hungary, July 2004, CDROM.
- (C110) **P. D. Gader**, Wen-Hsiung Lee and Xuping Zhang, “Renyi entropy with respect to Choquet capacities”, *Proceedings IEEE Conference Fuzzy Systems*, Budapest, Hungary, July 2004, CDROM.
- (C111) H. Frigui, **P. D. Gader**, K. Satyanarayana, “Landmine Detection with Ground Penetrating Radar using Fuzzy K-Nearest Neighbors”, *Proceedings IEEE Conference Fuzzy Systems*, Budapest, Hungary, July 2004, CDROM.
- (C112) H. Frigui, **P. D. Gader**, Wen-Hsiung Lee, Joseph N. Wilson, “Detection and Discrimination of Landmines in Ground Penetrating using an Eigenmine and Fuzzy Membership Function Approach”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets IX*, Orlando, FL, April 2004.
- (C113) **P. D. Gader**, R. Grandhi, W-H. Lee, J. Wilson, K. C. Ho, “Feature Analysis for the NIITEK Ground Penetrating Radar using Order Weighted Averaging Operators for Landmine Detection”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets IX*, Orlando, FL, April 2004.
- (C114) J. Wilson, **P. D. Gader**, K. C. Ho, W-H. Lee, R. J. Stanley, “Region Processing of Ground Penetrating Radar for Handheld Landmine Detection”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets IX*, Orlando, FL, April 2004.
- (C115) John McElroy, **P. D. Gader**, James M. Keller, and Robert Luke, “Side Attack Mine Detection in Visible and Near IR imagery via Morphological Image Analysis”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets IX*, Orlando, FL, April 2004.
- (C116) Joe Stanley, K. C. Ho, **P. D. Gader**, J. Wilson, “Advances in EMI and GPR Algorithms in Discrimination Mode Processing for Handheld Landmine Detectors”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets IX*, Orlando, FL, April 2004.
- (C117) Tsaipei Wang, James M. Keller, **P. D. Gader**, A. Koksal Hocaoglu, Gerhard X. Ritter, “Phase signatures in acoustic-seismic landmine detection”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets IX*, Orlando, FL, April 2004.
- (C118) Robert Luke, James M. Keller, **P. D. Gader**, Marjorie Skubic, and Tsaipei Wang, “Experiments in Tripwire Detection using visible and Near IR imagery”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets IX*, Orlando, FL, April 2004.
- (C119) C. S. Throckmorton, L. Collins, P. A. Torrione, **P. D. Gader**, W. Lee, J. N. Wilson, “The efficacy of human observation for discrimination and feature identification of targets measured by the NIITEK ground-

penetrating radar”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets IX*, Orlando, FL, April 2004.

(C120) **P. D. Gader**, J. N. Wilson, and W-H. Lee, “Adaptive Whitening for Landmine Detection with Array-Based Ground Penetrating Radar”, *Proceedings of the Int’l Conference on Requirements and Technologies for the Detection, Removal, and Neutralization of Landmines and UXO (EUDEM 2003)*, Sept. 15-18, 2003, pp. 509-515.

(C121) Ali Koksall Hocaoglu, **P. D. Gader**, G.X. Ritter, “Acoustic/Seismic Imaging using Spectral Estimation for Landmine Detection”, *Proceedings of the Int’l Conference on Requirements and Technologies for the Detection, Removal, and Neutralization of Landmines and UXO (EUDEM 2003)*, Sept. 15-18, 2003, pp. 489-495.

(C122) G. X. Ritter, J. M., Keller, **P. D. Gader**, T. Wang, and Ali K. Hocaoglu, “Autonomous Detection of Landmines using Seismic/Acoustic Magnitude and Phase Based Information”, *Proceedings of the Int’l Conference on Requirements and Technologies for the Detection, Removal, and Neutralization of Landmines and UXO (EUDEM 2003)*, Sept. 15-18, 2003, pp. 496-499.

(C123) M. Popescu, J. M. Keller, and **P. D. Gader**, “Linguistic hidden Markov models”, *Proceedings IEEE Conference Fuzzy Systems*, May 25-28, 2003, pp. 796-797.

(C124) Ali K. Hocaoglu and **P. D. Gader**, “An interpretation of discrete Choquet integrals in morphological image processing”, *Proceedings IEEE Conference Fuzzy Systems*, May 25-28, 2003, pp. 1291-1295.

(C125) **P. D. Gader**, “Continuous Choquet integrals with respect to random sets”, *Proceedings IEEE Conference Fuzzy Systems*, May 25-28, 2003, pp. 1281-1284.

(C126) H. Frigui, K. Satyanarayana, and **P. D. Gader**, “Detection of Land Mines using Fuzzy and Possibilistic Membership Functions”, *Proceedings IEEE Conference Fuzzy Systems*, May 25-28, 2003, pp. 834-839.

(C127) Ali K. Hocaoglu and **P. D. Gader**, “Detection of Tripwires using Diffusion”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets VIII*, Orlando, FL, April 2003, pp. 527-535.

(C128) J. M. Keller, **P. D. Gader**, T. Wang, Ali K. Hocaoglu, G. X. Ritter, M. Schmalz, “Model-based landmine detection algorithms for acoustic/seismic data”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets VIII*, Orlando, FL, April 2003, pp. 558-568.

(C129) J. M. Keller, M. Skubic, **P. D. Gader**, T. Wang, R. Luke, “Real-time tripwire detection on a robotic testbed”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets VIII*, Orlando, FL, April 2003, pp. 1287-1297.

(C130) **P.D. Gader**, Joseph N. Wilson, T. Wang, J.M. Keller, Wen-Hsiung Lee, R. Grandhi, A. Koksall Hocaoglu, John McElroy “Fusion of acoustic/seismic and GPR detection algorithms”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets VIII*, Orlando, FL, April 2003, pp. 1307-1315.

(C131) K. C. Ho and **P. D. Gader**, “Dynamic Template Matching-Based Processing for Hand-Held Landmine Detector”, *Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets VIII*, Orlando, FL, April 2003, 1261-1270.

- (C132) **P. D. Gader** and A. K. Hocaoglu, “Continuous Processing of Acoustic Data for Landmine Detection”, Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets VII, Orlando, FL, pp, 654-664, April 2002.
- (C133) K. C. Ho, **P. D. Gader**, and J. B. Devaney, “Locate Mode Processing for Hand-held Landmine Detection using GPR”, Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets VII, Orlando, FL, pp.356-366, April 2002.
- (C134) **P. D. Gader**, M. Popescu, and K. C. Ho, “Generalized Hidden Markov Models for Landmine Detection”, Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets VII, Orlando, FL, pp.349-355, April 2002.
- (C135) J. M. Keller, **P. D. Gader**, Z. Cheng, and A. K. Hocaoglu, “Fourier Descriptor Features for Acoustic Landmine Detection”, Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets VII, Orlando, FL, 673-684, April 2002.
- (C136) R.J. Stanley, S. Somanchi and **P. D. Gader**, “The Impact of Weighted Density Distribution Function Features on Landmine Detection Using Hand-Held Units”, Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets VII, Orlando, FL, 892-902, April 2002.
- (C137) Y. Zhao, P. Chen, **P.D. Gader**, Y. Zhang, “Combined Evolutionary Algorithm and Minimum Classification Error Training for DHMM Based Landmine Detection”, Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets VII, Orlando, FL, 1038-1045, April 2002.
- (C138) K. Hocaoglu and **P. D. Gader**, “Generalizations of Morphological Shared Weight Networks Using Choquet Integrals with Applications to Ground Penetrating Radar Based Land Mine Detection”, Proceedings of the Workshop on Computer Vision Beyond the Visible Spectrum, Kauai, HI, CD-ROM, December 2001.
- (C139) H. Frigui, **P. D. Gader**, and R. Krishnapuram, “Handwritten Character Membership Function Estimation for Word Recognition, Proceedings of the IEEE International Conference on Fuzzy Systems, December 2001, pp. 928-931.
- (C140) R. J. Stanley, J. M. Keller, C. W. Caldwell, **P. D. Gader**, “Abnormal cell detection using the Choquet integral”, Proceedings of the IFSA/NAFIPS 2001 Conference, pp. 1134-1139, Vancouver, Canada, July 2001.
- (C141) J. Keller, **P. D. Gader**, S. Sohn, and C. Caldwell, "Soft Counting Networks for Bone Marrow Differentials", Proceedings of the IEEE International Conference on Systems, Man, and Cybernetics, Tuscon, AZ, October, 2001, pp. 3425-3428.
- (C142) M. Mystkowski and **P. D. Gader**, “Adaptive Hidden Markov models for extended landmine detection”, Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets VI, Orlando, FL, April 2001, pp. 476-482.
- (C143) K. C. Ho and **P. D. Gader**, “An Improved Correlation Based Detector for a Hand-held Landmine Detector”, Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets VI, Orlando, FL, April 2001, pp. 483-493.
- (C144) K. C. Ho, **P. D. Gader**, S. Bishop, D. Lang, and B. Duston, “Fusion of Energy Based Processing and HMM GPR Algorithms for the Mine Hunter/Killer Program”, Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets VI, Orlando, FL, April 2001, pp.806-816.

(C145) J. M. Keller, S. Auephanwiriyaikul, and **P. D. Gader**, “Experiments in Predictive Sensor Fusion”, Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets VI, Orlando, FL, April 2001, pp. 1047-1058.

(C146) B. K. Verma. and **P. D. Gader**, “Fusion of Multiple Handwritten Word Recognition Techniques”, Proceedings of the IEEE International Workshop on Neural Networks for Signal Processing, pp. 926-934, Sydney, Australia.

(C147) **P. D. Gader** and Miroslaw Mystkowski, “Land Mine Detection using Hidden Markov Models: A General Method for Ground Penetrating Radar Analysis”, Proceedings of International Conference of the Geo-Science and Remote Sensing Society (IGARSS 2000), Honolulu Hawaii, July 2000, Proceedings on CD-ROM.

(C148) W. Chen and **P. D. Gader**, “Word Level Discriminative Training for Handwritten Word Recognition”, Proceedings of the International Workshop on Frontiers of Handwriting Recognition, Amsterdam, The Netherlands, September 2000, pp. 393-403.

(C149) J. Liu and **P. D. Gader**, “Outlier Rejection with MLPs and Variants of RBF Networks,” 15<sup>th</sup> International Conference on Pattern Recognition (ICPR’2000), Barcelona, Spain, September 2000, pp. 684-687.

(C150) N. Theera-Umpon and **P. D. Gader**, “Training Neural Networks to Count White Blood Cells via a Minimum Counting Error Objective Function,” 15<sup>th</sup> International Conference on Pattern Recognition (ICPR’2000), Barcelona, Spain, September 2000, pp. 299-302.

(C151) K. C. Ho and **P. D. Gader**, “Correlation Based Landmine Detection using GPR,” Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets V, Orlando, FL, pp. 1088-1095, April 2000.

(C152) **Paul D. Gader**, A. Koksai Hocaoglu, Miroslaw Mystkowski, and Yunxin Zhao, “Hidden Markov Models and Morphological Neural Networks for GPR-based Landmine Detection,” Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets V, Orlando, FL, pp. 1096-1107, April 2000.

(C153) James M. Keller, Sansanee Auephanwiriyaikul, and **Paul D. Gader**, “New Fuzzy Set Tools to Aid in Predictive Sensor Fusion”, Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets V, Orlando, FL, pp. 1497-1509, April 2000.

(C154) M. Khabou, **P. D. Gader**, and J. M. Keller, “Morphological Shared-Weight Neural Networks: A Tool for Automatic Target Recognition Beyond the Visible Spectrum,” Proceedings of the IEEE Workshop on Computer Vision Beyond the Visible Spectrum, (part of CVPR’99), Ft. Collins, CO, June 1999 pp. 101-110.

(C155) J. M. Keller, **P. D. Gader**, and X. Wang, “LADAR Scene Description using Fuzzy Morphology and Rules,” Proceedings of the IEEE Workshop on Computer Vision Beyond the Visible Spectrum, (part of CVPR’99), Ft. Collins, CO, June 1999 pp. 120-130.

(C156) **P. D. Gader** and M. Mystkowski, “Applications of Hidden Markov Models to Detecting Landmines with Ground Penetrating Radar,” Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets IV, April 1999, pp. 1085-1093.

(C157) B. N. Nelson, **P. D. Gader**, and J. M. Keller, “Fuzzy Set Information Fusion in Landmine Detection,” Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets IV, April 1999, pp. 1168-1177.

- (C158) **P. D. Gader**, H. Frigui, B. Nelson, G. Vaillette, and J. M. Keller, "New Results in Fuzzy Set Based Detection of Landmines with GPR," Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets IV, April 1999, pp. 1075-1084.
- (C159) Ali Koksak Hocaoglu, **P. D. Gader**, E. Gelenbe, and T. Kocak, "Optimal of Order Statistics Filters and their Relationship to the Delta-Operator," Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets IV, April 1999, pp. 1323-1329.
- (C160) M. Popescu and **P. D. Gader**, "Image Content Retrieval from Image Databases using Feature Integration by Choquet Integral," Proceedings of the SPIE Conference on Storage and Retrieval for Image and Video Databases VII, San Jose, CA, Jan. 1999.
- (C161) W. T. Chen and **P. D. Gader**, "Word Level Optimization of Dynamic Programming-based Handwritten Word Recognition Algorithms," Proceedings of the SPIE Conference on Document Recognition and Retrieval VI, San Jose, CA, Jan. 1999.
- (C162) N. Theera-Umpon and **P. D. Gader**, "Automated White Blood Cell Counting via Classification-free Granulometric Methods," Proceedings of the SPIE Conference on Nonlinear Image Processing IX, San Jose, CA, Vol. 3646, Jan. 1999, pp. 260-270 .
- (C163) K. Hocaoglu and **P. D. Gader**, "Choquet Integral-Based Morphological Operators," Proceedings of the SPIE Conference on Nonlinear Image Processing IX, San Jose, CA, Jan. 1999, pp. 46-56.
- (C164) M. Klein, **P. D. Gader**, and J. Keller, "A Mathematical Programming Approach to Chromosome Karyotyping," Proceedings of the Seventh Industrial Engineering Research Conference, Banff, Alberta, Canada, 2E Optimization Applications, May 1999, pp. 1-9 (CD-ROM).
- (C165) J. Park, J. M. Keller, **P. D. Gader**, and R. Schuchard, "Hough-Based Registration of Retinal Images," Proceedings of IEEE International Conference on Systems, Man, and Cybernetics, La Jolla, CA, October, 1998, pp. 4550-4555.
- (C166) H. Frigui, **P. D. Gader**, J. M. Keller, "Fuzzy Clustering for Land Mine Detection," Proceedings of NAFIPS '98, Pensacola, FL, August 1998, pp. 261-265.
- (C167) J. Keller, J. Moore, and **P. D. Gader**, "A Fuzzy Logic Approach to Detector Scoring," Proceedings of NAFIPS '98, Pensacola, FL, August 1998, pp. 339-345.
- (C168) Andrew J. Blanchard, **P. D. Gader**, A. C. Correa, and A. K. Hocaoglu, "The use of spline based wavelet filtering to improve classification processing of SAR imagery", Proceedings of the IEEE International Conference on Geoscience and Remote Sensing (IGARSS '98), vol. 4, July 1998, pp. 1757-1759.
- (C169) **P. D. Gader**, J. Keller, H. Frigui, H. Liu, and D. Wang, "Landmine Detection Using Fuzzy Sets with GPR Images," Proceedings of the Sixth IEEE International Conference on Fuzzy Systems, Anchorage, AK, May 1998, pp. 232-236 (invited paper).
- (C170) H. Frigui, R. Krishnapuram, J. Keller, **P. Gader**, and D. DeKruger, "Robust and Fuzzy Preprocessing Algorithms for Target Detection in Ladar Range Images," Proceedings of the IEEE International Conference on Fuzzy Systems, Anchorage, AK, May 1998, pp. 67-70.

- (C171) J. Keller, **P. D. Gader**, R. Krishnapuram, X. Wang, K. Hocaoglu, H. Frigui, and J. Moore, "Fuzzy Logic Automatic Target Recognition System For LADAR Range Images," Proceedings of the IEEE International Conference on Fuzzy Systems, Anchorage, AK, May 1998, pp. 71-76.
- (C172) **P. D. Gader** and J. M. Keller, "Multi-Sensor Fusion with DARPA Backgrounds Data," Proceedings of the SPIE Conference on Detection and Remediation Technologies for Mines and Minelike Targets III, April 1998.
- (C173) N. Theera-Umpon, M. Khabou, **P. D. Gader**, J. M. Keller, H. Shi, and H. Li, "Detection and Classification of MSTAR Objects via Morphological Shared-Weight Neural Networks," Proceedings of the SPIE Conference on Algorithms for Synthetic Aperture Radar Imagery V, April 1998.
- (C174) Ali K. Hocaoglu and **P. D. Gader**, "Choquet Integral Representations of Nonlinear Filters with Applications to LADAR Image Processing," Proceedings of the SPIE Conference on Nonlinear Image Processing IX, San Jose, CA, Feb 1998, pp. 66-72.
- (C175) K. Hocaoglu, **P. D. Gader**, and J. Keller, "A Fuzzy Integral Filter for Object Detection in LADAR Images," Proceedings of NAFIPS '97, Syracuse, NY, September, 1997, pp. 177-182.
- (C176) X. Wang, J. Keller, and **P. D. Gader**, "Using Spatial Relationships as Features in Object Recognition," Proceedings of NAFIPS '97, Syracuse, NY, September, 1997, pp. 160-165.
- (C177) **P. D. Gader** and A. J. Blanchard, "The use of mathematical morphology for accurate detection and identification of microwave images in the K-space domain", Proceedings of the IEEE International Conference on Geoscience and Remote Sensing (IGARSS '97), vol. 2, August 1997, pp. 643-645.
- (C178) **P. D. Gader**, "Fuzzy Spatial Relations Based on Fuzzy Morphology," Sixth IEEE International Conference on Fuzzy Systems (FUZZ-IEEE '97), Barcelona, Spain, July 1997, pp. 1185-1191.
- (C179) W. Chen, **P. D. Gader**, and H. Shi, "Improved Dynamic Programming-Based Handwritten Word Recognition Using Optimal Order Statistics," Proceedings of the SPIE Conference on Statistical and Stochastic Methods in Image Processing II, San Diego, CA, July 1997, pp. 246-256.
- (C180) H. Shi, **P. D. Gader**, and H. Li, "Chromosome Image Segmentation on PAL Parallel Image Processor," Proceedings of the SPIE Conference on Parallel and Distributed Methods for Image Processing, Vol. 3166, July 1997.
- (C181) H. Shi and **P. D. Gader**, "Practical Mesh Algorithms for Finding Shortest Paths in Grid Graphs," Proceedings of the International Conference on Parallel and Distributed Techniques and Applications, Las Vegas, NV, July 1997.
- (C182) H. Shi, **P. D. Gader**, H. Li, and Y-B. Lim, "Finding the Best Cut Between Touching Chromosomes Using Local Operations," Proceedings of the International Conf Parallel and Distributed Techniques and Applications, Las Vegas, NV, July 1997.
- (C183) H. Shi and **P. D. Gader**, "Lexicon-Driven Handwritten Word Recognition Using Choquet Fuzzy Integral," Proceedings of the IEEE Conference on Systems, Man, and Cybernetics, Beijing, China, Oct. 1996, Vol. I, pp. 412-417.
- (C184) M. Khabou and **P. D. Gader**, "Morphological Networks as Solutions of Regularization Problems," Proceedings of the SPIE Conference on Nonlinear Image Processing VIII, San Jose, CA, Feb. 1997 pp. 106-112.

(C185) J.-H. Chiang and **P. D. Gader**, "A Hybrid Fuzzy Feature Extraction Framework for Handwritten Numeric Fields Recognition," Proceedings of the Fifth IEEE International Congress on Fuzzy Systems, New Orleans, LA, September 1996, pp. 1881-1886.

(C186) H. Shi, **P. D. Gader**, and J. M. Keller, "An O(K)-Time Implementation of Fuzzy Integral Filters on an Enhanced Mesh Processor Array," Proceedings of the Fifth IEEE International Congress on Fuzzy Systems, New Orleans, LA, September, 1996, pp. 1086-2092.

(C187) **P. D. Gader** and J. M. Keller, "Fuzzy Methods in Handwriting Recognition: An Overview," Proceedings of NAFIPS '96, Berkeley, CA, June 1996, pp. 137 - 141.

(C188) R. J. Stanley, J. Keller, C. W. Caldwell, and **P. D. Gader**, "A Centromere Attribute Integration Approach to Centromere Identification," Proceedings of the Rocky Mountain Bioengineering Symposium, Copper Mountain, CO, April 1996, pp. 23 - 29.

(C189) M. A. Leon, **P. D. Gader**, and J. M. Keller, "Multiple Neural Network Response Variability as a Predictor of Neural Network Accuracy for Chromosome Recognition," Proceedings of the Rocky Mountain Bioengineering Symposium, Copper Mountain, CO, April 1996, pp. 31 - 37.

(C190) Y. Won and **P. D. Gader**, "A Comparison of Linear and Morphological Shared-Weight Neural Networks," Proceedings of the SPIE Conference on Nonlinear Image Processing VII, San Jose, CA, Jan. 1996, pp. 81-93.

(C191) **P. D. Gader** and M. Mohamed, "The Choquet Fuzzy Integral in Handwritten Word Recognition," Proceedings of the SPIE Conference on Document Recognition III, San Jose, CA, Jan. 1996, pp. 309 - 321.

(C192) J.-H. Chiang and **P. D. Gader**, "Improving Digit Recognition Reliability by a Hybrid Neural Model," Proceedings of the International Conference of CFSA/IFIS/SOFT '95 on Fuzzy Theory and Applications, Taipei, Taiwan, Dec. 1995, pp. 182-187.

(C193) Y. Won and **P. D. Gader**, "Morphological Shared Weight Neural Network for Pattern Classification and Automatic Target Detection," Proceedings of the 1995 IEEE International Conference on Neural Networks, Perth, Australia, Nov. 1995, pp. 2134-2139.

(C194) Classifier Fusion for Handwritten Word Recognition," IEEE Conference on Systems, Man, and Cybernetics, Vancouver, Canada, October 1995, pp. 2329-2335.

(C195) J. M. Keller and **P. D. Gader**, "Fuzzy Logic and the Principle of Least Commitment in Computer Vision," IEEE Conference on Systems, Man, and Cybernetics, Vancouver, Canada, October 1995, pp. 4621-4626.

(C196) **P. D. Gader** and J.-H. Chiang, "Robust Handwritten Word Recognition with Fuzzy Sets," Proceedings of ISUMA/NAFIPS '95, College Park, MD, Sept. 1995, pp. 198-204.

(C197) E. Dunn, J. Keller, L. Marks, J. Ikerd, and **P. D. Gader**, "Extending the Application of Fuzzy Sets to the Problem of Agricultural Sustainability," Proceedings of ISUMA/NAFIPS '95, College Park, MD, Sept. 1995, pp. 497-502.

(C198) J. Keller, **P. D. Gader**, O. Sjahputera, C. W. Caldwell, and H.-M. Huang, "A Fuzzy Logic Rule-Based System for Chromosome Recognition," Proceedings of the Eighth IEEE Symposium on Computer-Based Medical Systems, Lubbock TX, June, 1995, pp. 125-132 (invited paper).



- (C199) R. J. Stanley, J. Keller, C. W. Caldwell, and **P. D. Gader**, "Automated Chromosome Classification Limitations Due to Image Processing," Proceedings of the Rocky Mountain Bioengineering Symposium, Copper Mountain, CO, April 1995, pp. 183-188.
- (C200) **P. D. Gader**, M. Andres Mohamed, J. M. Keller, "Applications of Fuzzy Integrals to Handwriting Recognition," Proceedings of the SPIE Conference of Applications of Fuzzy Logic Technology II, April 1995.
- (C201) J. Keller, **P. D. Gader**, and C. Caldwell, "The Principle of Least Commitment in the Analysis of Chromosome Images," SPIE Conference on Applications of Fuzzy Logic Technology, April 1995, pp. 178-186.
- (C202) **P. D. Gader**, J. M. Keller, H. Nair, M. Andres Mohamed, and J. Chiang, "The Principle of Least Commitment in Computer Vision," Proceedings of the Fourth Annual Midwest Electro-Technology Conference, Ames, IA, March 1995.
- (C203) M. Mohamed and **P. D. Gader**, "Generalization of Hidden Markov Models Using Fuzzy Integrals," Proceedings of NAFIPS '94, San Antonio, TX, Dec. 1994.
- (C204) **P. D. Gader**, Y. Won, and M. Khabou, "Image Algebra Networks for Pattern Classification," Proceedings of the SPIE Conference on Image Algebra and Morphological Image Processing V, July 1994.
- (C205) **P. D. Gader**, J. M. Keller, T. Jones, J. Miramonti, and G. Hobson, "MACE Prefiltering for Neural Network Based Automatic Target Recognition," Proceedings of the IEEE International Conference on Neural Networks, Orlando, FL, June 1994.
- (C206) **P. D. Gader** and J. M. Keller, "Applications of Fuzzy Set Theory to Handwriting Recognition," Proceedings of the Third IEEE International Conference on Fuzzy Systems, Orlando, June 1994 (invited paper).
- (C207) G. Hobson, S.R. Sims, **P. D. Gader**, and J. Keller, "MACE Prefiltering Networks for Automatic Target Recognition," Proceedings of the SPIE Conference on Automatic Object Recognition IV, Orlando, FL, April 1994.
- (C208) M. Ganzberger, R. Rovner, A. Gillies, D. Hepp, and **P. Gader**, "Matching Database Records to Handwritten Text," Proceedings of the SPIE Conference on Document Recognition, San Jose, CA, Feb. 1994.
- (C209) **P. D. Gader** and M. A. Khabou, "Automated Feature Generation for Handwritten Digit Recognition," Proceedings of the Third International Workshop on Frontiers of Handwriting Recognition, Buffalo, NY, May 1993.
- (C210) **P. D. Gader**, M. Mohamed, and J. Chiang, "Comparison of Crisp and Fuzzy Character Networks in Handwritten Word Recognition," Proceedings of NAFIPS '92, Puerto Vallarta, Mexico, Dec. 1992, pp. 257-266.
- (C211) **P. D. Gader**, M. Mohamed, and J. Chiang, "Segmentation-Based Handprinted Word Recognition," Proceedings of the Fifth U.S. Postal Service Advanced Technology Conference, Washington, D.C., Nov. 1992, pp. 215-225.
- (C212) **P. D. Gader**, B. Forester, A. Gillies, M. Ganzberger, R. Vogt, and J. Trenkle, "A Segmentation-Free Neural Network Classifier for Machine-Printed Numeric Fields," Proceedings of the U.S. Postal Service Advanced Technology Conference, Washington, D.C., Nov. 1992, pp. A-137-151.
- (C213) **P. D. Gader**, M. Mohamed, and J. Chiang, "Fuzzy and Crisp Handwritten Alphabetic Character Recognition Using Neural Networks," Proceedings of the Artificial Neural Networks in Engineering, St. Louis, MO, Nov. 1992.

- (C214) **P. D. Gader**, “Template Generation for Pattern Classification,” Proceedings of the SPIE Conference on Image Algebra and Morphological Image Processing III, July 1992, Vol. 1796.
- (C215) **P. D. Gader**, “Fuzzy Morphological Networks,” Proceedings of the First Midwest Electro-Technology Conference, Ames, IA, April 1992.
- (C216) W. F. Pont, Jr. and **P. D. Gader**, “Gradient Descent Techniques for Feature Detection Template Generation,” Proceedings of the SPIE Conference on Image Algebra and Morphological Image Processing II, July 1991, Vol. 1568.
- (C217) **P. D. Gader**, D. Hepp, B. Forester, T. Peurach, and B. T. Mitchell, “Pipelined Systems for Recognition of Handwritten Digits in USPS ZIP Codes,” Proceedings of U.S. Postal Service Advanced Technology Conference, Washington, D.C., November 1990.
- (C218) **P. D. Gader** and S. Takriti, “Decomposition Techniques for Gray-Scale Morphological Templates,” Proceedings of the SPIE Conference on Image Algebra and Morphological Image Processing, San Diego, CA, July 1990, Vol. 1350.
- (C219) **P. D. Gader** and B. Forester, “Integrating Template and Model Matching for Unconstrained Handwritten Numeral Recognition,” SPSE Annual Conference, Rochester, NY, May 1990.
- (C220) Andres M. Gillies, **P. D. Gader**, M. P. Whalen, and B.T. Mitchell, “Application of Mathematical Morphology to Handwritten ZIP Code Recognition,” Proceedings of the SPIE Conference on Visual Communications and Image Processing IV, Philadelphia, PA, Nov. 1989, Vol. 1199.
- (C221) **P. D. Gader** and E. Dunn, “Image Algebra and Morphological Template Decomposition,” Proceedings of the SPIE Conference on Aerospace Pattern Recognition, Orlando, FL, March 1989.
- (C222) G. X. Ritter, **P. D. Gader**, and J. L. Davidson, “Bridge Detection FLIR Images,” Proceedings of the Eighth International Conference on Pattern Recognition, Paris, France, October 1986.
- (C223) G. X. Ritter and **P. D. Gader**, “Image Algebra Implementations on Cellular Array Computers,” Proceedings of the IEEE Computer Society Workshop on Computer Architecture for Pattern Analysis and Image Database Management, Miami Beach, FL, November 1985.

## CONFERENCE PRESENTATIONS

D. K. C. Ho, **P. D. Gader**, Joseph N. Wilson, “Subspace Processing on the Energy Density Spectrum for Landmine Detection”, Presented at UXO-Countermine Forum 2007, Orlando FL, August 2007.

J. N. Wilson, **P. D. Gader**, D. K. C. Ho, “Sensor Fusion for Autonomous Mine Detection”, Presented at UXO-Countermine Forum 2007, Orlando FL, August 2007.

H. Frigui, Lijun Zhang, and **P. D. Gader** , “Comparison of Different Algorithm Fusion Methods for Landmine Detection with GPR”, Presented at UXO-Countermine Forum 2007, Orlando FL, August 2007.

W. H. Lee, **P. D. Gader**, J. N. Wilson, “Optimizing functions of ROC curves for landmine detection”, Presented at IEEE International Geoscience and Remote Sensing Symposium, Denver CO.. August 2006.

J. N. Wilson, **P. D. Gader**, T. C. Glenn, K. C. Ho, “Sensor fusion for automated hand-held landmine discrimination”, Presented at IEEE International Geoscience and Remote Sensing Symposium, Denver CO.. August 2006.

**P. D. Gader** “HSI/SAR Fusion Using Choquet Integration for Airborne Mine Detection” Presented at SIAM 2005 National Meeting, Minisymposium on Mathematics in Landmine Detection, New Orleans, LA, July 2005 (invited talk)

**P. D. Gader**, “Displacement Ranks for Group Matrices,” Presented at the SIAM 1988 National Meeting, Minneapolis, MN, July 1988.

**P. D. Gader**, “Numerical Factorization of Matrices into Products of Local Matrices,” Presented at the SIAM Conference on Applied Linear Algebra, Madison, WI, May 1988.

**P. D. Gader**, “Elementary Number and Group Theory in Computer Science and Engineering,” Presented at Wisconsin Section of Math Association of America Annual Meeting, La Crosse, WI, April 1988.

**P. D. Gader**, “An Algebraic Approach to the Development of Parallel Algorithms for Two-Dimensional Discrete Fourier Transforms,” Presented at the SIAM 1986 National Meeting, Boston, MA, July 1986.

## TUTORIALS, WORKSHOPS AND SPECIAL PRESENTATIONS

“Probabilistic and Deterministic Unmixing for Imaging Spectroscopy”, presented at Dagstuhl Seminar on Hyperspectral, Multispectral, and Multimodal (HMM) Imaging: Acquisition, Algorithms, and Applications, Schloss-Dagstuhl, Leibniz-Zentrum für Informatik, Saarbrücken, Germany, Oct. 9-13, 2017.

“Possibilistic Ambiguity Preserving Classification in Hyperspectral Image Analysis”, Distinguished Speaker, College of Engineering, University of Texas – El Paso, Feb. 23, 2017.

“Hyperspectral Image Analysis: How to see inside a pixel”, Invited Speaker, Cinvestav (University) Guadalajara, Mexico, November, 2016.

“Nonlinear Unmixing of Hyperspectral Images”, Tutorial taught with Dr. Rob Heylen, University of Antwerp, Belgium at the 8<sup>th</sup> Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS), Los Angeles, CA, August 2016.

“Hyperspectral Image Analysis”, Invited Talk, ECE Department, University of Massachusetts, Amherst, MA, USA, October 2012.

“Nonlinear spectral unmixing: An overview with applications”, Invited Talk at Universidad de Las Palmas, Gran Canaria, Canary Islands, September, 2012.

“Models and Algorithms for Linear & Nonlinear Hyperspectral Unmixing”, Presentation to Technical Staff of Commonwealth Scientific and Industrial Research Organisation (CSIRO), July 2012.

“Hyperspectral Image Analysis: How to See Inside a Pixel”, Keynote Talk at Alternative Sensing Modalities for Robotic Perception Workshop, part of the Robotic Science and Systems Conference, Sydney, Australia, July 2012.

“Nonlinear Unmixing of Hyperspectral Images”, Invited Talk, University of Pavia, Pavia, Italy, April, 2012.

“Ground Penetrating Radar and Hyperspectral/LIDAR Image Analysis for Buried and Occluded Object Detection” Invited Talk, Naval Surface Warfare Center, Panama City Beach, Florida, USA, October 2011.

“Soft Computing for Hard Pattern Recognition Problems”, Keynote Talk at the IEEE Conf. Fuzzy Systems, Taipei, Taiwan, July 2011.

“Piece-wise Convex Hyperspectral Endmember Distribution Detection”, Invited Talk, ECE Department, University of Puerto Rico – Mayaguez, Mayaguez, Puerto Rico, December 2010.

“Pattern Recognition for Humanitarian De-Mining”, Presentation as a Member of an Invited Panelist for Panel on Applications of Image and Signal Processing in the Preservation of the Environment, International Conference on Pattern Recognition (ICPR 2002), Quebec City, Quebec, Canada, August 2002.

“Hidden Markov Models for Landmine Detection with Ground Penetrating Radar”, Presented to the Research Staff of TNO Physics and Electronics Laboratory, The Hague, The Netherlands, September 2000.

“Soft Computing Techniques for GPR Detection and Fusion”, Presented at Joint U. S. / European Research on De-mining Technologies, Sponsored by the European Commission’s Joint Research Center, the U. S. Army Electronics Technology and Devices Lab, and the European Research Office, Ispra, Italy, July 2000.

“Introduction to Morphological Image Processing,” Short course co-taught with Edward Dougherty at the IS&T Symposium on Electronic Imaging Science and Technology, San Jose, CA, Feb. 10, 1997.

“Applications of Fuzzy Sets in Handwriting Recognition,” Presented to the Electronic Imaging Working Group Meeting at the IS&T/SPIE Symposium on Electronic Imaging, San Jose, CA, Jan. 30, 1996.

“A Comparison of Fuzzy Logic and Neural Network Methods for Street Number Location in Handwritten Addresses,” Presented to the Bay Area OCR Group at Apple Computer, San Jose, CA, Feb. 1, 1996.

**FUNDED RESEARCH Total :: \$15.3 Million**

Sponsors

- Air Force
- Army
- DARPA
- DoD
- Geo-Centers (Industry)
- Harris (Industry)
- Missouri Dept. of Transportation
- National Science Foundation
- Sandia National Lab
- Signalscape (Industry)
- Strategic Environmental R & D Program
- U. S. Postal Service
- Electronics and Space Corporation (Industry)

**TEACHING****Ph.D. Dissertations Supervised (22)**

- 2017 *Possibilistic Classification Using Gaussian Process Prior* by Leila Kalantari
- 2014 *Normalized Maximum Likelihood on Variable Length Sequence Datasets* by Joshua Horton
- 2014 *Bayesian Hyperspectral Unmixing and Endmember Detection with MultiVariate Beta Distributions* by Dmitri Dranishnikov
- 2013 *Context-Dependent Detection in Hyperspectral Imagery* by Taylor Glenn
- 2011 *Endmember And Proportion Estimation Using Physics-Based Macroscopic And Microscopic Mixture Models* by Ryan Close
- 2011 *Context-Based Classification Via Data-Dependent Mixtures Of Logistic And Hidden Markov Model Classifiers* by Seniha Esen Yuksel
- 2010 *Fast Physics-Based Methods for Wideband Electromagnetic Induction Data Analysis* by Ganesan Ramachandran
- 2009 *Robust Kernel Methods in Context-dependent Fusion* by Gyeongyong Heo
- 2009 *Automatic Feature Learning and Parameter Estimation for Hidden Markov Models Using MCE and Gibbs Sampling* by Xuping Zhang
- 2009 *Optimized Dictionary Design and Classification Using the Matching Pursuits Dissimilarity Measure* by Raazia Mazhar
- 2008 *Hyperspectral Endmember Detection and Band Selection Using Bayesian Methods* by Alina Zare
- 2008 *Random Set Framework for Context-Based Classification* by Jeremy Bolton
- 2008 *Information Fusion and Sparsity Promotion using Choquet Integrals* by Andres Mendez-Vazquez.
- 2007 *Piecewise Linear Lattice Based Associative Memories* by John McElroy.
- 2003 *New Sequence Processing Algorithms using Hidden Markov Models* by Mihail Popescu.
- 2000 *Choquet Integral Based Morphological Operators with Applications to Object Detection and Information Fusion* by Ali Koksal Hocaoglu.
- 2000 *Word Level Training of Handwritten Word Recognition Systems* by Wen-Tsong Chen.
- 2000 *Morphological Granulometric Estimation with Random Primitives and Applications to Blood Cell Counting* by Nipon Theera-Umpon.

- 1999 *Improving Shared-Weight Neural Networks Generalization Using Regularization Theory and Entropy Maximization* by Mohamed Khabou.
- 1995 *Handwritten Word Recognition using Generalized Hidden Markov Models* by Magdi Mohamed.
- 1995 *Nonlinear Correlation Filter and Morphology Neural Networks for Image Pattern and Automatic Target Recognition* by Yonggwon Won.
- 1995 *Hybrid Fuzzy Neural Systems for Robust Handwritten Word Recognition* by Jung-Hsien Chiang.

### **Post-Doctoral Associates Supervised**

- 1) Dr. H. Frigui (Dec 97 – Aug 98) (University of Missouri)
- 2) Dr Brijesh Verma (Jan 99 – Nov 99) (University of Missouri)
- 3) Dr. Jinhui Liu (Jan 99 – December 2000) (University of Missouri)
- 4) Dr. Mirosław Mystkowsky (Dec 99 – Aug 01) (University of Missouri)
- 5) Dr. Nipon Theera-Umpon (May 00 – May 01) (University of Missouri)
- 6) Dr. Guoqing Liu (joint with Dr. Li of ECE) (Oct. 01 – Aug 02) (University of Florida)
- 7) Dr. Ali Koksal Hocaoglu (Fall 01 – August 04) (University of Missouri and University of Florida)
- 8) Dr. Wen-Hsiung Lee (Spring 02 – Aug 06) (University of Florida)
- 9) Dr. Alina Zare (January 2009 – August 2010) (University of Florida)
- 10) Dr. Jeremy Bolton (January 2009 – 2012) (University of Florida)
- 11) Dr. Rob Heylon (Oct. 2012 – April 2013) (University of Florida)
- 12) Dr. Hamdi Jenzri (August 2014 – December 2014) (University of Florida)



**COURSES TAUGHT AT THE UNIVERSITY OF MISSOURI**

|           |  |
|-----------|--|
| CECS 476: | Pattern Recognition (Graduate Course)                                    |
| ECE 471:  | Neural Network Based Computing Systems (Graduate Course)                 |
| CS 425:   | Artificial Intelligence II (Graduate Course)                             |
| ECE 474:  | Artificial Intelligence (Graduate Course)                                |
| ECE 458:  | Introduction to Modeling and Management of Uncertainty (Graduate Course) |
| ECE 401:  | Image Algebra and Morphological Image Processing (Graduate Course)       |
| ECE 365:  | Introduction to Digital Image Processing (Senior Lab Course)             |
| ECE 227:  | Algorithms and Software Design with the C Language (Junior Course)       |
| ENGR 20:  | Introduction to Computer Programming with PASCAL (Freshman Course)       |

**COURSES TAUGHT / DEVELOPED WHILE AT THE UNIVERSITY OF FLORIDA  
(Including courses while a Visiting Professor designated by \*)**

|                    |  |
|--------------------|--|
| CAP 6617           | Advanced Machine Learning (Graduate Course) (I developed into regular course)            |
| CAP 6615           | Neural Networks for Computing (Graduate Course)  |
| CAP 6610:          | Machine Learning (Graduate Course)   |
| CAP 4621:          | Artificial Intelligence (Senior Course)  |
| CAP 4410:          | Digital Image Processing (Senior Course)   |
| COT 3100:          | Applied Discrete Structures (Junior Course)  |
| CIS 6930:          | Fuzzy Sets and Fuzzy Logic (Graduate Special Topics)                                     |
| CIS 6930/COT 5615: | Math for Intelligent Systems (Grad Special Topics) (I developed into regular course)     |
| CIS 6930           | Hidden Markov Models (Graduate Special Topics Course)                                    |
| CIS 6930           | Subsurface Sensing Algorithms (Graduate Special Topics Course)                           |
| CIS 6930           | Elements of Statistical Learning (Grad Special Topics Course, co-taught with Statistics) |
| CIS 4930           | Introduction to Computational Intelligence (Undergraduate Special Topics Course)         |
| CIS 6930/4930      | Hyperspectral Image Analysis (Graduate / Undergraduate Special Topics Course)            |
| ENV 6932           | Computer Programming for Environmental Research (Graduate Special Topics Course)         |

\*Winter 2016 Deep Learning (Graduate Course), University of California – Santa Barbara, CS Department

\*Winter 2012 Digital Image Processing (Undergraduate Course), Grenoble Institute of Technology, France

## **National / International SERVICE**

### **Tutorials and Short Courses**

Tutorial: Nonlinear Unmixing for Hyperspectral Images and Imaging Spectroscopy  
(with Dr. Rob Heylen, University of Antwerp, Belgium)

8<sup>th</sup> Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS) August 2016.

10th European Association of Remote Sensing Laboratories (EARSeL), Imaging Spectroscopy Workshop, April 2017

Short Course: Classification of Hyperspectral Data using Python  
NSF National Ecological Observatory Network (NEON) Data Skills Workshop, June 2017.

### **Panels**

Pattern Recognition for Humanitarian Demining, ICPR Panel, (2002).

Invited serve White House Science panel on Evaluation of New Technologies for Humanitarian Demining, (2002).

Member of United States Army Hand-held Standoff Mine Detection System Red Team, (1998-1999).

NSF Panel, Interactive Systems Division, (Gary Strong, Program Director), (1996).

### **Memberships**

Fellow International Institute of Electrical and Electronics Engineers (IEEE)  
Member Society of Photo-Optical and Instrumentation Engineers (SPIE)

### **International Committees**

IEEE Society/Technical Council Fellow Evaluation Committee, 2011

### **Honors**

University of Florida Research Foundation Professor

Outstanding Junior Faculty Research Award, University of Missouri, College of Engineering, March 1996.

Technical Director of Army Research Office Multi-University Research Initiative on Humanitarian De-Mining. (University of Missouri, University of Kansas, and Carnegie Mellon University), (1999-2002).

Best Paper Award, IEEE Transactions Fuzzy Systems, 2000.

### **Associate Editor**

IEEE Geoscience and Remote Sensing Letters (2009 – 2013)

IEEE Transactions Fuzzy Systems (2004-2007)

Journal of Mathematical Imaging and Vision

Journal of Electronic Imaging (1996-1999)

### **Journal Guest Editor**

IEEE Signal Processing Magazine, Hyperspectral Signal and Image Processing, 2012-13

IEEE Transactions on Fuzzy Systems, Special Issue on Recognition Technology, February 2001.

Journal of Mathematical Imaging and Vision, September 1992.

#### **Conference Chair**

SPIE Conference on Image Algebra and Morphological Image Processing (1990-1994)  
IEEE Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (2013).

#### **Area/Theme Chair**

Landmine and Unexploded Ordnance Detection, IEEE Int'l Conference Geo-science and Remote Sensing (2010)  
Landmine and Unexploded Ordnance Detection, IEEE Int'l Conference Geo-science and Remote Sensing (2008)  
Pattern Recognition and Image Processing, IEEE Int'l Conference Neural Networks, (1997).  
Pattern Recognition and Clustering Area, IEEE Int'l Conference Fuzzy Systems, (1998).

#### **Keynote Speaker**

IEEE International Conference on Fuzzy Systems, Taipei, Taiwan (2011)  
Robotics Science and Systems, Sydney, Australia, (2012)

#### **Session Chair**

IEEE World Congress on Computational Intelligence, Special Session on AGOPs in Practice, (2008)  
IEEE Int'l Conference Geo-science and Remote Sensing, Special Session Subsurface Sensing, (2008)  
International Workshop on Frontiers of Handwriting Recognition, (September 2000)  
Detection & Remediation Technologies for Mines and Minelike Targets (2000-2009)  
IEEE International Conference on Fuzzy Systems (1998, 2003)  
Fuzzy Sets in Handwriting Recognition, NAFIPS '96 (June 1996)  
IEEE Conference on Systems, Man, and Cybernetics (October 1995)

#### **Program Committee**

IEEE Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing, (2011-2012)  
IEEE International Conference on Fuzzy Systems (1998, 2001, 2003, 2005, 2008)  
IEEE International Conference on Geo-science and Remote Sensing (2004, 2008, 2010, 2013)  
International Workshop on Frontiers of Handwriting Recognition, (2000, 2006)  
IEEE Workshop Computer Vision Beyond the Visible Spectrum (1999-2001)  
International Conference on Pattern Recognition (ICPR) (1998, 2006)  
SPIE Conference on Nonlinear Imaging (1996-1998)  
NAFIPS (1996, 2001, 2002)

#### **Organizing Committee**

IEEE World Congress on Computational Intelligence (2010)

#### **Paper Reviewer**

IEEE Computer  
IEEE Geoscience and Remote Sensing Letters  
IEEE International Conference on Fuzzy Systems (FUZZ-IEEE)  
IEEE Sensors  
IEEE Transactions on Pattern Analysis and Machine Intelligence  
IEEE Transactions on Fuzzy Systems  
IEEE Transactions on Image Processing  
IEEE Transactions on Knowledge and Data Engineering  
IEEE Transactions on Signal Processing  
IEEE Transactions on Antennas and Propagation

IEEE Transactions on Geoscience and Remote Sensing  
IEEE Transactions on Systems, Man, and Cybernetics  
IEEE World Congress on Computational Intelligence (WCCI)  
IEEE Workshop Hyperspectral Image & Signal Analysis... (WHISPERS)  
Fuzzy Sets and Systems  
Journal of Information Fusion  
Journal of Information Science  
International Conference on Pattern Recognition (ICPR)  
International Conference Neural Networks (ICNN)  
International Conference on Frontiers of Handwriting Recognition (ICFHR)  
International Workshop on Frontiers of Handwriting Recognition (IWFHR)  
ISPRS Journal of Photogrammetry and Remote Sensing  
Journal of Real-Time Imaging  
Journal of Mathematical Imaging and Vision  
Journal of Electronic Imaging  
Pattern Recognition Letters  
Pattern Recognition  
Signal Processing

**David D. Hibbitts, Ph.D.**

|                                 |  |                       |                                 |  |
|---------------------------------|--|-----------------------|---------------------------------|--|
| Position                        | Assistant Professor<br>University of Florida<br>Department of Chemical Engineering<br>221 Chemical Engineering Building<br>Gainesville, FL 32611 USA   | August 2015 – Present | / IS<br>/ %<br>/ W<br>/ IS<br>/ | hibbitts@che.ufl.edu<br>hibbitts.rc.ufl.edu<br>@HibbittsCatLab<br>Google Scholar |
| Research Interests              | <b>Fundamental insights into heterogeneous catalysis:</b>  |                       |                                 |  |
|                                 | <ul style="list-style-type: none"> <li>- Use kinetic, isotopic, and theoretical studies on well-defined catalysts.</li> <li>- Determine mechanisms and active sites for reactions of fossil- and biomass-based chemicals.</li> <li>- Establish structure-function relationships to develop and improve catalytic materials.</li> <li>- Design interfaces to improve accuracy and efficiency of theoretical methods.</li> </ul> |                       |                                 |  |
| Post-Doctoral Research          | University of California, Berkeley, CA<br>Chemical Engineering Advisor: Prof. Enrique Iglesia  | Oct 2012 – July 2015  |                                 |  |
| Education                       | University of Virginia, Charlottesville, VA<br>Ph.D., Chemical Engineering Advisor: Prof. Matthew Neurock  | August 2012           |                                 |  |
|                                 | Clemson University, Clemson, SC<br>B.S. cum Laude, Chemical Engineering  | May 2007              |                                 |  |
| Recent Awards                   | <ul style="list-style-type: none"> <li>- NSF CAREER Award, 2020-2024</li> <li>- American Chemical Society Petroleum Research Fund NDI Award, 2016-2018</li> <li>- Outstanding Service Award, UF Department of Chemical Engineering, 2017</li> </ul>  |                       |                                 |  |
| Journal Publications            | [1] A. Hoffman, <sup>G</sup> J. Bates, J. Di Iorio, S. Nystrom, <sup>G</sup> C. Nimlos, R. Gounder, and D. Hibbitts.*<br>“Rigid arrangements of ionic charge in zeolite frameworks conferred by specific Al distributions preferentially stabilize alkanol dehydration transition states.” <i>Submitted (2019)</i>   |                       |                                 |  |
| Total: 36                       | [2] L. Kilburn, <sup>U</sup> M. DeLuca, <sup>G</sup> A. Hoffman, <sup>G</sup> and D. Hibbitts.* “Comparing alkene disproportionation and formaldehyde-mediated diene formation routes in methanol-to-olefins catalysis in MFI and CHA zeolites.” <i>Submitted (2019)</i>   |                       |                                 |  |
| Independent: 18                 | [3] P. Kravchenko, <sup>G</sup> V. Krishnan, <sup>G</sup> and D. Hibbitts.* “Mechanism and effects of coverage and particle morphology on Rh-catalyzed NO-H <sub>2</sub> reactions.” <i>J. Phys. Chem. C, In Press. (2020) doi:10.1021/acs.jpcc.0c04024</i>  |                       |                                 |  |
| Citations: 1908                 | [4] M. Allen, A. Hoffman, <sup>G</sup> T.-W. Liu, <sup>G</sup> D. Hibbitts,* and Thomas Schwartz.* “Highly selective cross-etherification of 5-hydroxymethylfurfural with ethanol.” <i>ACS Catal. 10 (2020) 6771–6785.</i>   |                       |                                 |  |
| H-index: 18                     | [5] A. Almithn <sup>G</sup> and D. Hibbitts.* “Impact of metal and heteroatom identities in the hydrogenolysis of C–X bonds (X = C, N, O, S, and Cl)” <i>ACS Catal. 10 (2020) 5086–5100.</i>   |                       |                                 |  |
| <sup>G</sup> Grad. Student      | [6] M. DeLuca, <sup>G</sup> C. Janes, <sup>U</sup> and D. Hibbitts.* “Contrasting arene, alkene, diene, and formaldehyde hydrogenation in H-ZSM-5, H-SSZ-13, and H-SAPO-34 zeolite frameworks during MTO.” <i>ACS Catal. 10 (2020) 4593–4607.</i>  |                       |                                 |  |
| <sup>U</sup> Undergrad. Student | [7] Pavlo Kravchenko, <sup>G</sup> C. Plaisance,* and D. Hibbitts.* “A new computational interface for catalysis.” <i>Pre-print available (2019).</i>  |                       |                                 |  |
| *Corresp. Author                | [8] M. DeLuca <sup>G</sup> and D. Hibbitts.* “Prediction of C <sub>6</sub> –C <sub>12</sub> interconversion rates using novel zeolite-specific kinetic Monte Carlo simulation methods.” <i>Pre-print available (2019).</i>   |                       |                                 |  |
|                                 | [9] J. Di Iorio, A. Hoffman, <sup>G</sup> C. Nimlos, S. Nystrom, <sup>G</sup> D. Hibbitts,* and R. Gounder.* “Mechanistic origins of the high-pressure inhibition of methanol dehydration rates in small-pore acidic zeolites.” <i>J. Catal. 380 (2019) 161–177.</i>   |                       |                                 |  |
|                                 | [10] M. Witzke, A. Almithn, <sup>G</sup> C. Coonrod, M. Triezenberg, D. Hibbitts,* and D. Flaherty.* “In situ methods for identifying reactive surface intermediates during hydrogenolysis reactions: C–O bond cleavage on nanoparticles of nickel and nickel phosphides” <i>J. Amer. Chem. Soc. 141 (2019) 16671–16684.</i>   |                       |                                 |  |

- [11] M. DeLuca,<sup>G</sup> P. Kravchenko,<sup>G</sup> and D. Hibbitts.\* “Mechanism and kinetics of methylating C<sub>6</sub>–C<sub>12</sub> methylbenzenes with methanol and DME in H-MFI zeolites.” *ACS Catal.* **9** (2019) 6444–6460. **Front Cover Article**
- [12] A. Hoffman,<sup>G</sup> M. DeLuca,<sup>G</sup> and D. Hibbitts.\* “Restructuring of MFI framework zeolite models and their associated artifacts in density functional theory calculations.” *J. Phys. Chem. C.* **123** (2019) 6572–6585. **Editor’s Choice**
- [13] A. Aalmithn<sup>G</sup> and D. Hibbitts.\* “Comparing rate and mechanism of ethane hydrogenolysis on transition metal catalysts.” *J. Phys. Chem. C.* **123** (2019) 5421–5432.
- [14] M. Cordon, J. Harris, J. Vega-Vila, J. Bates, S. Kaur,<sup>G</sup> M. Gupta,<sup>G</sup> M. Witzke, E. Wegener, J. Miller, D. Flaherty, D. Hibbitts, and R. Gounder.\* “The dominant role of entropy in stabilizing sugar isomerization transition states within hydrophobic zeolite pores.” *J. Amer. Chem. Soc.* **140** (2018) 14244–14266.
- [15] S. Nystrom,<sup>G</sup> A. Hoffman,<sup>G</sup> and D. Hibbitts.\* “Tuning Bronsted acid strength by altering site proximity in CHA framework zeolites.” *ACS Catal.* **8** (2018) 7842–7860.
- [16] M. Witzke,<sup>G</sup> A. Aalmithn,<sup>G</sup> C. Coonrod, D. Hibbitts,\* and D. Flaherty.\* “Mechanisms and active sites for C–O bond rupture within 2-methyltetrahydrofuran over nickel phosphide catalysts.” *ACS Catal.* **8**. (2018) 7141–7157.
- [17] A. Aalmithn<sup>G</sup> and D. Hibbitts.\* “Effects of Catalyst Model and High Adsorbate Coverages in ab initio Studies of Alkane Hydrogenolysis.” *ACS Catal.* **8** (2018) 6375–6387.
- [18] A. Aalmithn<sup>G</sup> and D. Hibbitts.\* “Supra-monolayer coverages on small metal clusters and their effects on H<sub>2</sub> chemisorption particle size estimates.” *AIChE J.* **64** (2018) 3109–3120. (Invited)
- [19] R. Rao, R. Blume, T. Hansen, E. Fuentes, K. Dreyer,<sup>U</sup> S. Moldovan, O. Ersen, D. Hibbitts, Y. Chabal, R. Schlögl, and J.-P. Tessonnier. “Interfacial charge distributions in carbon-supported palladium catalysts.” *Nature Comm.* **8** (2017) 340.

Selected  
Ph.D. /  
Post-Doc.  
Publications  
(12 Omitted)

- [20] J. Liu, D. Hibbitts, and E. Iglesia. *J. Amer. Chem. Soc.* **139** (2017) 11789–11802.
- [21] D. Hibbitts and E. Iglesia. *Acc. Chem. Res.* **48** (2015) 1254–1262.
- [22] D. Flaherty, D. Hibbitts, and E. Iglesia. *J. Amer. Chem. Soc.* **136** (2014) 9664–9676.
- [23] D. Hibbitts, B. Loveless, M. Neurock, and E. Iglesia. *Angew. Chemie, Int. Ed.* **125** (2013) 12499–12504.
- [24] M. Chia, Y. Pagan-Torres, D. Hibbitts, Q. Tan, H. Pham, A. Datye, M. Neurock, R. Davis, J. Dumesic. *J. Amer. Chem. Soc.* **133** (2011) 12675–12689.
- [25] B. Zope, D. Hibbitts, M. Neurock, R. Davis. *Science.* **330** (2010) 74–78.

Presentations

- 11 Past and Upcoming Departmental Seminars
- 30 National Conference Presentations (7 invited)
- 25 Student / Collaborator Presentations

Grants

**Funding, PI on all awards, 3 awarded AY 2019–2020**

<sup>P</sup>My portion

- NSF (CHEM) (Recommended) “Collaborative: Separating Electronic and Geometric Effects in Compound Catalysts: Examining Unique Selectivities for C–O Hydrogenolysis on Transition Metal Phosphides” (Lead) \$672,000 \$239,000<sup>P</sup>, May 2020 – Apr 2023.
- NSF (CBET) “CAREER: Elucidating Mechanisms and the Effects of Zeolite Framework, Acid Site Location and Strength in Methanol-to-Hydrocarbon Reactions” \$554,000<sup>P</sup>, Jan 2020 – Dec 2025.
- NSF (CBET) “Understanding and Controlling Wax-Water Interactions in Pores of Fischer-Tropsch Synthesis Catalysts. (1933054)” \$450,000 \$275,000<sup>P</sup>, Aug 2019 – July 2022.
- NSF (CBET) “Collaborative: GOALI: Identifying the roles of atomically dispersed Rh, support interactions, and environmental conditions in automotive NO reduction catalysis. (1803165)” \$450,000 \$225,000<sup>P</sup>, Sept 2018 – Aug 2021.
- ACS PRF “Effects of Zeolite Topology for Conversion of Methanol/Ethanol to Hydrocarbons: Toward Computer-Directed Synthesis (57079-DNI5)”, \$110,000, Sept 2016 – Aug 2019.

## Parisa Rashidi, PhD

Intelligent Health Lab (iHeal),  
Department of Biomedical Engineering, University of Florida  
1064 Center Drive, NEB 459, Gainesville, FL 32611  
Office Phone: (352) 392-9469  
E-mail: [parisa.rashidi@ufl.edu](mailto:parisa.rashidi@ufl.edu)

---

### APPOINTMENTS

#### University of Florida

Associate Professor  
Assistant Professor  
Department of Biomedical Engineering  
Affiliated, Department of Electrical & Computer Engineering  
Affiliated, Department of Computer & Information Science & Engineering  
Affiliated, Department of Aging and Geriatric Research

Gainesville, FL  
August 2020 - Present  
August '13 – 2020

#### Northwestern University, Feinberg School of Medicine

Assistant Professor, Center on Health and Engineering  
Affiliated, Department of Computer Science

Chicago, IL  
September '12 – June '13

#### University of Florida

Research Scientist,  
Department of Computer & Information Science & Engineering

Gainesville, FL  
September '11 – May '12

#### Washington State University

Graduate Research Assistant

Pullman, WA  
September '06 – May '11

#### Microsoft Research

Intern, Health Systems Group

Washington, D.C.  
June '09 – September '09

#### Microsoft Research

Intern, Robotics Group

Redmond, WA  
June '08 – September '08

---

### EDUCATION

Washington State University  
Research Area: Activity Recognition, Machine Learning

**Ph.D., Computer Science**  
May 2011

Washington State University  
Research Area: Activity Recognition, Machine Learning

**M.Sc., Computer Science**  
December 2007

University of Tehran  
Area: Intelligent Systems

**Graduate Coursework**  
May 2006

University of Tehran  
Area: Software Engineering

**B.S., Computer Engineering**  
September 2005

---

## HONORS & AWARDS

- 2020 Pruitt Family Endowed Faculty Fellowship, University of Florida
  - 2019 Faculty Research Excellence Award, Biomedical Engineering Department (BME), University of Florida
  - 2019 Mitchell Max Award Finalist, National Institute of Health (NIH)
  - 2019 Excellence Award for Assistant Professors, University of Florida (UF Excellence Award)
  - 2019 Excellence Award for Assistant Professors, Herbert Wertheim College of Engineering (HWCOE Excellence Award)
  - 2019 National Institute of Health (NIH), Trailblazer Award
  - 2019 Senior Member Grade, Institute of Electrical and Electronics Engineers (IEEE)
  - 2018 University of Florida Term Professorship, Excellence in Research, Teaching, Service
  - 2018 National Science Foundation Faculty Early Career Development Program (NSF CAREER)
  - 2017 National Academy of Engineering (NAE), Frontiers of Engineering (FOE)
  - 2015 Biomedical Engineering Society (BMES), Career Development Award
  - 2015 Microsoft Faculty Summit Invited Participant
  - 2014 National Science Foundation Travel Award, Computing Challenges in Future Mobile Health Systems and Applications Workshop
  - 2011 The Outstanding Dissertation Award, Washington State University, WA
  - 2006 Graduate Research Award, Washington State University, WA
  - 2005 Max-Planck Summer School Travel award, Germany
- 

## PUBLICATIONS

### Summary:



|                             |       |
|-----------------------------|-------|
| <b>Total Citation Count</b> | 4700+ |
| <b>h-index</b>              | 25    |
| <b>i10-index</b>            | 42    |

[Google Scholar Link](#)

---

## Journal Articles

1. Alpert, Jordan, Todd Manini, Roberts, Megan Roberts, Naga Probhakar Kota, Tona Mendoza, Laurence Solberg, and **Parisa Rashidi**. "Secondary Care Provider Attitudes Towards Patient Generated Health Data from Smartwatches". *Nature (NPJ) Digital Medicine*, 3, no. 27 (2020): 1-7.
2. Bandyopadhyay, Sabyasachi, Nicholas Lysak, Lasith Adhikari, Laura M. Velez, Larysa Sautina, Rajesh Mohandas, Maria-Cecilia Lopez Ungaro, Ricardo, Peng, Ying-Chih, Kadri, Ferdous, Efron, Philip, Brakenridge, Scott, Moldawer, Lyle, Moore, Frederick, Baker, Henry V., Segal, Mark S., Ozrazgat-Baslanti, Tezcan, **Rashidi, Parisa**, Bihorac, Azra. "Discovery and Validation of Urinary Molecular Signature of Early Sepsis." *Critical Care Explorations* 2, no. 10 (2020): e0195.
3. Loftus, Tyler J., Amanda C. Filiberto, Jeremy Balch, Alexander L. Ayzengart, Patrick J. Tighe, **Parisa Rashidi**, Azra Bihorac, and Gilbert R. Upchurch Jr. "Intelligent, Autonomous Machines in Surgery." *Journal of Surgical Research* 253 (2020): 92-99.
4. Datta, Shounak, Tyler J. Loftus, Matthew M. Ruppert, Chris Giordano, Gilbert R. Upchurch Jr, **Parisa Rashidi**, Tezcan Ozrazgat-Baslanti, and Azra Bihorac. "Added Value of Intraoperative Data for Predicting Postoperative Complications: The MySurgeryRisk PostOp Extension." *Journal of Surgical Research* 254 (2020): 350-363.
5. Loftus, Tyler J., Amanda C. Filiberto, Yanjun Li, Jeremy Balch, Allyson C. Cook, Patrick J. Tighe, Philip A. Efron, Gilbert R. Upchurch, **Parisa Rashidi**, Xiaolin Li, Azra Bihorac. "Decision analysis and reinforcement learning in surgical decision-making." *Surgery* (2020).
6. Ong, Triton L., Matthew M. Ruppert, Maisha Akbar, **Parisa Rashidi**, Tezcan Ozrazgat-Baslanti, Azra Bihorac, and Marko Suvajdzic. "Improving the Intensive Care Patient Experience with Virtual Reality—A Feasibility Study." *Critical Care Explorations* 2, no. 6 (2020): e0122.
7. Loftus, Tyler J., Patrick J. Tighe, Amanda C. Filiberto, Jeremy Balch, Gilbert R. Upchurch Jr, **Parisa Rashidi**, and Azra Bihorac. "Opportunities for machine learning to improve surgical ward safety." *The American Journal of Surgery* (2020).
8. **Rashidi, Parisa**, and Azra Bihorac. "Artificial Intelligence Approaches to Improve Kidney Care." *Nature Reviews Nephrology*, (2019): 1-2.
9. Davoudi, Anis, Todd M. Manini, Azra Bihorac, and **Parisa Rashidi**. "Role of Wearable

- Accelerometer Devices in Delirium Studies: A Systematic Review." *Critical Care Explorations*, 1, no. 9 (2019): e0027.
10. Tighe, Patrick, David E. Edwards, and **Parisa Rashidi**. "Primer on Machine Learning: Utilization of Large Data Set Analyses to Individualize Pain Management Current Opinion in Anesthesiology." *Current Opinion in Anesthesiology*, 1, no. 9 (2019): e0027.
  11. Tighe, Patrick, Benjamin Shickel, Sannapaneni, Bharadwaj, Charles Doyle, Michael Kent, and **Parisa Rashidi**. "42 Million Ways to Describe Pain: Topic Modeling of 200,000 PubMed Pain-Related Abstracts Using Natural Language Processing and Deep-Learning-Based Text Generation." *Pain Medicine*, 10, no. 10, (2020): 1-28.
  12. Loftus, Tyler John, Gilbert R. Upchurch, Daniel Delitto, **Parisa Rashidi**, and Azra Bihorac. "Mysteries, Epistemological Modesty, and Artificial Intelligence in Surgery." *Frontiers in Artificial Intelligence*, 2 (2019): 32.
  13. Loftus, Tyler J., Patrick J. Tighe, Amanda C. Filiberto, Philip A. Efron, Scott C. Brakenridge, Alicia M. Mohr, **Parisa Rashidi**, Gilbert R. Upchurch, and Azra Bihorac. "Artificial Intelligence and Surgical Decision-Making." *JAMA surgery*, 155, no. 2 (2020): 148-158.
  14. Lysak, Nicholas., Haleh Hashemighouchani, Anis Davoudi, Negin Pourafshar, Tyler J. Loftus, Matthew Ruppert, Phil A. Efron, **Parisa Rashidi**, Azra Bihorac, and Tezcan Ozrazgat-Baslanti. "Cardiovascular death and progression to end-stage renal disease after major surgery in elderly patients." *British Journal of Surgery Open*, 4, no. 1 (2020): 145-156.
  15. Davoudi, Anis, Kumar Rohit Malhotra, Benjamin Shickel, Scott Siegel, Seth Williams, Matthew Ruppert, Emel Bihorac, Tezcan Ozrazgat-Baslanti, Patrick J. Tighe, Azra Bihorac, and **Parisa Rashidi**. "Intelligent ICU for Autonomous Patient Monitoring Using Pervasive Sensing and Deep Learning." *Scientific Reports*, 9, no. 1 (2019): 8020-8033.
  16. Shickel, Benjamin, Tyler J. Loftus, Lasith Adhikari, Tezcan Ozrazgat-Baslanti, Azra Bihorac, and **Parisa Rashidi**. "DeepSOFA: A Continuous Acuity Score for Critically Ill Patients using Clinically Interpretable Deep Learning." *Scientific Reports* 9, no. 1 (2019): 1879-1891.  
 ☉ **Top 5% of all research outputs scored by Altmetric. Featured in CBS, Fox, UF Health News, NPR Local News.**
  17. Manini, Todd Matthew, Tonatiuh Mendoza, Manoj Battula, Anis Davoudi, Matin Kheirkhahan, Mary Ellen Young, Eric Weber, Roger Benton Fillingim, and **Parisa Rashidi**. "Perception of Older Adults Toward Smartwatch Technology for Assessing Pain and Related Patient-Reported Outcomes: Pilot Study." *JMIR mHealth and uHealth* 7, no. 3 (2019): e10044.  
 ☉ **Impact Factor 4.5, #2 in Medical Informatics by Thomson Reuters.**
  18. Davoudi, Anis, Amal Asiri Wanigatunga, Matin Kheirkhahan, Duane Benjamin Corbett, Tonatiuh Mendoza, Manoj Battula, Sanjay Ranka, Roger Benton Fillingim, Todd Matthew Manini, and **Parisa Rashidi**. "Accuracy of Samsung Gear S Smartwatch for Activity Recognition: Validation Study." *JMIR mHealth and uHealth* 7, no. 2 (2019): e11270.  
 ☉ **Impact Factor 4.5, #2 in Medical Informatics by Thomson Reuters.**
  19. Adhikari, Lasith, Tezcan Ozrazgat-Baslanti, Matthew Ruppert, RWMA Madushani, Srajan Paliwal, Haleh Hashemighouchani, Feng Zheng, Ming Tao, Juliano M Lopes, Xiaolin Li,

- Parisa Rashidi**, Azra Bihorac. "Improved predictive models for acute kidney injury with IDEA: Intraoperative Data Embedded Analytics." *PLOS One* 14, no. 4 (2019): e0214904.
20. Ebadi, Ashkan, Patrick J. Tighe, Lei Zhang, and **Parisa Rashidi**. "A quest for the structure of intra-and postoperative surgical team networks: does the small-world property evolve over time?." *Social Network Analysis and Mining* 9, no. 1 (2019): 7.
  21. Mollalo, Abolfazl, Liang Mao, **Parisa Rashidi**, and Gregory E. Glass. "A GIS-Based Artificial Neural Network Model for Spatial Distribution of Tuberculosis across the Continental United States." *International Journal of Environmental Research and Public Health* 16, no. 1 (2019): 157.
  22. Kheirkhahan, Matin, Sanjay Nair, Anis Davoudi, **Parisa Rashidi**, Amal A. Wanigatunga, Duane B. Corbett, Tonatiuh Mendoza, Todd M. Manini, and Sanjay Ranka. "A Smartwatch-Based Framework for Real-Time and Online Assessment and Mobility Monitoring." *Journal of Biomedical Informatics* 89 (2019): 29-40.
  23. Shickel, Benjamin, Patrick James Tighe, Azra Bihorac, and **Parisa Rashidi**. "Deep EHR: A Survey of Recent Advances in Deep Learning Techniques for Electronic Health Record (EHR) Analysis." *IEEE Journal of Biomedical and Health Informatics (IEEE JBHI)* 22, no. 5 (2018): 1589-1604.  
 ⊗ **Among Top 3 IEEE JBHI Articles of All Time. 6000+ Downloads, Citation Count: 180+, In the top 5% of all research outputs scored by Altmetric.**
  24. Mollalo, Abolfazl, Ali Sadeghian, Glenn D. Israel, **Parisa Rashidi**, Aioub Sofizadeh, and Gregory E. Glass. "Machine Learning Approaches In GIS-Based Ecological Modeling of The Sand Fly Phlebotomus Papatasi, A Vector of Zoonotic Cutaneous Leishmaniasis In Golestan Province, Iran." *Acta Tropica* 188 (2018): 187-194.
  25. Bihorac, Azra, Tezcan Ozrazgat-Baslanti, Ashkan Ebadi, Amir Motaei, Mohcine Madkour, Panagote Pardalos, Gloria Lipori, William Hogan, Philip Efron, Frederick Moore, Lyle Moldawer, Daisy Wang, Charles Hobson, **Parisa Rashidi**, Xiaolin Li, Petar Momcilovic. "MySurgeryRisk: Development and Validation of a Machine-Learning Risk Algorithm for Major Complications and Death After Surgery." *Annals of Surgery* 269, no. 4 (2019): 652-662.
  26. Nickerson, Paul V., Raheleh Baharloo, Amal A. Wanigatunga, Todd M. Manini, Patrick J. Tighe, and **Parisa Rashidi**. "Transition Icons for Time-Series Visualization and Exploratory Analysis." *IEEE Journal of Biomedical and Health Informatics (IEEE JBHI)* 22, no. 2 (2018): 623-630.  
 ⊗ **Featured cover article, March 2018.**
  27. Suvajdzic, Marko, Azra Bihorac, **Parisa Rashidi**, Triton Ong, and Joel Applebaum. "Virtual reality and human consciousness: The Use of Immersive Environments in Delirium Therapy." *Technoetic Arts* 16, no. 1 (2018): 75-83.
  28. Ebadi, Ashkan, Josué L. Dalboni da Rocha, Dushyanth B. Nagaraju, Fernanda Tovar-Moll, Ivanei Bramati, Gabriel Coutinho, Ranganatha Sitaram, and **Parisa Rashidi**. "Ensemble Classification of Alzheimer's Disease and Mild Cognitive Impairment Based on Complex Graph Measures from Diffusion Tensor Images." *Frontiers in Neuroscience* 11 (2017): 56.

29. Ebadi, Ashkan, Patrick J. Tighe, Lei Zhang, and **Parisa Rashidi**. "DisTeam: A Decision Support Tool for Surgical Team Selection." *Artificial Intelligence in Medicine* 76 (2017): 16-26.  
 ☉ **Selected as Best article by the International Medical Informatics Association (IMIA) in the 'Clinical Decision Support' category.**
30. Ozrazgat-Baslanti, Tezcan, Paulette Blanc, Paul Thottakkara, Matthew Ruppert, **Parisa Rashidi**, Petar Momcilovic, Charles Hobson, Philip A. Efron, Frederick A. Moore, and Azra Bihorac. "Preoperative Assessment of The Risk for Multiple Complications After Surgery." *Surgery* 160, no. 2 (2016): 463-472.
31. Tighe, Patrick J., Paul Nickerson, Roger B. Fillingim, and **Parisa Rashidi**. "Characterizations of Temporal Postoperative Pain Signatures with Symbolic Aggregate Approximations." *The Clinical Journal of Pain* 33, no. 1 (2017): 1.
32. Thottakkara, Paul, Tezcan Ozrazgat-Baslanti, Bradley B. Hupf, **Parisa Rashidi**, Panos Pardalos, Petar Momcilovic, and Azra Bihorac. "Application of Machine Learning Techniques to High-Dimensional Clinical Data to Forecast Postoperative Complications." *PLOS One* 11, no. 5 (2016): e0155705.  
 ☉ **Among the top 10% most cited PLOS ONE authors of 2016.**
33. Tighe, Patrick J., Matthew Bzdega, Roger B. Fillingim, **Parisa Rashidi**, and Haldun Aytug. "Markov Chain Evaluation of Acute Postoperative Pain Transition States." *Pain* 157, no. 3 (2016): 717.
34. Wanigatunga, Amal A., Paul V. Nickerson, Todd M. Manini, and **Parisa Rashidi**. "Using Symbolic Aggregate Approximation (SAX) to Visualize Activity Transitions Among Older Adults." *Physiological Measurement* 37, no. 11 (2016): 1981.
35. Stephen D Anton, Adam J Woods, Tetso Ashizawa, Diana Barb, Thomas W Buford, Christy S Carter, David J Clark, Ronald A Cohen, Duane B Corbett, Yenisel Cruz-Almeida, Vonetta Dotson, Natalie Ebner, Philip A Efron, Roger B Fillingim, Thomas C Foster, David M Gundermann, Anna-Maria Joseph, Christy Karabetian, Christiaan Leeuwenburgh, Todd M Manini, Michael Marsiske, Robert T Mankowski, Heather L Mutchie, Michael G Perri, Sanjay Ranka, **Parisa Rashidi**, Bhanuprasad Sandesara, Philip J Scarpace, Kimberly T Sibille, Laurence M Solberg, Shinichi Someya, Connie Uphold, Stephanie Wohlgemuth, Samuel Shangwu Wu, and Marco Pahor. "Successful Aging: Advancing the Science of Physical Independence in Older Adults." *Ageing Research Reviews* 24 (2015): 304-327.
36. Mohr, David C., Stephen M. Schueller, Enid Montague, Michelle Nicole Burns, and **Parisa Rashidi**. "The Behavioral Intervention Technology Model: An Integrated Conceptual and Technological Framework For eHealth and mHealth Interventions." *Journal of Medical Internet Research* 16, no. 6 (2014): e146.  
 ☉ **Impact Factor: 4.6, Citation Count: 190+, In the top 5% of all research outputs scored by Altmetric.**
37. **Rashidi, Parisa**, and Alex Mihailidis. "A Survey on Ambient-Assisted Living Tools for Older Adults." *IEEE Journal of Biomedical Aand Health Informatics* 17, no. 3 (2013): 579-590.  
 ☉ **Citation Count: 660+, 6000+ Downloads, Among the Top 50 IEEE JBHI Papers of All Time, Cited by the European Union (EU) Policy Document on Ethical aspects of Cyber-Physical**

### Systems.

38. Acampora, Giovanni, Diane J. Cook, **Parisa Rashidi**, and Athanasios V. Vasilakos. "A Survey on Ambient Intelligence in Healthcare." *Proceedings of the IEEE* 101, no. 12 (2013): 2470-2494. [authors equally contributed, listed alphabetically]  
 ☉ **Impact Factor 9.1, Citation Count: 400+, 4500+ downloads.**
39. **Rashidi, Parisa**, and Diane J. Cook. "COM: A Method for Mining and Monitoring Human Activity Patterns in Home-Based Health Monitoring Systems." *Association for Computing Machinery (ACM) Transactions on Intelligent Systems and Technology (TIST)* 4, no. 4 (2013): 64.  
 ☉ **5-year Impact Factor: 10.4, Ranked No.1 in all ACM journals in terms of avg. citations per paper.**
40. Cook, Diane J., Narayanan C. Krishnan, and **Parisa Rashidi**. "Activity Discovery and Activity Recognition: A New Partnership." *IEEE Transactions on Cybernetics* 43, no. 3 (2013): 820-828.  
 ☉ **Impact Factor: 8.8, Citation Count: 170+, 1600+ Downloads.**
41. Chen, Liming, and **Parisa Rashidi**. "Situation, Activity and Goal Awareness in Ubiquitous Computing." *International Journal of Pervasive Computing and Communications* 8, no. 3 (2012): 216-224.
42. **Rashidi, Parisa**, Diane J. Cook, Lawrence B. Holder, and Maureen Schmitter-Edgecombe. "Discovering Activities to Recognize and Track in A Smart Environment." *IEEE Transactions on Knowledge and Data Engineering* 23, no. 4 (2011): 527-539.  
 ☉ **Citation Count: 410+, 8 Patent Citations, 3300+ Downloads.**
43. **Rashidi, Parisa**, and Diane J. Cook. "Activity Knowledge Transfer in Smart Environments." *Pervasive and Mobile Computing* 7, no. 3 (2011): 331-343.
44. **Rashidi, Parisa**, and Diane J. Cook. "Keeping the Resident in the Loop: Adapting the Smart Home to the User." *IEEE Trans. Systems, Man, and Cybernetics, Part A* 39, no. 5 (2009): 949-959.  
 ☉ **Citation Count: 370+, 11 Patent Citations, 2800+ Downloads, Top #50 Top IEEE TSMC Articles of All Time.**

---

### Preprint Manuscripts

1. Ong, Triton, Matthew Ruppert, **Parisa Rashidi**, Tezcan Ozrazgat-Baslanti, Marko Suvajdzic, and Azra Bihorac. "The DREAMS Project: Improving the Intensive Care Patient Experience with Virtual Reality." *arXiv preprint arXiv:1906.11706* (2019).
2. Shickel, Benjamin, Scott Siegel, Martin Heesacker, Sherry Benton, and **Parisa Rashidi**. "Automatic Detection and Classification of Cognitive Distortions in Mental Health Text." *arXiv preprint arXiv:1909.07502* (2019).

3. Ebadi, Ashkan, Patrick J. Tighe, Lei Zhang, and **Parisa Rashidi**. "Does the Position of Surgical Service Providers in Intra-Operative Networks Matter? Analyzing the Impact of Influencing Factors on Patients' Outcome." *arXiv preprint arXiv:1812.07129* (2018).
4. Adhikari, Lasith, Tezcan Ozrazgat-Baslanti, Paul Thottakkara, Ashkan Ebadi, Amir Motaei, **Parisa Rashidi**, Xiaolin Li, and Azra Bihorac. "Improved Predictive Models for Acute Kidney Injury with IDEAs: Intraoperative Data Embedded Analytics." *arXiv preprint arXiv:1805.05452* (2018).
5. Davoudi, Anis, Kumar Rohit Malhotra, Benjamin Shickel, Scott Siegel, Seth Williams, Matthew Ruppert, Emel Bihorac, Tezcan Ozrazgat-Baslanti, Patrick J. Tighe, Azra Bihorac, and **Parisa Rashidi**. "The Intelligent ICU Pilot Study: Using Artificial Intelligence Technology for Autonomous Patient Monitoring." *arXiv preprint arXiv:1804.10201* (2018).

⊛ **In the top 5% of all research outputs scored by Altmetric, Highlighted in NVIDIA News. Published in Nature Scientific Reports in May 2019.**

---

### Conference Proceeding Papers

1. Shickel, Benjamin, Martin Heesacker, Sherry Benton, and **Parisa Rashidi**. "Automated Emotional Valence Prediction in Mental Health Text via Deep Transfer Learning." In the Proceedings of the *20th annual IEEE International Conference on Bioinformatics and Bioengineering (IEEE BIBE)*. Online, October 2020.
2. Shickel, Benjamin, Scott Siegel, Martin Heesacker, Sherry Benton, and Parisa Rashidi. "Automatic Detection and Classification of Cognitive Distortions in Mental Health Text." In the Proceedings of the *20th annual IEEE International Conference on Bioinformatics and Bioengineering (IEEE BIBE)*. Online, October 2020.
3. Davoudi, Anis, Catherine Dion, Shawna Amini, David Libon, Patrick Tighe, Catherine Price, and **Parisa Rashidi**. "Phenotyping Cognitive Impairment using Graphomotor and Latency Features in Digital Clock Drawing Test". In Proceedings of the *42nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*. Montréal, Québec, Canada, July 2020.
4. Davoudi, Anis, Tezcan Ozrazgat-Baslanti, Patrick Tighe, Azra Bihorac, and **Parisa Rashidi**. "Pain and Physical Activity Association in Critically Ill Patients". In Proceedings of the *42nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Montréal, Québec, Canada, July 2020.
5. Demrozi, Florenc, Graziano Pravadelli, Patrick Tighe, Azra Bihorac, and **Parisa Rashidi**. "Joint Distribution and Transitions of Pain and Activity in Critically Ill Patients". In Proceedings of the *42nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Montréal, Québec, Canada, July 2020.
6. Iyengar, Vasundhara, Azra Bihorac, and **Parisa Rashidi**. "Automated Detection of Rest Disruptions in Critically Ill Patients". In Proceedings of the *42nd Annual International*

- Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*. Montréal, Québec, Canada, July 2020.
7. Alpert, Jordan, Satya Prabhaka Kota Naga, Tonati Mendoza Viramontes, Laurence Solberg, Todd Manini, and **Parisa Rashidi**. "Incorporating patient-generated smartwatch data into the EHR". In *Proceedings of the International Conference on Communication in Healthcare (ICCH)*, 27-30. San Diego, CA, USA, 2019.
  8. Suvajdzic, Marko, Azra Bihorac, **Parisa Rashidi**, Matthew Ruppert, Seth Williams, Triton Ong and Tezcan Ozrazgat-Baslanti. "Developing a Patient-Centered Virtual Reality Healthcare System to Prevent the Onset of Delirium in ICU Patients." In *Proceedings of the IEEE International Conference on Serious Games and Applications for Health (SeGAH)*, 150-156. Kyoto, Japan, 2019.
  9. Malhotra, Rohit, Kumar, Anis Davoudi, Scott Siegel, Azra Bihorac, and **Parisa Rashidi**. "Autonomous Detection of Disruptions in the Intensive Care Unit Using Deep Mask R-CNN." In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops*, 1863-1865. Salt Lake City, UT, USA, 2018.
  10. Nickerson, Paul, Raheleh Baharloo, Anis Davoudi, Azra Bihorac, and **Parisa Rashidi**. "Comparison of Gaussian Processes Methods to Linear methods for Imputation of Sparse Physiological Time Series". In *Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, 4106-4109. Honolulu, HI, USA, 2018.
  11. Davoudi, Anis, Duane B. Corbett, Tezcan Ozrazgat-Baslanti, Azra Bihorac, Scott C. Brakenridge, Todd M. Manini, and **Parisa Rashidi**. "Activity and Circadian Rhythm of Sepsis Patients in the Intensive Care Unit". In *Proceedings of the IEEE Biomedical and Health Informatics (BHI)*, 17-20. Las Vegas, NV, USA, 2018.
  12. Shruthi Gopalswamy, Patrick J. Tighe, and **Parisa Rashidi**. "Deep Recurrent Neural Networks for Predicting Intraoperative and Postoperative Outcomes and Trends". In *Proceedings of the IEEE International Conference on Biomedical and Health Informatics (BHI)*, 568-573. Orlando, FL, USA, 2017.
  13. Davoudi, Anis, Tezcan Ozrazgat-Baslanti, Ashkan Ebadi, Alberto C. Bursian, Azra Bihorac, and **Parisa Rashidi**. "Delirium Prediction using Machine Learning Models on Predictive Electronic Health Records Data". In *Proceedings of the IEEE International Conference on Bioinformatics and Bioengineering (BIBE)*, 568-573. Washington, DC, USA, 2017.
  14. Kheirhahan, Matin, Hiranava Das, Manoj Battula, Anis Davoudi, **Parisa Rashidi**, Todd M. Manini, and Sanjay Ranka. "Power-Efficient Real-Time Wear and Non-Wear Time Detection Method for Smartwatches". In *Proceedings of the IEEE International Conference on Biomedical and Health Informatics (BHI)*, 217-220. Orlando, FL, USA, 2017.
  15. Suvajdzic, Marko, **Parisa Rashidi**, and Azra Bihorac. "D.R.E.A.M.S. (Digital Rehabilitation Environment-Altering Medical System)". In *Proceedings of the IEEE 5th International Conference on Serious Games and Applications for Health (SeGAH)*, 1-5. Perth, Western Australia, 2017.

16. Shickel, Benjamin, and **Parisa Rashidi**. "ART: An Availability-Aware Active Learning Framework for Data Streams". In *Proceedings of the International Florida Artificial Intelligence Research Society Conference (FLAIRS)*, 92-97. Key Largo, FL, USA, 2016.
17. Nickerson, Paul, Patrick Tighe, Benjamin Shickel, and **Parisa Rashidi**. "Deep neural network architectures for forecasting analgesic response." In *Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, 2966-2969. Orlando, FL, USA, 2016.
18. Ebadi, Ashkan, Patrick Tighe, Lei Zheng, and **Parisa Rashidi**. "On the Scale-Free Characteristics of Surgical Team Networks". In *Proceedings of the International Conference on Collaboration Network (COLLNET)*, 1-11. Nancy, France. 2016.
19. Nair, Sanjay, Matin Kheirhahan, Anis Davoudi, **Parisa Rashidi**, Amal A. Wanigatunga, Duane B. Corbett, Todd M. Manini, and Sanjay Ranka. "ROAMM: A software infrastructure for real-time monitoring of personal health." In *Proceedings of the IEEE International Conference on e-Health Networking, Applications and Services (Healthcom)*, 1-6. Munich, Germany, 2016.
20. Shickel, Benjamin, Martin Heesacker, Sherry Benton, Ashkan Ebadi, Paul Nickerson, and **Parisa Rashidi**. "Self-Reflective Sentiment Analysis." In *Proceedings of the Computational Linguistics and Clinical Psychology Workshop (CLPsych), Conference of the North American Chapter of the Association for Computational Linguistics – Human Language Technologies (NAACL HLT)*, 23-32. San Diego, CA, USA, 2016.
21. Shickel, Benjamin, and **Parisa Rashidi**. "Automatic Triage of Mental Health Forum Posts". In *Proceedings of the Computational Linguistics and Clinical Psychology Workshop (CLPsych), Conference of the North American Chapter of the Association for Computational Linguistics – Human Language Technologies (NAACL HLT), Shared Task*, 188-192. San Diego, CA, USA, 2016.
22. **Rashidi, Parisa**. "Assisted Living Technologies for Older Adults". In *Proceedings of the ACM International Health Informatics Symposium (IHI)*, 875–878. Miami, FL, USA, 2012.
23. **Rashidi, Parisa**, and Diane J. Cook. "Ask me better questions: active learning queries based on rule induction." In *Proceedings of the International Conference on Knowledge Discovery and Data Mining (KDD)*, 904-912. San Diego, CA, USA, 2011.
24. **Rashidi, Parisa**, and Diane J. Cook. "Domain selection and adaptation in smart homes." In *Proceedings of the International Conference on Smart Homes and Health Telematics (ICOST)*, 17-24. Montreal, Canada, 2011.
25. Nazerfard, Ehsan, **Parisa Rashidi**, and Diane J. Cook. "Using association rule mining to discover temporal relations of daily activities." In *Proceedings of the International Conference on Smart Homes and Health Telematics (ICOST)*, 49-56. Montreal, Canada, 2011.



26. **Rashidi, Parisa**, and Diane J. Cook. "Mining sensor streams for discovering human activity patterns over time." In *Proceedings of the IEEE International Conference on Data Mining (ICDM)*, 431-440. Sydney, Australia, 2010.
27. **Rashidi, Parisa**, and Diane J. Cook. "Mining and monitoring patterns of daily routines for assisted living in real world settings." In *Proceedings of the ACM International Health Informatics Symposium*, 336-345. Arlington, VA, USA, 2010.
28. **Rashidi, Parisa**, and Diane J. Cook. "Multi home transfer learning for resident activity discovery and recognition." In *Proceedings of the International Conference on Knowledge Discovery and Data Mining (KDD) Workshop on Knowledge Discovery from Sensor Data*, 56-63. Washington, DC, USA, 2010.
29. **Rashidi, Parisa**, and Diane J. Cook. "Activity recognition based on home to home transfer learning." In *Proceedings of the Workshops at AAAI Conference on Artificial Intelligence*, 45-52. Atlanta, GA, USA, 2010.
30. Nazerfard, Ehsan, **Parisa Rashidi**, and Diane J. Cook. "Discovering Temporal Features and Relations of Activity Patterns." In *Proceedings of the IEEE International Conference on Data Mining (ICDM) Workshops*, 1069-1075. Sydney, Australia, 2010.
31. **Rashidi, Parisa**, and Diane J. Cook. "Transferring Learned Activities in Smart Environments." In *Proceedings of the Intelligent Environments (IE)*, 185-192. Barcelona, Spain, 2009.
32. **Rashidi, Parisa**, and Diane J. Cook. "Keeping the intelligent environment resident in the loop". In *Proceedings of the International Conference on Intelligent Environments (IE)*, 45-54. Seattle, WA, USA, 2008.
33. Habib Karbasian and **Parisa Rashidi**. "PBT: Persian Part of Speech Brill Tagger". In *Proceedings of the International Conference Applied Computing (IADIS)*, 348-352. Amsterdam, the Netherlands, 2008.
34. **Rashidi, Parisa**, and Diane J. Cook. "An adaptive sensor mining framework for pervasive computing applications." In *Proceedings of the International Workshop on Knowledge Discovery from Sensor Data*, 154-174. Las Vegas, NV, USA, 2008.
35. **Rashidi, Parisa**, and Diane J. Cook. "Adapting to resident preferences in smart environments." In *Proceedings of the Conference on Artificial Intelligence (AAAI) Workshop on Preference Handling*, 78-84. Chicago, IL, USA, 2008.

---

## Book Chapters

1. Acampora, Giovanni, Diane J. Cook, **Parisa Rashidi**, and Athanasios V. Vasilakos, "Data Analytics for Pervasive Health". In *Healthcare Data Analytics*, edited by Chandan K. Reddy, Charu C. Aggarwal, 533-576. Boca Raton, FL: Chapman and Hall/CRC Press, 2015. [*authors equally*]

*contributed, listed alphabetically]*

2. **Rashidi, Parisa**, "Stream sequence mining for human activity discovery". In *Plan, Activity, and Intent Recognition*, edited by Gita Sukthankar, Christopher Geib, Hung Hai Bui, David Pynadath, and Robert Goldman, 123-148. Burlington, MA: Morgan Kaufmann, 2014.
3. **Rashidi, Parisa**, Narayanan C. Krishnan, and Diane J. Cook, "Discovering and Tracking Patterns of Interest in Security Sensor Streams". In *Securing Cyber-Physical Critical Infrastructure*, edited by Sajal Das, Krishna Kant, and Nan Zhang, 481-504. Burlington, MA: Morgan Kaufmann, 2012.
4. **Rashidi, Parisa**, G. Michael Youngblood, Diane J. Cook, and Sajal K. Das, "Inhabitant Guidance of Smart Environments." In *Human-Computer Interaction. Interaction Platforms and Techniques*, edited by Julie A. Jacko, 910-919. Berlin, Heidelberg: Springer, 2007.
5. **Rashidi, Parisa**, and Diane J. Cook. "An Adaptive Sensor Mining Framework for Pervasive Computing Applications." In *Knowledge Discovery from Sensor Data*, edited by Mohamed Medhat Gaber, Ranga Raju Vatsavai, Olufemi A. Omitaomu, João Gama, Nitesh V. Chawla, Auroop R. Ganguly, 154-174. Springer, Berlin, Heidelberg: Springer, 2008.

---

## Editorial Report

1. Roy, Nirmalya, **Parisa Rashidi**, Lawrence Holder, and Liming Chen. "Special Issue on Data Mining in Pervasive Environments". *Pervasive and Mobile Computing*, 15, (2014): 151-152.
  2. Ghasemzadeh, Hassan, Diane Cook, Misha Pavel, **Parisa Rashidi**, Roozbeh Jafari, Marjorie Skubic, Michael Ong, and George Demiris. "SmartHealthSys 2014: ACM ubicomp international workshop on smart health systems and applications". In *Proceedings of the ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp)*, pp. 1179-1185. Budapest, Hungary, 2014.
  3. Dogan, Rezarta Islamaj, Yolanda Gil, Haym Hirsh, Narayanan C. Krishnan, Michael Lewis, Cetin Mericli, **Parisa Rashidi**, Victor Raskin, Samarth Swarup, Wei Sun, Julia M. Taylor, and Lana Yeganova. "Reports on the 2012 AAAI Fall Symposium Series". *AI Magazine*, 34, no. 1 (2012): 93-100.
  4. **Rashidi, Parisa**, Liming Chen, and William K. Cheung. "International Workshop on Situation, Activity and Goal Awareness (SAGAware 2012)". In *Proceedings of the 2012 ACM Conference on Ubiquitous Computing (UbiComp)*, pp. 1012-1015. Pittsburgh, PA, USA, 2012.
  5. Chen, Liming, **Parisa Rashidi**, Ismail Khalil, Zhiwen Yu, Christian Becker, and William K. Cheung. "Workshop overview for the international workshop on situation, activity and goal awareness". In *Proceedings of the International Conference on Ubiquitous Computing*, pp. 631-632. Beijing, China, 2011.
-

## Conference Abstracts

1. Shickel, Benjamin, Anis Davoudi, Tezcan Ozrazgat-Baslanti, Matthew Ruppert, Azra Bihorac, **Parisa Rashidi**. “Deep Multi-Modal Transfer Learning for Augmented Outcome Prediction In The Intelligent ICU.” *Biomedical Engineering Society (BMES) Annual Meeting*. Online, October 2020.
2. Bandyopadhyay, Sabyasachi, Tyler Loftus, Tezcan Ozrazgat-Baslanti, Ying-Chih Peng, Larysa Sautina, Maria-Cecilia Lopez, Henry Baker, Mark Segal, Azra Bihorac, **Parisa Rashidi**. “Machine Learning on Urinary Cellular Gene Expression Can Discriminate Sepsis From SIRS.” *Biomedical Engineering Society (BMES) Annual Meeting*. Online, October 2020.
3. Davoudi, Anis, Catherine Dion, Erin Formanski, Shawna Amini, Patrick Tighe, **Parisa Rashidi**, Catherine Price. “Operationalizing Normal Appearing Digital Clock Drawing Among Older Adults.” *Biomedical Engineering Society (BMES) Annual Meeting*. Online, October 2020.
4. Loftus, Tyler, Shounak Datta, Matthew M Ruppert, Ziyuan Guan, Gloria Lipori, Chris Giordano, Gilbert R. Upchurch Jr., **Parisa Rashidi**, Tezcan Ozrazgat-Baslanti, and Azra Bihorac. “Artificial Intelligence for Predicting Complications with Live-Streaming Data: Prospective MySurgeryRisk Validation.” *Clinical Congress*, Chicago, IL, October 2020.
5. Loftus, Tyler, Shounak Datta, Tezcan Ozrazgat-Baslanti, Matthew M Ruppert, Scott C Brakenridge, Alicia M Mohr, Philip Efron, Gilbert R. Upchurch Jr., **Parisa Rashidi**, and Azra Bihorac. “Added Value of Intraoperative Data for Predicting Postoperative Complications.” *15<sup>th</sup> Annual Academic Surgical Congress*, Orlando, FL, February 2020.
6. Davoudi, Anis, Kumar Rohit Malhotra, Benjamin Shickel, Scott Siegel, Seth Williams, Matthew Ruppert, Emel Bihorac, Tezcan Ozrazgat-Baslanti, Patrick J. Tighe, Azra Bihorac, and **Parisa Rashidi**. “Intelligent ICU for Autonomous Patient Monitoring Using Pervasive Sensing and Deep Learning.” *Frontiers of AI-Assisted Care Scientific Symposium*. Stanford, CA, September 2019.
7. Shickel, Benjamin, Tyler J. Loftus, Lasith Adhikari, Tezcan Ozrazgat-Baslanti, Azra Bihorac, and **Parisa Rashidi**. “DeepSOFA: Clinical Deep Learning for Real-Time Acuity Assessments of Critically Ill ICU Patients.” *Frontiers of AI-Assisted Care Scientific Symposium*. Stanford, CA, September 2019.
8. Mardini, Mamoun T., Subhash Nerella, Dottington M. Fullwood, Duane B. Corbett, Sanjay Ranka, **Parisa Rashidi**, and Todd M. Manini. “Excursion from Home and Ecological Pain in Older Adults with Knee Pain.” *Gerontological Society of America Annual Scientific Meeting (GSA)*. Austin, Texas, US, November 2019.
9. Davoudi, Anis, Benjamin Shickel, Kumar Malhotra, Catharine Price, Patrick Tighe and **Parisa Rashidi**. “Deep Learning in Processing Clock Drawing Tests.” *Biomedical Engineering Society (BMES) Annual Meeting*. Atlanta, GA, US, October 2018.
10. Bandyopadhyay, Sabyasachi, Nicholas Lysak, Lasith Adhikari, Tezcan Baslanti, Larysa Sautina, Maria-Cecilia Lopez, Mark Segal, Henry Baker, Azra Bihorac and **Parisa Rashidi**. “Machine Learning Based Discovery of Urinary Biomarkers of Sepsis.” *Biomedical Engineering Society*

(BMES) Annual Meeting. Atlanta, GA, US, October 2018.

11. Evelev, Natalie, Kumar Rohit Malhotra, Anis Davoudi, Azra Bihorac, and **Parisa Rashidi**. Patient Recognition for Pervasive Monitoring of Patients in The Intensive Care Unit. *Biomedical Engineering Society (BMES) Annual Meeting*. Atlanta, GA, US, October 2018.
12. Jackson, Nicholas, Anis Davoudi, Azra Bihorac and **Parisa Rashidi**. “Analysis of Actigraphy Data for Classifying Delirium in the ICU.” *Biomedical Engineering Society (BMES) Annual Meeting*. Atlanta, GA, US, October 2018.
13. York, Jacob, Anis Davoudi, Azra Bihorac and **Parisa Rashidi**. “Comparing Machine Learning Models for Diagnosis of Patient Delirium in The ICU Using Actigraphy Data.” *Biomedical Engineering Society (BMES) Annual Meeting*. Atlanta, GA, USA, October 2018.
14. Manini, Todd M., Anis Davoudi, Matin Kheirkhahan, Duane Corbetta, Roger Fillingim, Sanjay Ranka, and **Parisa Rashidi**. “Connections between daily activity patterns and ecological momentary assessments of pain in older adults who report knee pain.” *Gerontological Society of America (GSA)*, Boston, MA, US, November 2018.
15. Manini, Todd M., Anis Davoudi, Matin Kheirkhahan, Duane Corbetta, Roger Fillingim, Sanjay Ranka, and **Parisa Rashidi**. “Digging Deeper: Insights into Physical and Cognitive Health Using Novel Methods for Accelerometry and Function.” *Gerontological Society of America (GSA)*, Boston, MA, US, November 2018.
16. Corbett, Duane, Anis Davoudi, Matin Kheirkhahan, Roger Fillingim, Sanjay Ranka, **Parisa Rashidi**, and Todd Manini. “Smartwatch-Based Ecological Momentary Assessment versus Questionnaire-Based Recall of Knee Pain among Older Adults.” *World Congress on Pain*, Boston, MA, US, September 2018.
17. Davoudi, Anis, Duane B. Corbett, Tezcan Ozrazgat-Baslanti, Azra Bihorac, Scott C. Brakenridge, Todd M. Manini, and **Parisa Rashidi**. “Sepsis Recovery Subtyping using Actigraphy Methods.” *International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Honolulu, HI, US, July 2018.
18. Shickel, Benjamin, Patrick Tighe, and **Parisa Rashidi**. “What Would PubMed Write about Pain? Automated PubMed Abstract Text Generation using Seq2Seq-style Deep Learning Techniques Trained on 200k PubMed Pain Research Abstracts.” *American Academy of Pain Medicine Annual Meeting*, Vancouver, BC, Canada, April 2018.
19. Baharloo, Raheleh, Patrick Tighe, and **Parisa Rashidi**. “Postoperative Acute Pain as a Dynamical System: Lessons from Infinite Impulse Response Filter Modeling.” *American Academy of Pain Medicine Annual Meeting*. Vancouver, BC, Canada, April 2018.
20. Raheleh Baharloo, Patrick Tighe, and **Parisa Rashidi**. *Making Waves for Postoperative Pain: Wavelet-Based Clustering of Acute Postoperative Pain Intensity and Modeling to Forecast Average Pain Scores at Postoperative Day 30*. American Academy of Pain Medicine’s 34th Annual Meeting. Vancouver, BC, Canada, April 2018.

21. Benjamin Shickel, Tyler Loftus, Tezcan Ozrazgat Baslanti, Azra Bihorac, and **Parisa Rashidi**. *Increasing SOFA Score Granularity with Deep Learning*. Society of Critical Care Medicine Congress (SCCM), San Antonio, TX, US, February 2018.
22. Tighe, Patrick J, Zach Quicksall, Shruthi Gopalswamy, and **Parisa Rashidi**. “Moving Beyond Dose and Demand Counts: Development of a Novel PCA Analytical Software Toolbox.” *The International Anesthesia Research Society (IARS) Annual Meeting*. Washington, DC., US, May 2017.
23. Simpson, David, Andrew Jin, Mizuki Miyatake, **Parisa Rashidi**, and Patrick Tighe. “What Makes It This, and Not That? Deep Learning Neural Networks for Characterization of Ultrasound-Guided Peripheral Nerve Blocks: Elementary Hyper-parameter Explorations of Pilot Anatomical Windows.” *Annual Regional Anesthesiology and Acute Pain Medicine Meeting (ASRA)*, San Francisco, CA, US, April 2017.
24. Siegel, Scott, Agyeiwaa Agyei, Anis Davoudi, Patrick Tighe, and **Parisa Rashidi**. “Intelligent Surgical Instrument Recognition System.” *American Medical Informatics Association Annual Symposium (AMIA)*, Washington, DC, US, November 2017.
25. Adams, Kaitlyn, Kumar Malhorta, Scott Siegel, Anis Davoudi, Azra Bihorac, and **Parisa Rashidi**. “Pervasive Monitoring of Patients Activity in The Intensive Care Unit.” *Biomedical Engineering Society Annual Meeting (BMES)*, Phoenix, AZ, US, October 2017.
26. Ebadi, Ashkan, Paul Thottakkara, Tezcan Ozrazgat-Baslanti, **Parisa Rashidi**, and Azra Bihorac. “Reclassification Improvement for Acute Kidney Injury Using Intraoperative Data.” *Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Orlando, FL, US, August 2016.
27. Shickel, Benjamin, **Parisa Rashidi**, Haldun Aytug, and Patrick Tighe. “Markov Decision Processes for Postoperative Acute Pain Decision Support.” *Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Orlando, FL, US, August 2016.
28. Davoudi, Anis, Jacob Rubin, Matthew Ruppert, Patrick Tighe, Azra Bihorac, and **Parisa Rashidi**. “Detection of Delirium using Kinect Sensor and Accelerometer Data.” *Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Orlando, FL, US, August 2016.
29. Davoudi, Anis, Sanjay Nair, Matin Kheirhahan, Sanjay Ranka, Todd M. Manini, and **Parisa Rashidi**. “Validation of Accelerometer Data from Samsung Gear S Smartwatch.” *Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Orlando, FL, US, August 2016.
30. Pourafshar, Negiin, Tezcan Ozrazgat-Baslanti, Anis Davoudi, **Parisa Rashidi**, Mark Segal, and Azra Bihorac. “Cardiovascular Mortality after Major Surgery in Elderly.” *American Society of Nephrology Meeting*, Chicago, IL, US, November 2016.
31. Shickel, Benjamin, Matthew Bzdega, Roger Fillingim, **Parisa Rashidi**, Haldun Aytug, and Patrick Tighe. “Measuring Policy Sensitivity under Uncertain Conditions and Debatable Outcomes....”

Painful MDP's for Acute Pain Decision Support?" *International Annual Conference on Production and Operations Management Society (POMS)*, Orlando, FL, US, May 2016. [Invited Talk]

32. Shickel, Benjamin, Gokul Maddali, and **Parisa Rashidi**. "Extracting Type Relevancy of Conversational Entities for Building a Communication Assistant Tool." *International Florida Artificial Intelligence Research Society Conference (FLAIRS)*, Hollywood, FL, US, May 2015.
33. Shickel, Benjamin and **Parisa Rashidi**. "Time-Sensitive Online Active Learning for Multiple-Oracle Data Stream Classification." *International Florida Artificial Intelligence Research Society Conference (FLAIRS)*, Hollywood, FL, US, May 2015.
36. Nagaraju, Dushyanth Bookanakere, Josue Luiz Dalboni da Rocha, Ranganatha Sitaram, and **Parisa Rashidi**. "Classifying Alzheimer's disease Based on Complex Graph Measures and Machine Learning Techniques." *Real-time Functional Imaging and Neurofeedback Conference (rtFIN)*, Gainesville, FL, US, February 2015.
37. **Parisa Rashidi**. "Vision Paper: Lifelong Monitoring and Intervention." *National Workshop on Computing Challenges in Future Mobile Health (mHealth) Systems and Applications*, Washington, D.C., US, October 2014.
38. Tighe, Patrick, Paul Nickerson, Roger Fillingim, and **Parisa Rashidi**. "Preliminary Definitions of TEMPoral POstoperative pain Signatures via Symbolic Aggregate approximation." *National Institute of Health (NIH) Forum on Pain Research*, Washington, D.C., US, May 2014.

---

### Internal Abstracts & Posters

1. Davoudi, Anis, Duane Corbett, Tezcan Ozrazgat-Baslanti, Azra Bihorac, Scott Brakenridge, Todd Manini, and **Parisa Rashidi**. "Activity and Circadian Rhythm of Sepsis Patients in the Intensive Care Unit." *Celebration of Research, University of Florida*, Gainesville, FL, US, 2018.
2. Bandyopadhyay, Sabyasachi, Azra Bihorac, and **Parisa Rashidi**. "Machine Learning on Urinary Gene Expression to predict Sepsis in Patients." *Pruitt Research Day Celebration, University of Florida*, Gainesville, FL, US, November 2017.
3. Shickel, Benjamin, Azra Bihorac, and **Parisa Rashidi**. "Deep SOFA: Development and Validation of a Novel Acuity Score Framework Using Deep Learning." *Pruitt Research Day Celebration, University of Florida*, Gainesville, FL, US, November 2017.
4. Davoudi, Anis, Azra Bihorac, and **Parisa Rashidi**. "Intelligent ICU for Autonomous Patient Assessment." *Pruitt Research Day Celebration, University of Florida*, Gainesville, FL, US, November 2017.
5. Davoudi, Anis, Matin Kheirkhahan, Sanjay Nair, Sanjay Ranka, Todd Manini, and **Parisa Rashidi**. "Validation of Samsung Gear S Smartwatch in Actigraphy and Energy Expenditure Estimation." *College of Medicine Celebration of Research, University of Florida*, Gainesville, FL, US, 2017.

6. Liu, Weier, Ashkan Ebadi, Lei Zhang, **Parisa Rashidi**, and Patrick Tighe. "Social Network Analysis of Intraoperative Teams and Perioperative Outcomes." *College of Medicine Celebration of Research, University of Florida*, Gainesville, FL, US, 2017.
7. Simpson, David, Andrew Jin, Mizuki Miyatake, **Parisa Rashidi**, and Patrick Tighe. "Convolutional Neural Network Approaches to Preliminary Classification of Ultrasound-Guided Regional Anesthetic Target Regions." *College of Medicine Celebration of Research, University of Florida*, Gainesville, FL, US, 2017.
8. Khorram, Tina, Paul Thottakkara, Ashkan Ebadi, Tezcan Ozrazgat-Baslanti, Anis Davoudi, **Parisa Rashidi**, and Azra Bihorac. "Application of Machine Learning Techniques to High-Dimensional Clinical Data to Predict Risk for Postoperative Complications." *College of Medicine Celebration of Research, University of Florida*, Gainesville, FL, US, 2016.
9. Ebadi, Ashkan, Anis Davoudi, Paul Thottakkara, Tezcan Ozrazgat-Baslanti, **Parisa Rashidi**, and Azra Bihorac. "GATOR Kidney Risk Score." *College of Medicine Celebration of Research, University of Florida*, Gainesville, FL, US, 2016.
10. Manini, Todd, **Parisa Rashidi**, Sanjay Nair, and Sanjay Ranka. "Real-Time Online Activity and Mobility Monitoring (ROAMM) Through Wearable Technology." *Annual Pepper Center Conference, University of Florida*, Gainesville, FL, US, 2015.
11. Nickerson, Paul, Ben Shickel, Patrick Tighe, and **Parisa Rashidi**. "Deep Learning for Post-Operative Pain Management." *Pruitt Research Day Celebration, University of Florida*, Gainesville, FL, US, 2015.
12. Shickel, Ben, and **Parisa Rashidi**. "Automatic Identification and Classification of Cognitive Distortions in Text." *Pruitt Research Day Celebration, University of Florida*, Gainesville, FL, US, 2015.
13. Kheirkhahan, Matin, **Parisa Rashidi**, Sanjay Ranka, and Todd M. Manini. "Finding Activity Patterns among Participants with Different Mobility Characteristic using Bag-of-Words Approach." *Spotlight on Aging, University of Florida*, Gainesville, FL, US, 2015.
14. Davoudi, Anis, Matin Kheirkhahan, Sanjay Ranka, Todd M. Manini, and **Parisa Rashidi**. "Validation of Accelerometer Data from Samsung Gear S Smart Watch." *Spotlight on Aging, University of Florida*, Gainesville, FL, US, 2015.
15. Wanigatunga, Amal Asiri, Paul Nickerson, Todd M. Manini, and **Parisa Rashidi**. "Examining Symbolic Aggregate approximation (SAX) Adaptive Accelerometry Cut-Points Among US Older Adults." *Spotlight on Aging, University of Florida*, Gainesville, FL, US, 2015.
16. Kheirkhahan, Matin, **Parisa Rashidi**, Sanjay Ranka, and Todd M. Manini. "Analysis of Mobility and Cognition Function in Older Adults from Actigraphy Data." *Aging Research Day, University of Florida*, Gainesville, FL, US, 2014.
17. Bhaskaran, Jagadeesh Radhakrishnan, Ishani Parikh, Matin Kheirkhahan, Sanjay Ranka, Adam Woods, Todd M. Manini, and **Parisa Rashidi**. "Identifying Older Adult Population Segments In

Terms Of Mobility And Cognitive Function Using Hierarchical Clustering.” *Pruitt Research Day Celebration, University of Florida, Gainesville, FL, US, 2014.*

18. Nickerson, Paul, Patrick Tighe, and **Parisa Rashidi**. “Mining Motifs in Vital Sign Time Series.” BME Pruitt Research Day, *University of Florida, Gainesville, FL, US, 2014. [Honorable Mention Poster Award]*
19. Shickel, Benjamin, Gokul Maddali and **Parisa Rashidi**. “Extracting Type Relevancy of Conversational Entities for Building a Communication Assistant Tool.” *Pruitt Research Day Celebration, University of Florida, Gainesville, FL, US, 2014.*

---

## PATENTS

- Systems and Methods for Providing an Acuity Score for Critically Ill or Injured Patients. Azra Bihorac, Tyler J. Loftus, Tezcan Ozrazgat Baslanti, Parisa Rashidi, Benjamin P. Shickel. Pending Appl. No. 62/809,159, filed February 22, 2019 (*Pending*). **The first real-time and continuous version of the commonly used Sequential Organ Failure Assessment (SOFA) score in the Intensive Care Unit (ICU).**
- Rashidi, Parisa, Azra Bihorac, and Patrick J. Tighe. "Method and apparatus for pervasive patient monitoring." U.S. Patent Application 16/388,351, filed October 24, 2019. **The first autonomous visual assessment system for monitoring critically ill patients in the Intensive Care Unit (ICU).**
- Bihorac, Azra, Xiaolin Li, Parisa Rashidi, Panagote Pardalos, Tezcan Ozrazgat-baslanti, Wiliam Hogan, Daisy Zhe Wang, Petar Momcilovic, and Gloria Lipori. "Method and apparatus for prediction of complications after surgery." U.S. Patent Application 16/616,534, filed May 21, 2020. **The first real-time system for predicting complications after surgery.**
- Cook, Diane J., and Parisa Rashidi. "Systems and methods for adaptive smart environment automation." U.S. Patent Number. 8,880,378. 4, November 2014. **First adaptive smart home system utilizing machine learning techniques to adapt to residents, cited 69 times.**

---

## GRANTS & AWARDS

| AWARDED, SUMMARY                  | 2013-2020 |
|-----------------------------------|-----------|
| Number of Grants/Awards Received: | 17        |
| Faculty Share:                    | \$3.05 M  |
| Total Amount:                     | \$10.6M   |

---



**AWARDED, DETAILS****--- Federal Grants ---**

2019-2022 \$576,801 (Rashidi: \$576,801) National Institute of Health (**NIH**)  
**TrailBlazer:** Autonomous Pain Recognition in Non-Verbal and Critically Ill Patients  
 The overall objective of this project is to build the foundation of an autonomous, clinically-available pain assessment system by developing and validating pain recognition algorithms in a fully uncontrolled ICU setting.  
 Rashidi (PI) Role: PI

2018-2023 \$595,029 (Rashidi: \$595,029) National Science Foundation (**NSF**)  
**CAREER:** Fundamental Intelligent Building Blocks of the Intensive Care Unit (ICU) of the Future  
 Project Goal: The major goals of this project are to develop machine learning models for patient monitoring in the critical care unit.  
 Rashidi (PI) Role: PI

2015-2016 \$225,000 (Rashidi: \$95,087) National Science Foundation (**NSF**)  
**STTR Phase I:** TAO: An Intelligent Mental Health Therapy Tool  
 Project Goal: The major goals of this project are to utilize the wealth of collected mental health data by online therapy tool TAO using novel natural language processing and machine learning techniques to provide highly personalized treatments to mental health patients.  
 Rashidi (University PI), Benton (Private Partner PI) Role: PI

2016 \$45,000 (Rashidi: \$32,010) National Science Foundation (**NSF**)  
**BRIDGE Phase I to II:** TAO: An Intelligent Mental Health Therapy Tool  
 Project Goal: The major goals of this project are to further develop the natural language processing techniques developed in Phase I using techniques such as word embedding and deep learning.  
 Rashidi (University PI), Benton (Private Partner PI) Role: PI

2016-2019 \$750,000 (Rashidi: \$221,242) National Science Foundation (**NSF**)  
**SBIR Phase II:** An Intelligent Mental Health Therapy System  
 Project Goal: The major goals of this project are to further develop the natural language processing and machine learning techniques developed in Phase I.  
 Rashidi (University PI), Benton (Private Partner PI) Role: PI

2015-2020 \$3,231,529 (Rashidi: \$265,939) National Institute of Health (**NIH**)  
**R01:** Finding Good Temporal Postoperative Pain Signatures  
 Project Goal: This project examines how postoperative pain scores change with respect to time using machine learning and advanced data science techniques such as shapelets and deep learning techniques.  
 Rashidi (Co-I), Tighe (PI) Role: Co-I

2015-2018 \$665,000 (Rashidi: \$23,517) National Institute of Health (**NIH**)

**SBIR: PEAKS: Validation of Mobile Technologies for Clinical Assessment, Monitoring, and Intervention**

This project examines how wearable accelerometers can be used for clinical assessment and monitoring.

Rashidi (Co-I), Albinali (PI)                      Role: Co-I

2016-2020      \$2,286,618 (Rashidi: \$299,313)      National Institute of Health (**NIH**)

**R01:** Integrating data, algorithms and clinical reasoning for surgical risk assessment

Project Goal: This project examines how surgical risk can be assessed using machine learning and advanced data analysis techniques.

Rashidi (Co-I), Bihorac, Li (PI)                      Role: Co-I

2017-2022      \$2,500,00 (Rashidi: \$750,000)      National Institute of Health (**NIH**)

**R01:** PRECEDE: PREsurgical Cognitive Evaluation via Digital clockfacE drawing

Project Goal: This project examines how deep learning and digital technology can be used to assess cognitive function in hospitalized patients.

Rashidi (Co-I), Tighe, Price (PI)                      Role: Co-I

2013-2018      \$3,825,482 (Rashidi: \$ 127,985)      National Institute of Health (**NIH**)

**R01:** Artificial Intelligence in a Mobile Intervention Tool for Depression

Project Goal: This project aims to use machine learning techniques to provide just in time intervention techniques for mental health patients.

Rashidi (Co-I), Mohr (PI)                      Role: Co-I

*\*Not transferred after moving to UF*

#### ----Workshop Grants ----

2013-2014      \$15,000 (Rashidi: N/A)                      National Science Foundation (**NSF**)

**Workshop:** Travel Fund for 2012 AAAI Fall Symposium on AI for Gerontechnology

Project Goal: This workshop provided travel fund for approximately 10 early stage scholars, including graduate students and postdoctoral fellows.

Rashidi (Co-PI), PI (Cook)                      Role: Co-PI

#### ---- State Grants ----

2015-2016      \$124,556 (Rashidi: \$80,627)                      Florida High Tech Corridor Council

**FHTCC:** Intelligent Mental Health Treatment Recommendation

Project Goal: The goal of this project is to automatically recommend treatments and interventions based on personalized patient profiles and their recovery trajectory. This is a matching grant on TAO Connect Inc. Industry support.

Rashidi (PI), Heesacker (co-I)                      Role: PI

#### ---- Industry Support ----

2017              Deep Learning GPU Equipment (Rashidi)                      Industry: NVIDIA Corporation

**Intelligent Health System Lab Support**

Project Goal: The GPU equipment will be used to develop deep learning applications in the clinical domain.

Rashidi (PI)

Role: PI

2015-2016 \$18,819 (Rashidi: \$7,269)

Industry: TAO Connect, Inc.

**Matched:** Intelligent Mental Health Treatment Recommendation

Project Goal: The goal of this project is to automatically recommend treatments and interventions based on personalized patient profiles and their recovery trajectory.

Rashidi (PI), Heesacker (co-I)

Role: PI

**---- Internal Grants ----**

2015-2016 \$30,777 (Rashidi: \$30,777)

UF Informatics Institute (UFII)

**Automatic Real-Time Detection of Delirium in Intensive Care Units using Pattern Recognition**

Project Goal: This project examines how delirium can be detected using machine learning and advanced data analysis techniques.

Rashidi (PI)

Role: PI

2018-2019 \$56,247 (Rashidi: \$56,247) Clinical and Translational Science Institute (CTSI)

**Automated Integration of Patient-Generated Data with the Electronic Health Record Data**

Project Goal: This project aims to integrate electronic health record data with mHealth sensor data.

Rashidi (PI)

Role: PI

2016-2018 \$24,109 (Rashidi: \$24,109)

PRICE-CTSI-IOA Pilot

**Real-Time Patient Reported Outcome of Pain in Community-dwelling Older Adults**

Project Goal: This project aim is to provide an ecological momentary assessment (EMA) tool for capturing patient reported outcome (PRO) in real time within daily life, using a smartwatch for collecting pain intensity, fatigue level, and mood.

Rashidi (PI)

Role: PI

2014-2015 \$37,838 (Rashidi: no efforts allowed)

UF Informatics Institute (UFII)

**Analysis of Actigraphy Patterns for Improved Physical Activity Intervention and Preventing Mobility Incidents in Older Adults**

Project Goal: The major goal of this project is to identify mobility impairment using high resolution movement data measured from accelerometer.

Rashidi (Co-I), Manini (PI)

Role: Co-I

---

**TEACHING****Primary Instructor:**

- **Computer Applications For BME, BME 3053C**  
Undergraduate Course, Department of Biomedical Engineering,  
Spring 2018, Fall 2019 (Co-teaching), Spring 2020

University of Florida

- **Biomedical Data Science, BME4931/6938**  
Graduate Course, Department of Biomedical Engineering,  
Spring 2017, Fall 2018, Fall 2019, Fall 2020  
University of Florida
- **Machine Learning for Health and Biomedical Applications, BME4931/6938**  
Graduate Course, Department of Biomedical Engineering,  
Spring 2014, Fall 2015, Fall 2016  
University of Florida
- **Biomedical Informatics, BME4931/6938**  
Undergraduate Course, Department of Biomedical Engineering,  
Spring 2016, Fall 2014  
University of Florida
- **Programming Fundamentals for CIS Majors, COP 3502**  
Undergraduate Course, Computer and Information Science and Engineering,  
Spring 2012  
University of Florida

#### **Guest Lectures:**

- **Machine Learning Lecture Series**  
Guest Lecture, CBITs,  
Spring 2013  
Northwestern University
- **Introduction to Biomedical Engineering, BME 1008**  
Guest Lecture, Department of Biomedical Engineering,  
Fall 2013, Spring 2014, Spring 2016, Spring 2018, Fall 2019  
University of Florida
- **Data Science: Large-scale Advanced Data Analysis, CIS 6930 / CIS4930**  
Guest Lecture, Computer and Information Science and Engineering,  
Spring 2012  
University of Florida

---

## **PRESENTATIONS & INVITED TALKS**

International, National, Regional

1. **Parisa Rashidi**, Azra Bihorac. "Pervasive sensing in critical care." The 2020 International on Complex Acute Illness (ICCAI), September 2020. [Invited Talk, Panelist, Virtual due to COVID-19]
2. **Parisa Rashidi**. "AI: Balancing Profit, Efficiency, and Patient Safety in the Operating Room and ICU." *The 2020 International Anesthesia Research Society Meeting*, San Francisco, CA, US, May 2020. [Invited Talk, Panelist, Canceled due to COVID-19]
3. **Parisa Rashidi**. "Machine Learning in Medicine: Where to Start, Where We Are Going." *The 2020 International Anesthesia Research Society Meeting*, San Francisco, CA, US, May 2020. [Invited Talk, Panelist, Canceled due to COVID-19]
4. **Parisa Rashidi**. "The dark Side of AI in Medicine." *Annual Meeting of the Society for Critical Care Medicine (SCCM)*, Orlando, FL, February 2020 [Invited Talk].
5. **Parisa Rashidi**. "Intelligent Patient Monitoring Systems in Critical Care Settings." *Mayo Clinic's Grand Informatics Rounds*, Rochester, MN, January 2020. [Invited Talk]
6. **Parisa Rashidi**. "Intelligent Critical Care Monitoring." *Symposium on Machine Learning in Science and Engineering*, Atlanta, GA, June 2019. [Invited Talk]
7. **Parisa Rashidi**. "Autonomous Pain Assessment in Critically Ill Patients." *Pain Symposium, National Institute of Health (NIH)*, Washington, DC, May 2019. [Invited Talk, Mitchel Max Award Finalist]
8. **Parisa Rashidi**. "Man vs. Machine or Man + Machine? Leveraging Machine Learning and AI to Improve Health Care." *The 2019 International Anesthesia Research Society Meeting.*, Montreal, Quebec, Canada, May 2019. [Invited Talk, Panelist]
9. **Parisa Rashidi**. "Intelligent Health Systems." *International Conference on Computational Biomedicine*, Gainesville, FL, US, February 2019. [Invited Talk]
10. **Parisa Rashidi**. "Autonomous Pain Recognition in Critically Ill Patients", *Annual NIH Pain Consortium Symposium*, Invited, Washington, DC, May 2019.
11. **Parisa Rashidi**. "Intelligent Patient Monitoring Systems. " *Rita Kobb Nursing Informatics Symposium*, Invited Talk, Gainesville, FL, February 2019. [Invited Talk]
12. **Parisa Rashidi**. "Deep Analysis of Messy Perioperative Data." *Annual Meeting of the Society for Technology in Anesthesia (STA)*, Invited Talk, Panelist, Miami, FL, US, January 2018. [Invited Talk, Panelist]
13. **Parisa Rashidi**. "Data Science for mHealth Technologies and Behavioral Measurement." *74th American Psychosomatic Society Annual Meeting*, Denver, CO, US, March 2016. [Invited Talk]
14. **Parisa Rashidi**. Intelligent Health Systems, *National Academy of Engineering, Frontiers of Engineering*, Davis, CA, 2017.
15. **Parisa Rashidi**. "Intelligent Health Systems", *Daytona State University STEM Seminar Series*, Invited Talk, Daytona Beach, FL, February 2016.

16. **Parisa Rashidi.** “Lifelong Monitoring and Intervention.” *National Workshop on Computing Challenges in Future Mobile Health (mHealth) Systems and Applications*, Washington, D.C., US, October 2014.
17. **Parisa Rashidi.** “Machine Learning for mHealth.” *National Institute of Health (NIH)*, Washington, DC, December 2013. [Invited Lecture]
18. **Parisa Rashidi.** “Machine Learning for mHealth, mHealth Bootcamp.” *National Collaborative on Childhood Obesity Research (NCCOR)*, Atlanta, GA, December 2013. [Invited Lecture]
19. **Parisa Rashidi.** “Machine Learning for mHealth.” *National Institute of Health (NIH)*, Washington, DC, December 2012. [Invited Lecture]
20. **Parisa Rashidi.** “A Tutorial on Assisted Living Technologies for Older Adults.” *International Health Informatics Symposium (IHI)*, Miami, FL. January 2012.
21. **Parisa Rashidi.** “Machine Learning and Gerontechnology.” *Florida Institute for Human and Machine Cognition (IHMC)*, Pensacola, FL, July 2012.
22. **Parisa Rashidi.** “How Smart is Your Home?” *University of Oregon, Department of Computer Science*. Eugene, OR, March 2011.
23. **Parisa Rashidi**, and Diane J. Cook. “Mining and Monitoring Patterns of Daily Routines for Assisted Living in Real World Settings.” *International Health Informatics Symposium (IHI)*, Washington, D.C., US, November 2010.
24. **Parisa Rashidi**, and Diane J. Cook. “Activity Recognition Based on Home to Home Transfer Learning.” *Association for Artificial Intelligence (AAAI) Conference on Artificial Intelligence*, Atlanta, GA, US, July 2010.
25. **Parisa Rashidi**, and Diane J. Cook. “Multi Home Transfer Learning for Resident Activity Discovery and Recognition.” *Conference on Knowledge Discovery and Data Mining (KDD)*, Washington, D.C., US, July 2010.
26. **Parisa Rashidi**, and Diane J. Cook. “An Adaptive Sensor Mining Model for Pervasive Computing Applications.” *Conference on Knowledge Discovery and Data Mining (KDD)*, Las Vegas, NV, US, July 2010.

### Local

1. **Parisa Rashidi.** “Artificial Intelligence & the Future of Work.” Santa Fe College, Gainesville, FL, US, October 2020.
2. **Parisa Rashidi.** “A Smartwatch Framework for Assessing Patient Reported Outcomes.” *Pain Research and Intervention Center of Excellence (PRICE)*, University of Florida, Gainesville, FL, US, February 2018.

3. **Parisa Rashidi.** “Intelligent Health & Wellbeing Systems.” *Institute on Aging (IOA), University of Florida, Gainesville, FL, US, September 2014.*
4. **Parisa Rashidi.** “Machine Learning for Smart Health.” *Computer and Information Science and Engineering (CISE), University of Florida, Gainesville, FL, US, February 2014.*
5. **Parisa Rashidi.** “Intelligent Health & Wellbeing Systems.” *Computational Neural Engineering Lab, Electrical and Computer Engineering (ECE), University of Florida, Gainesville, FL, US, October 2013.*
6. **Parisa Rashidi.** “Intelligent Health & Wellbeing Systems.” *Clinical and Translational Science Institute (CTSI), University of Florida, Gainesville, FL, US, October 2013.*
7. **Parisa Rashidi.** “Intelligent Health & Wellbeing Systems.” *Electrical and Computer Engineering (ECE), University of Florida, Gainesville, FL, US, February 2014.*
8. **Parisa Rashidi.** “Machine Learning for Assisted Living.”, *Cognitive Neurology and Alzheimer's Disease Center, Northwestern University, Chicago, IL December 2012.*
9. **Parisa Rashidi.** “Ambient Assisted Living.” *Feinberg School of Medicine, Northwestern University, Chicago, IL, December 2011.*

---

## MENTORING

### Junior Faculty

- Mamoun Mardini, Assistant Professor, Dept. of Aging and Geriatric Research
- Tyler J. Loftus, Assistant Professor, Department of Surgery

### Postdoctoral Fellows

- Ashkan Ebadi, Ph.D., Machine Learning, 2015- 2016

### PhD Students

1. Ben Shickel, CISE, Physiological Time Series Analysis, 2014 - Present
2. Anis Davoudi, BME, Intelligent ICU, 2015 – Present
3. Raheleh Baharloo, ECE, Physiological Time Series Analysis, 2017 - Present
4. Scott Siegel, BME, Quantum Machine Learning, 2017 - Present
5. Sabyasachi Bandyopadhyay, BME, Integrated Data Analysis, 2017 – Present
6. Subhash Nerella, BME, Critical Care Monitoring, 2018 - Present

**Master's Students (*Alumni in Italics*)**

1. Rahul Radhakrishnan, Sketch Analysis, 2020
2. Parth Shah, Intelligent ICU, 2019
3. Anirudh Mukundan Raghavan, Intelligent ICU, 2019
4. Vasundhra Iyengar, CISE, Intelligent ICU, 2019
5. Suchak, Amish R, CISE, Intelligent ICU, 2018-2019
6. Ray, Swapnendu, ECE, Intelligent ICU, 2018-2019
7. Sannapaneni, Bharadwaj, CISE, Clinical Text Analysis, 2018-2019
8. Nitish Kumar Rath, CISE, Intelligent ICU, 2018-2019
9. *Kumar R Malhotra, CISE, Activity Recognition in the ICU, 2017-2018*
10. *Subhash Nerella, Mech.E, Ultrasound Image Segmentation, 2018*
11. *Wan, Yongchen, CISE, Intelligent ICU, 2018*
12. *Mizuki Miyatake, BME, Deep Learning in Ultrasound Inference, 2016*
13. *Piyush Agade, CISE, Graph analysis, 2016*
14. *Karthik Maharajan Sankara Subramanian, CISE, Pain Recognition, 2016*
15. *Sritapa Dutta, CISE, Physiological Data Analysis, 2015*
16. *Dushyanth Bookanakere Nagaraju, CISE, Graph Analysis, 2014- 2015*
17. *Jagadeesh Radhakrishnan Bhaskaran, mHealth, CISE, 2014- 2015*
18. *Sudarsanan Janakiraman, Information System and Operation Management, 2014*
19. *Pankaj Narula, CISE, Machine Learning, 2013- 2014*
20. *Sanchit Katdare, Mental Health Text Analysis, CISE, 2013- 2014*

**Individual Study**

1. Rahul Radhakrishnan, Sketch Analysis, 2020
2. Pulkit Tripathi, Clustering, 2019
3. Nitish Kumar Rath, Intelligent ICU, CISE, 2019
4. Aditya Nalluri, Deep Learning in Intraoperative Setting, CISE, 2018
5. Ajitesh Janaswamy, EHR DB, CISE, 2018
6. Srajan Paliwal, AKI Prediction Tool, CISE, 2018
7. Ghananeel S Rotithor, Assisted Communication Tool, BME, 2017
8. Venkata Trivedi, Pain Recognition Using Deep Learning, CISE, 2016
9. Rahul James Maliakkal, Anesthesia Equipment Recognition, CISE, 2016



10. Sunil Kumar, Mobile Facial Expression Recognition, CISE, 2016
11. Ambuj Kumar, Medical Literature Mining, Biology, 2016
12. Amal A. Wanigatunga, Epidemiology, Sensor Data Analysis, Health Sciences, 2015
13. Gokul Maddali, Named Entity Type Recognition, CISE, 2015
14. Siddardha Maddula, Mobile Facial Expression Recognition, CISE, 2015
15. Dushyanth Bookanakere Nagaraju, Graphs in Machine Learning, CISE, 2014
16. Jain Manish Geverchand, Audio Data Classification, CISE, 2014
17. Jagadeesh Radhakrishnan Bhaskaran, Sensor Data Analysis, CISE, 2014
18. Animita Roy, Sensor Data Analysis, ECE, 2014
19. Benjamine Shickel, Natural Language Processing in Mental Health, CISE, 2014
20. Namrata Bikhchandani, Natural language Features of Cognitive Distortions, CISE, 2014

### **Undergraduate Students (*Alumni in Italics*)**

1. Kevin Miguel Vega Gonzalez, 2019-2020
2. Joseph Brooks, CISE, 2018-2019, University Scholar
3. Ria Bhaskar, BME, 2018-2020
4. Christie Nguyen, BME, 2017-2019, University Scholar
5. Natalie Evelev, BME, 2017-2019, University Scholar
6. *Anthony Rodriguez, BME, 2018*
7. *Matthew Ruppert, BME, 2017-2018*
8. *Kaitlyn C Adams, BME, 2017*
9. *Gouthami Gadamsetty, BME, 2017*
10. *Alexander Hall, Senior, ECE, 2016*
11. *Paul Nickerson, BME, 2015*
12. *Zachary Quicksall, BME, Honorable mention, NSF Graduate fellowship Program, 2016*

### **University Minority Mentor Program (UMMP)**

1. Michele Wu, CISE, Freshman, 2016
2. Anthony Voong, CISE, Freshman, 2016
3. Abhisek Mishra, ECE, Freshman, 2015

### **Visiting Scholars**

1. Sameh Triki, PhD Candidate, University of Toulous, France, Discovering Human Walking

Patterns, 2015

### Student Science Training Program (SSTP)

1. Nicholas Jackson, Junior High school, Summer 2018
2. Jacob York, Junior High school, Summer 2018
3. Avaneesh R. Kunta, Junior High school, Summer 2016

---

### THESIS & DISSERTATION COMMITTEES

#### Ph.D. Committee Chair

- |                             |      |             |
|-----------------------------|------|-------------|
| 1. Shickel, Benjamin P      | CISE | Summer 2019 |
| 2. Davoudi, Anis            | BME  | Spring 2020 |
| 3. Raheleh Baharloo         | ECE  | Spring 2020 |
| 4. Scott Siegel             | BME  | Spring 2020 |
| 5. Sabyasachi Bandyopadhyay | BME  | Spring 2020 |
| 6. Subhash Nerella          | BME  | Spring 2023 |

#### Ph.D. Committee Member (Alumni in blue font)

- |                             |      |             |
|-----------------------------|------|-------------|
| 1. Kheirhahan, Matin        | CISE | Fall 2018   |
| 2. Charbel, Marc W          | BME  | Spring 2018 |
| 3. Liu, Fujun               | ECE  | Summer 2017 |
| 4. Rajan, Abhijit           | BME  | Spring 2018 |
| 5. Ravindran, Aniruddh      | BME  | Summer 2017 |
| 6. Sapkota, Manish          | ECE  | Spring 2018 |
| 7. Su, Hai                  | BME  | Spring 2019 |
| 8. Xie, Yuanpu Sr           | BME  | Spring 2018 |
| 9. Shi, Xiaoshuang          | BME  | Fall 2019   |
| 10. Chen, Pingjuin          | ECE  | Spring 2020 |
| 11. Meyappan, Sreenivasan   | BME  | Spring 2019 |
| 12. Xing, Fuyong            | ECE  | Spring 2018 |
| 13. Abolfazl Mollalo        | GEO  | Spring 2019 |
| 14. Sunil Kumar             | CISE | Spring 2020 |
| 15. Rozowsky, Jared M       | BME  | Spring 2021 |
| 16. Peng Liu                | BME  | Spring 2021 |
| 17. Farnaz Babaie Sarijaloo | ISE  | Spring 2021 |
| 18. Sarah Long              | BME  | TBD         |
| 19. Ayse Demircan           | BME  | Spring 2022 |
| 20. Kalyn Kearney           | BME  | TBD         |

#### International PhD Committee Member

- |                    |                             |             |
|--------------------|-----------------------------|-------------|
| 1. Florenc Demrozi | University of Verona, Italy | Spring 2020 |
|--------------------|-----------------------------|-------------|

**MS Committee Chair**

2. Paul Nickerson BME Spring 2017

**MS Committee Member**

1. Wu,Shaoju BME Fall 2017
2. Mcgough,Mason M BME Fall 2016

**Honor thesis Committee**

1. Nicole Veit BME, Fall 2020
2. Brecca Miller BME, Spring 2020
3. Kyle B. See BME, Spring 2019
4. Skylar Stolte BME, Spring 2019
5. Anthony Calas CISE Fall 2016

**BME Supervisory Chair**

1. Yangru Zhou
2. Megan Rahnama
3. Ibrahim Khaled Almuteb

---

**Student & Fellow Awards**

- 2019, Anis Davoudi, 2020 MCI Symposium Young Investigator Travel Scholarship
- 2019, Joseph Brooks, University Scholar
- 2018, Natalie Evelev, University Scholar
- 2018, Christie Nguyen, University Scholar
- 2018, Anis Davoudi, NSF Supported Women in Computer Vision Workshop, Conference on Computer Vision and Pattern Recognition (CVPR)
- 2018, Anis Davoudi, NSF Supported IEEE Biomedical and Health Informatics and Wearable and Implantable Body Sensor Networks Conference Student Travel Award
- 2017, Best Poster, College of Medicine Celebration of Research, Sabyasachi Bandyopadhyay
- 2016, Anis Davoudi, UF Informatics Institute Fellowship
- 2016, Zachary Quicksall, NSF Graduate Fellowship Honorable Mention
- 2016, Mizuki Miyatake, third place at BME photography contest, using deep learning
- 2014, Paul Nickerson, Honorable Mention Poster Award, BME Pruitt Research Day

---

**WORKSHOP & SYMPOSIUM ORGANIZATION**

- 2020 Sub-track Chair, The Annual Meeting of the Biomedical Engineering Society (BMES), Machine Learning in Biomedical Applications, San Diego, CA, US, 2020.
- 2017 Co-Chair, “Workshop on Machine Learning & Knowledge Extraction for Ambient Assisted Living”, *International Cross-Domain Conference for Machine Learning and Knowledge Extraction*. Reggio Calabria, Italy, August 2017.
- 2015 Co-Chair, “Workshop on Data Mining and Decision Analytics for Public Health and Wellness”, *IEEE International Conference on Data Mining (ICDM)*. Atlantic City, New Jersey, November 2015.
- 2014 Co-Chair, “Workshop on Smart Health Systems”, *ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp)*. Seattle, WA, September 2014.
- 2013 Co-Chair, “Symposium on Gerontechnology and AI”, *Association for the Advancement of Artificial Intelligence (AAAI)*. Washington, D.C., November 2012.
- 2012 Chair, “Workshop on Situation, Activity, Goal Awareness”, *ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp)*. Pittsburgh, PA, September 2012.
- 2011 Co-Chair, “Workshop on Situation, Activity, Goal Awareness”, *ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp)*. Beijing, China, September 2011.

---

## GRANT PROPOSAL REVIEW

- National Science Foundation (NSF)
  - 2020 ENG/IIP, SBIR/STTR, Ad-hoc Reviewer
  - 2019 CISE, Division of Information & Intelligent Systems (IIS), Panelist
  - 2018 CISE, Division of Information & Intelligent Systems (IIS), Panelist
  - 2017 CISE, Division of Information & Intelligent Systems (IIS), Panelist
  - 2016 CISE, Division of Information & Intelligent Systems (IIS), Panelist
  - 2014 CISE, Division of Information & Intelligent Systems (IIS), Panelist
  - 2012 CISE, Division of Information & Intelligent Systems (IIS), Panelist
  - 2011 CISE, Division of Information & Intelligent Systems (IIS), Panelist
- National Institute of Health (NIH)
  - 2020 Reviewer

- Patient-Centered Outcomes Research Institute (PCORI)
  - 2016                      Improving Methods, Scientist Reviewer
- Swiss National Science Foundation (NSF), Swiss
  - 2017                      Sinergia Funding Instrument, Reviewer
- The Dutch Cancer Society (KWF Kankerbestrijding), Netherlands
  - 2019                      External Reviewer
- Freiburg Institute for Advanced Studies (FRIAS), Germany
  - 2020                      External Reviewer

---

## **JOURNAL REVIEWER & EDITORIAL ROLES**

### Editor

- Editor, PLOS ONE, 2019 (5)
- Guest Editor: Special Issue on Data Mining and Mobile Sensing in Pervasive Environments, Elsevier's Pervasive and Mobile Computing, 2014 (15+)

### b. Editorial Advisory Boards

- Editorial Review Board: Journal of Ambient Intelligence and Smart Environments (JAISE) 2014-2017 (15+)

#### a. Reviewer for Scholarly Journals

1. Nature, Digital Medicine, 2019 (2), 2020 (1)
2. Nature, Medicine, 2019 (1)
3. Nature, Communications, 2019 (1), 2020 (2)
4. Nature, Machine Intelligence, 2019 (1)
5. Journal of Medical Internet Research (JMIR), 2019 (1)
6. Intensive Care Medicine Experimental, 2019 (1)
7. IEEE Transaction on Mobile Computing, 2019 (1)
8. IEEE Access, 2019 (1), 2020 (3)
9. IEEE Transactions on Neural Systems & Rehabilitation Engineering (IEEE TNSRE), 2019

- (1)
10. IEEE Transactions on Knowledge and Data Engineering (IEEE TKDE), 2018 (2), 2019 (1)
  11. IEEE Journal of Biomedical and Health Informatics (IEEE JBHI), 2014 (1), 2015 (1), 2018 (2), 2020 (2)
  12. Elsevier Current Opinion in Biomedical Engineering, 2018 (1)
  13. JAMA Neurology, 2018 (1)
  14. IEEE Transactions on Industrial Informatics (IEEE TII), 2018 (1)
  15. IEEE Transactions on Human-Machine Systems (IEEE THMS), 2013 (1), 2014 (1), 2018 (1)
  16. IEEE Transactions on Emerging Topics in Computing (IEEE TETC), 2013 (1), 2017 (1)
  17. IEEE Transactions on Mobile Computing (IEEE TMC), 2017 (1)
  18. PLOS ONE, PLOS Computational Biology, 2017 (1)
  19. Statistical Analysis and Data Mining (SDM), 2014 (1)
  20. ACM Transactions on Interactive Intelligent Systems (ACM TIIS), 2014 (1)
  21. IBM Journal of Research and Development, 2014 (1)
  22. ACM Transaction on Intelligent System and Technology (ACM TIST), 2012 (1)

---

## **CONFERENCE TECHNICAL PROGRAM COMMITTEES**

1. Machine Learning in Biomedical Applications, Annual Meeting of the Biomedical Engineering Society (BMES), 2020
2. International Conference on Pervasive Health 2020
3. IEEE International Conference on Computers, Software and Applications (IEEE COMPSAC), 2019.
4. ACM International Conference on Information and Knowledge Management (CIKM), 2013, 2015, 2016.
5. IEEE International Conference on Data Mining (ICDM), 2012, 2015.
6. IEEE International Conference on Tools with Artificial Intelligence (IEEE ICTAI), 2009-2015.
7. IEEE International Conference on Big Data (Big Data 2015), Workshop on Deriving Value from BigData in HealthCare, 2015.
8. ACM International Conference on Knowledge Discovery and Data Mining (ACM KDD), 2012, 2015.

9. International Conference of the Association for the Advancement of Artificial Intelligence (AAAI), 2013, 2014.
10. ACM International Conference on Bioinformatics, Computational Biology, and Health Informatics (ACM BCB), Workshop on Big Data in Life Sciences (BigLS), 2014.
11. International Conference on Data Mining (IEEE ICDM), Workshop on Data Mining and Decision Analytics for Public Health and Wellness, 2014.
12. International Conference on Ubiquitous Computing & Ambient Intelligence (UCAmI), 2014.
13. International Work Conference on Ambient Assisted Living (IWAAL), 2014.

#### Reviewer

- Annual Meeting of the Biomedical Engineering Society (BMES), 2020 (main conference, undergraduate session, 20+)
- IEEE Engineering in Medicine and Biology Society (EMBC), 2020.
- American Medical Informatics Association (AMIA) Annual Symposium, 2016-2019

---

### OUTREACH & INCLUSION

|           |   |
|-----------|---|
| 2019      | Artificial Intelligence in Medicine, Institute for Learning in Retirement at Oak Hammock                                |
| 2019      | Join detection demo, BME Outreach Event at Cade Museum  |
| 2019      | Sponsoring the Madelyn Lockhart Dissertation Award, Association for Academic Women's (AAW), Emerging STEM Scholar Award |
| 2015-2016 | University Minority Mentor Program (UMMP), University of Florida  |
| 2015-2017 | Iranian Student Association Advisor, University of Florida  |
| 2016-2018 | UF Student Science Training Program (SSTP), University of Florida   |

---

### MEDIA MENTIONS & INTERVIEWS

- CrossLink Magazine, Artificial Intelligence adds detail to health assessments in hospital intensive care units, November 2019, [Link](#)

- Herbert Wertheim College of Engineering, University of Florida, “UF Engineer Uses AI to Enhance Health Assessments In ICU”, July 31, 2019, [Link](#).
- News Story, Fox 13, “Artificial Intelligence in the ICU”, February 2019, [Link](#)
- News Story, CBS, “UF researchers develop new artificial intelligence system to help ICU patients”, February 2019, [Link](#)
- News Story, UF Health Newsroom, “University of Florida researchers develop artificial intelligence system for fast, accurate patient care”, February 2019, [Link](#)
- News Story, The Independent Florida Alligator, “UF researchers develop stronger, better, faster powered medical technology”, February 2019
- Featured Alumni, the National Academy of Engineering (NAE) Frontiers of Engineering (FOE), December 2018.
- News Story, NVIDIA Blog, “AI Assists Doctors Monitor ICU Patients”, May 2018, [Link](#)
- News Story, The Benzinga Financial Media, “TAO Connect Launches Mind Elevator Tool to Alter Thinking Habits Using Machine Learning Technology”, August 2017, [Link](#)
- News Story, The Gainesville Sun, “UF receives \$2.5 million grant to study postsurgical pain”, July 2015. [Link](#)
- Quotes and Interview, BME Cross Link Magazine, “Computing a Healthier Future”, July 2015. [Link](#)
- Quotes and Video, UF Promotional Video, “Enabling Technologies”, October 2014. [Link](#)
- Quotes and Interview, New Scientist, “Smart Home Knows Just How You Like Your Breakfast”, September 2009. [Link](#)

---

### **UNIVERSITY & DEPARTMENT SERVICE**

|                       |   |
|-----------------------|---|
| Summer 2020 – Present | Research Computing Advisory Committee (RCAC) to represent the Wertheim College of Engineering |
| Fall 2020 – Present   | Committee Member, AI, Master’s Program  |
| Spring 2020 - Present | College of Engineering, AI Task Force   |



|   |  |
|---|--|
| Fall 2019- Present                                | Co-Chair, master's in applied data science Program |
| Fall 2019   | Aging Faculty Search Committee                     |
| Fall 2015, Spring 2016, Spring 2017               | BME Undergraduate Program Committee                |
| Spring 2018, Fall 2018, Spring 2019,<br>Fall 2019 | BME Graduate Program Committee                     |
| Fall 2014, Spring 2015                            | BME Faculty Search Committee                       |
| Fall 2019   | CISE Faculty Search Committee                      |
| Fall 2018, Spring 2019, Fall 2019                 | BME Executive Committee                            |
| Spring 2014 – Spring 2018                         | BME Seminar Committee                              |
| Fall 2018, Spring 2018, Spring 2019,<br>Fall 2019 | BME Research Committee                             |
| Spring 2014, Spring 2016, Fall 2018               | Commencement Marshal                               |

---

### PROFESSIONAL MEMBERSHIP

|  |                |
|--|----------------|
| Association for computing Machinery (ACM)<br>Professional Member                 | 2011 - Present |
| Institute of Electrical and Electronics Engineers (IEEE)<br><i>Senior Member</i> | 2008 - Present |
| IEEE Computer Society  | 2008 - Present |
| IEEE Engineering in Medicine and Biology Society (EMBS)                          | 2015 - Present |
| Biomedical Engineering Society (BMES)  | 2013 - Present |
| Association for Academic Women (AAW) at the University of<br>Florida             | 2014 - Present |
| American Association of University Women (AAUW)                                  | 2017- Present  |
| Society of Women Engineers (SWE)   | 2015 - Present |

Society for Imaging Informatics in Medicine (SiiM)

2019- Present

American Association for Advancement of Science (AAAS)

2020 - Present

**Mostafa Reisi Gahrooei**

Department of Industrial and Systems Engineering  
 University of Florida, Gainesville, FL 32611  
 Phone: (352)2946896  
 Email: [mreisigahrooei@ufl.edu](mailto:mreisigahrooei@ufl.edu)  
<https://www.ise.ufl.edu/reisi-gahrooei/>

**EMPLOYMENT**

---

August 2019-Present: Assistant Professor, Department of Industrial and Systems Engineering, University of Florida, Gainesville, FL  
 June 2019-August 2019, Research Intern, ProcessMiner, Atlanta, GA  
 May 2018-August 2018, Research Intern, Xtal, San Jose, CA

**EARNED DEGREES**

---

|  |      |
|--|------|
| <b>Ph.D. in Industrial and Systems Engineering</b>                                     | 2019 |
| Georgia Institute of Technology, Atlanta, GA   |      |
| <u>Specialization:</u> System Informatics and Control                                  |      |
| <u>Minor:</u> Machine Learning   |      |
| <u>Dissertation title:</u> Modeling processes with heterogeneous high-dimensional data |      |
| <u>Academic advisors:</u> Dr. Jianjun (Jan) Shi and Dr. Kamran Paynabar                |      |
| <b>M.S. in Computational Science and Engineering</b>                                   | 2018 |
| Georgia Institute of Technology, Atlanta, GA   |      |
| <b>M.S. in Applied Mathematics</b>   | 2012 |
| Southern Illinois University Edwardsville  |      |
| <u>Academic advisor:</u> Dr. Urszula Ledzewicz   |      |
| <b>M.S. in Civil and Environmental Engineering</b>                                     | 2012 |
| Southern Illinois University Edwardsville  |      |
| <u>Specialization:</u> Transportation Systems  |      |
| <b>B.S. in Civil and Environmental Engineering</b>                                     |      |
| Isfahan University of Technology, Isfahan, Iran  |      |

**TEACHING**

---

**A. INDIVIDUAL STUDENT GUIDANCE****Independent study with grads/undergraduate**

Jieying Zhu, Ph.D. student, Fall 2019, Monitoring approaches for dynamic networks  
James Whitehurst, undergraduate, Spring 2020, data analytics for yield prediction in the agriculture industry.

**B. OTHER TEACHING ACTIVITIES****1. Curriculum development – Graduate education:**

**High-Dimensional Data Analytics:** Designed and developed a course on high dimensional data analytics with applications in healthcare and manufacturing.

**2. Teaching**

Instructor in ISE at the University of Florida

ESI4313: *Two sections of Operations Research II*, Spring 2020

Instructor in ISyE at Georgia Institute of Technology

ISyE3039: *Methods for Quality Improvement*, Spring 2019 (COA: 4.7/5)

ISyE2028: *Basic Statistical Methods* (3 sessions), ISyE, Spring 2018  
 ISyE6739: *Statistical Methods* (3 sessions), ISyE, Spring 2018  
 ISyE3039: *Methods for Quality Improvement* (4 sessions), ISyE, Fall 2017 and Fall 2018

Instructor in Math department in Southern Illinois University Edwardsville

College Algebra, Department of Mathematics and Statistics, Spring 2012  
 Differential Equations Lab, Department of Mathematics and Statistics, Fall 2011

Graduate Teaching Assistant, Georgia Institute of Technology

ISyE3038: *Methods for Quality Improvement* (4.63/5.0), ISyE, Fall 2017  
*Six Sigma*, ISyE, Spring 2017  
 ISyE6404: *Nonparametric Statistics* (4.31/5.0), ISyE, Fall 2015

## **PUBLICATIONS**

---

### **Refereed Journal Papers** (accepted or published)

1. Ebrahimi, S., Reisi Gahrooei, M., Mankad, S., Paynabar, K. (2020), Monitoring financial networks with online Hurdle models, Accepted in *IISE Transactions*.
2. Reisi Gahrooei, M., Yan, H., Paynabar K., Shi, J. (2020), Multiple tensor-on-tensor regression: An approach for modeling processes with heterogeneous sources of data. Accepted for publication in *Technometrics*.  
  
*(This paper is the winner of the SAS Data Mining Best Paper Award, INFORMS, 2018)*
3. Reisi Gahrooei, M., Paynabar, K., Yan, H. (2020). Discussion on active learning methods for manifold data, accepted in *Journal of the Spanish Society of Statistics and Operations Research* (invited)
4. Reisi Gahrooei, M., Paynabar K., Pacella, M., Colosimo, B. (2019), An adaptive fused sampling approach of high-accuracy data in the presence of low-accuracy data. *IISE Transactions*: 7:1-14.  
  
*(This paper was a finalist for Best Student Paper Award in the Industrial and Systems Engineering Conference in the Quality Control and Reliability Engineering (QCRE) division, 2018)*
5. Reisi Gahrooei, M., Paynabar, K. (2018). Change detection in a dynamic stream of attributed networks. *Journal of Quality Technology*: 50(4):418-30  
  
*(Selected for presentation in the JQT session at 2017 INFORMS Annual Meeting)*
6. Reisi Gahrooei, M., Paynabar K., Pacella, M., Shi, J. (2018) Process modeling and prediction with large number of high-dimensional variables using functional regression. *In press, IEEE Transactions on Automation Science and Engineering*.
7. Gorgannejad S, Reisi Gahrooei M, Paynabar K, Neu RW (2019). Quantitative prediction of the aged state of Ni-base superalloys using PCA and tensor regression. *Acta Materialia*:165:259-69.  
  
*(This paper is the recipient of the best poster award at the Career, Research, and Innovation Development Conference (CRIDC) at Georgia Tech, 2018)*
8. Reisi Gahrooei, M., Zhang, Y., Ashuri, B., Augenbroe, G. (2016). Timing residential photovoltaic investments in the presence of demand uncertainties. *Journal of Sustainable Cities and Society* 20:109-123.
9. Reisi Gahrooei, M, Work, D. (2015). Inferring traffic signal phases from turning movement counters using hidden Markov models. *Journal of IEEE Transactions on Intelligent Transportation Systems*, 16(1):91-101.

*Other Published Refereed Journal Papers (papers before joining the Ph.D. program)*

10. Ledzewicz, U., Schättler, H., Reisi Gahrooi, M., Dehkordi SM. (2013). On the MTD paradigm and optimal control for multi-drug cancer chemotherapy. *Journal of Mathematical Biosciences and Engineering*, 10(3):803-819.
11. Fries, R., Reisi Gahrooei, M., Chowdhury, M., Conway, A. (2012). Meeting privacy challenges while advancing intelligent transportation systems, *Journal of Transportation Research Part C*, 25:34-45.
12. Fries, R., Chowdhury, M., Dunning, A., Reisi Gahrooei, M (2010). Evaluating real time parking information: Case study of a university campus. *Transportation Research Record, Journal of Transportation Research Board*.

#### **Refereed Journal Papers** (under review/revision)

13. Wang, F., Reisi Gahrooei, M, Zhong, Z, Shi, J (2020), An Augmented regression model for tensors with missing values, to be submitted to *Journal of Quality Technology*.

#### **Refereed Conference Papers** (published in proceeding)

- C1. Reisi Gahrooei, M., Mahmoudi, B., Paynabar, K. Seizure prediction in epileptic rats using multiresolution analysis, Accepted for presentation in *40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, July 2018.
- C2. Reisi Gahrooei, M., Work, D. Estimating traffic signal phases from turning movement counters. *IEEE Conference on Intelligent Transportation Systems*, April 2013
- C3. Schättler, H., Ledzewicz, U., Reisi Gahrooei, M., Mahmoudian, S. A geometric analysis of bang-bang extremals in optimal control problems for combination cancer chemotherapy. Proceeding to the *51st IEEE Conference on Decision and Control*, Hawaii, 2012.

### **INVITED PRESENTATIONS**

---

1. From data fusion to computer design of experiment: Adaptive approach for sampling high accuracy data. *INFORMS 2018 Annual Meeting*, Phoenix, AZ.
2. When are markets out of control? Monitoring financial networks with online Hurdle models, *INFORMS 2018 Annual Meeting*, Phoenix, AZ.
3. Multiple tensor-on-tensor approach for modeling of a process with heterogeneous data. *INFORMS 2018 Annual Meeting*, Phoenix, AZ.
4. An adaptive approach for fusion of high-accuracy with low-accuracy data, QCRE best student paper session, *IISE 2018 Annual Meeting*, Orlando, FL.
5. Modeling and monitoring of dynamic networks with abrupt changes. *IISE 2018 Annual meeting*, Orlando, FL.
6. Change detection in a dynamic stream of attributed networks, *INFORMS 2017 Annual Meeting*, Houston, TX.
7. Process modeling and prediction with high-dimensional variables using functional regression, *INFORMS 2017 Annual Meeting*, Houston, TX.
8. Monitoring of dynamic sequence of networks, *INFORMS 2016 Annual Meeting*, Nashville, TN.

### **SERVICE**

---

#### **A. PROFESSIONAL CONTRIBUTIONS**

##### Conference session organization

- Chair and organizer of a session on “data analytics for systems improvement” *IISE Annual conference*, New Orleans, LA, May 2020

- Chair and organizer of a session on “High-dimensional data analytics and its application in system informatics” *INFORMS 2019 Annual Meeting*, Seattle, WA, Oct. 2019.
- Chair and organizer of a session on “High-dimensional data analytics and its application in system informatics” *INFORMS 2018 Annual Meeting*, Phoenix, AZ, Nov. 2018.

#### Refereeing for Journals:

- *Journal of Applied Statistics, Technometrics, IEEE T-ASE, Journal of Quality Technology, IIE Transactions, IEEE Sensors Letters, Quality Engineering, Data Mining and Knowledge Discovery*

Membership: Member of Institute for Operations Research and the Management Sciences (INFORMS), Quality, Statistics, and Reliability and Data mining section of INFORMS, Institute of Industrial and Systems Engineers (IISE).

## **B. CAMPUS CONTRIBUTIONS**

- 1- Committee member of masters of data analytics for college of engineering, Fall 2019-present
- 2- Applied OR/ data analytics search committee for ISE, Fall 2019-present
- 3- Graduate committee, ISE, Fall 2019-present
- 4- PhD Thesis committee:
  - A. Yanan Yu (ISE, Fall 2019)
  - B. Bijan Taslimi (ISE, Fall 2019)
  - C. Seonho Park (ISE, Fall 2019)

## **GRANTS AND CONTRACTS**

---

1. Collaborative Research: A Dynamic Disruption Prediction System for Transportation Networks. Source: NSF; PI: Reisi Gahrooei; Amount: 243,016; Date: Oct 2020-Sep 2023.
2. Multimodal-data Fusion-based Predictive Models for Agricultural Applications. Source: UF Informatics Institute Seed Award; PI: Reisi Gahrooei. Amount: 29,979; Date: June 2020-June 2021.
3. Real-time Data-driven Analysis of Economic Impacts of COVID-19 in Florida. Source: UF Informatics Institute; PI: Reisi Gahrooei. Date: June 2020-Nov 2020.
4. Phase-change detection through dynamic subspace learning in heterogeneous time-series, Source: ISE CRSF seed fund; PI: Reisi Gahrooei; Amount: 9,990; Date: 01/16/2020 – 10/15/2020
5. Human trafficking demand reduction strategies through network analytics and simulation modeling; Source: ISE CRSF seed fund; PI: Alvarado (50%), Co-PI: Reisi Gahrooei (50%); Amount: 10,000; Date: 01/16/2020 – 10/15/2020

## **SELECTED HONORS AND AWARDS**

---

- Winner of the best paper award in SAS Data Mining Best Paper competition, INFORMS (2018).
- Finalist for best student paper award in the Industrial and Systems Engineering Conference in the Quality Control and Reliability Engineering (QCRE) division (2018).
- Best poster award at The Career, Research, and Innovation Development Conference (CRIDC) at Georgia Tech (2018) for the paper: Characterizing the aged state of Ni-based Superalloys based on process variables using PCA and tensor regression.
- Recipient of the high impact project from Illinois department of transportation for project ICT-R27-90 (2013).
- Outstanding student award, Department of Mathematics and Statistics, Southern Illinois University (2011).
- Recipient of the Research Grants for Graduate Students (RGGGS), Southern Illinois University (2011).

## Catia S. Silva

Lecturer · Electrical and Computer Engineering · University of Florida ·  
(352) 727-0657 · [catiaspsilva@ece.ufl.edu](mailto:catiaspsilva@ece.ufl.edu)

### A. PROFESSIONAL PREPARATION

| <u>University</u>     | <u>Location</u> | <u>Major</u>                        | <u>Degree &amp; Year</u> |
|-----------------------|-----------------|-------------------------------------|--------------------------|
| University of Porto   | Porto, Portugal | Mathematics                         | B.S. 2010                |
| University of Porto   | Porto, Portugal | Biomedical Engineering              | M.S. 2012                |
| University of Florida | Gainesville, FL | Electrical and Computer Engineering | M.S. 2015                |
| University of Florida | Gainesville, FL | Electrical and Computer Engineering | Ph.D. 2018               |

### B. APPOINTMENTS

|                            |   |
|----------------------------|---|
| <b>Jul. 2019 - Present</b> | <b>Lecturer, Electrical and Computer Engineering, University of Florida, Gainesville, FL</b>  |
| Jun. 2018 – Jul. 2019      | Research Scientist, Aventusoft LLC, Boca Raton, FL  |
| Jan. 2018 – May 2018       | Instructor, University of Florida, Gainesville, FL  |
| Aug. 2013 – May 2018       | Graduate Research Assistant, Computational NeuroEngineering Laboratory, University of Florida, Gainesville, FL                                |
| Jan. 2012 – June 2013      | Research Scientist, Power and Energy Unit, INESC TEC, Porto, Portugal   |
| Sep. 2010 – Jan. 2012      | Graduate Research Assistant, Automatic computer-based Diagnosis system for Dermoscopy Images Laboratory, University of Porto, Porto, Portugal |

### C. RELEVANT PUBLICATIONS

1. C.S. Silva, A. Keil & J. C. Principe, “A novel methodology to quantify dense EEG in cognitive tasks” IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Mar. 2017. DOI: [10.1109/ICASSP.2017.7952595](https://doi.org/10.1109/ICASSP.2017.7952595)
2. C. S. Silva, M. K. Hazrati, A. Keil & J. C. Principe, “Quantification of neural functional connectivity during an active avoidance task” IEEE International Conference on Engineering in Medicine and Biology Society (EMBC), Aug. 2016. DOI: [10.1109/EMBC.2016.7590800](https://doi.org/10.1109/EMBC.2016.7590800)

3. R. J. Bessa, A. Trindade, C. S. Silva & V. Miranda, "Probabilistic solar power forecasting in smart grids using distributed information. International Journal of Electrical Power & Energy Systems, vol. 72, pp. 16-23, Nov. 2015. DOI: [10.1016/j.ijepes.2015.02.006](https://doi.org/10.1016/j.ijepes.2015.02.006)
4. R. J. Bessa, A. Trindade, A. Monteiro, C. S. Silva & V. Miranda, "Solar power forecasting in smart grids using distributed information". Power Systems Computation Conference, Feb. 2015. DOI: [10.1109/PSCC.2014.7038462](https://doi.org/10.1109/PSCC.2014.7038462)
5. C. S. Silva, A. R. S. Marçal, T. Mendonça & J. Rozeira, "Evaluation of the Menzies Method potential for automatic dermoscopic image analysis". Conference on Computational Modeling of Objects Presented in Images: Fundamentals, Methods and Applications, 3<sup>rd</sup> edition, Sep. 2012. DOI: [10.1201/b12753-19](https://doi.org/10.1201/b12753-19)

#### **D. SYNERGISTIC ACTIVITIES**

1. Educational Service: Currently teaching undergraduate and graduate level courses for introductory and fundamental concepts in Machine Learning, and undergraduate level data science course. These courses include in-class participation activities as well as group activities, promoting student leadership skills and student learning styles.
2. Educational Outreach: Aided in the design and coursework material development of a new undergraduate course "Data Science for ECE". This course will become the foundational required course for Electrical Engineers willing to pursue a wide range of EE studies including a potential Machine Learning track. This course is completely offered in IPython environment, providing the data science material but also Python programming experience.
3. Professional Development supported by the CITT institute at the University of Florida.  
 Certificates: (1) Great Online Teaching Certificate, (2) Great Teaching Certificate, (3) Great Teaching for New Faculty Certificate, (4) Utilizing Active Learning to Enhance Student Success  
 Other Activities: (1) Creating Online Experiential Learning, (2) Great Teaching with Vulnerable Storytelling, (3) Asynchronous Discussions for Remote Learning.
4. Service: Serving as a Faculty mentor for the University Multicultural Mentor Program (UMMP) at the University of Florida, 2020-present.



**Michael R Tonks, Ph.D.**

Associate Professor  
 Department of Materials Science and Engineering  
 University of Florida  
 158 Rhines Hall  
 Gainesville, FL 32611

Phone: (352) 846-3779; Email: michael.tonks@ufl.edu

**Education and Training:**

| Institution                                | Major/Area             | Degree | Year |
|--|------------------------|--------|------|
| Brigham Young University                   | Mechanical Engineering | B.S.   | 2001 |
| Brigham Young University                   | Mechanical Engineering | M.S.   | 2002 |
| University of Illinois in Urbana/Champaign | Mechanical Engineering | Ph.D.  | 2008 |

**Research and Professional Experience:**

2017-present Associate Professor, University of Florida

- Modeling fuel and cladding performance using MARMOT and BISON.
- Applying modeling and simulation to assist in the evaluation of accident tolerant reactor fuel concepts, including UO<sub>2</sub> with additives, U<sub>3</sub>Si<sub>2</sub> and SiC cladding.
- Investigating the performance thermal protection systems for reentry vehicles

2015-2017 Assistant Professor, Pennsylvania State University

- Used BISON and MARMOT to model nuclear material performance
- Simulated the impact of surface roughness on wetting behavior
- Modeled the thermal behavior of CERMET fuels for nuclear thermal protection

2014-2015 Group lead, Idaho National Laboratory

- Led seven full time staff in the microstructure science and engineering group
- Led MARMOT development
- Simulated the coevolution of microstructure and properties of nuclear materials

2009-2014 Staff Scientist, Idaho National Laboratory

- Created the mesoscale MARMOT nuclear materials tool
- Created the phase field module and developed the tensor mechanics module in the MOOSE
- Simulated the coevolution of microstructure and properties of nuclear materials framework

2008-2009 Postdoctoral researcher, Idaho National Laboratory

- Simulated the impact of fission gas bubble formation on macroscale fuel performance using concurrent multiscale modeling
- Developed a model of the impact of elastic deformation on grain growth

**Ten relevant publications:**

- [1] Greenquist, M.R. Tonks, Y. Zhang, Analysis of the impact of fuel microstructure on irradiation-enhanced densification using grand potential simulations, *Annals of Nuclear Energy*. (2020) *In press*.
- [2] K. Shrestha, T. Yao, J. Lian, D. Antonio, M. Sessim, M.R. Tonks, K. Gofryk, The grain-size effect on thermal conductivity of uranium dioxide, *Journal of Applied Physics*. 126 (2019) 125116. <https://doi.org/10.1063/1.5116372>.
- [3] Aitkaliyeva, C.A. Adkins, J. Hirschhorn, C. McKinney, M.R. Tonks, F.G. Di Lemma, Microstructural characterization of the as-cast and annealed Pu-10Zr alloy, *Journal of Nuclear Materials*. 523 (2019) 80–90. <https://doi.org/10.1016/j.jnucmat.2019.05.051>.

- [4] A.T. Motta, L. Capolungo, L.-Q. Chen, M.N. Cinbiz, M.R. Daymond, D.A. Koss, E. Lacroix, G. Pastore, P.-C.A. Simon, M.R. Tonks, B.D. Wirth, M.A. Zikry, Hydrogen in zirconium alloys: A review, *Journal of Nuclear Materials*. 518 (2019) 440–460. <https://doi.org/10.1016/j.jnucmat.2019.02.042>.
- [5] M.R. Tonks, D. Andersson, S.R. Phillpot, Y. Zhang, R. Williamson, C.R. Stanek, B.P. Uberuaga, S.L. Hayes, Mechanistic materials modeling for nuclear fuel performance, *Annals of Nuclear Energy*. 105 (2017) 11–24. <https://doi.org/10.1016/j.anucene.2017.03.005>.
- [6] L. Zhao, P. Chakraborty, M.R. Tonks, I. Szlufarska, On the plastic driving force of grain boundary migration: A fully coupled phase field and crystal plasticity model, *Computational Materials Science*. 128 (2017) 320–330. <https://doi.org/10.1016/j.commatsci.2016.11.044>.
- [7] M.R. Tonks, X.-Y. Liu, D. Andersson, D. Perez, A. Chernatynskiy, G. Pastore, C.R. Stanek, R. Williamson, Development of a multiscale thermal conductivity model for fission gas in UO<sub>2</sub>, *Journal of Nuclear Materials*. 469 (2016) 89–98. <https://doi.org/10.1016/j.jnucmat.2015.11.042>.
- [8] J.D. Hales, M.R. Tonks, K. Chockalingam, D.M. Perez, S.R. Novascone, B.W. Spencer, R.L. Williamson, Asymptotic expansion homogenization for multiscale nuclear fuel analysis, *Computational Materials Science*. 99 (2015) 290–297. <https://doi.org/10.1016/j.commatsci.2014.12.039>.
- [9] R.L. Williamson, J.D. Hales, S.R. Novascone, M.R. Tonks, D.R. Gaston, C.J. Permann, D. Andrs, R.C. Martineau, Multidimensional multiphysics simulation of nuclear fuel behavior, *Journal of Nuclear Materials*. 423 (2012) 149–163. <https://doi.org/10.1016/j.jnucmat.2012.01.012>.
- [10] M.R. Tonks, D. Gaston, P.C. Millett, D. Andrs, P. Talbot, An object-oriented finite element framework for multiphysics phase field simulations, *Computational Materials Science*. 51 (2012) 20–29. <https://doi.org/10.1016/j.commatsci.2011.07.028>.

### Patents, Copyrights, and Software Systems

- Original creator of the MARMOT tool in August, 2009.

### Synergistic Activities:

- MARMOT Development Team Leader, Aug 2009 to Aug 2015, lead development of the MARMOT mesoscale computational nuclear material tool as part of the Nuclear Energy Advanced Modeling and Simulation Program's Fuels Product Line.
- NEAMS Work Package Manager, Aug 2013 to Aug 2015, managed INL's lower length-scale model development package in the DOE Nuclear Energy Advanced Modeling and Simulation Program's Fuels Product Line.
- PI of INL Laboratory Directed R&D (LDRD) project, June 2013 to Aug 2015, lead team of experimentalists and modelers to develop a fundamental model of hydride formation and reorientation in pure zirconium and zirconium alloys.
- Chair of the TMS Nuclear Materials Committee, 2019 - Present
- Honors and awards:
  - 2017: Presidential Early Career Award for Scientists and Engineers
  - 2015: ANS Materials Science and Technology Division Special Achievement Award
  - 2014: Idaho National Laboratory Early Career Exceptional Achievement Award, US DOE Nuclear Energy Advanced Modeling and Simulation Program Excellence Award, TMS SMD Young Leader Professional Development Award.

## NSF BIOGRAPHICAL SKETCH

NAME: Zare, Alina

ORCID: 0000-0002-4847-7604

POSITION TITLE & INSTITUTION: Professor, University of Florida

### (a) PROFESSIONAL PREPARATION

| INSTITUTION           | LOCATION        | MAJOR / AREA OF STUDY                        | DEGREE<br>(if applicable) | YEAR<br>YYYY |
|-----------------------|-----------------|--|---------------------------|--------------|
| University of Florida | Gainesville, FL | Computer Engineering                         | BENG                      | 2003         |
| University of Florida | Gainesville, FL | Computer Engineering                         | MS                        | 2008         |
| University of Florida | Gainesville, FL | Computer & Information Science & Engineering | Ph.D.                     | 2008         |

### (b) APPOINTMENTS

|                |  |
|----------------|--|
| 2020 - present | Professor, University of Florida, Electrical and Computer Engineering, Gainesville, FL               |
| 2016 - 2020    | Associate Professor, University of Florida, Electrical and Computer Engineering, Gainesville, FL     |
| 2016 - 2016    | Associate Professor, University of Missouri, Electrical and Computer Engineering, Columbia, Missouri |
| 2010 - 2016    | Assistant Professor, University of Missouri, Electrical and Computer Engineering, Columbia, Missouri |

### (c) PRODUCTS

#### Products Most Closely Related to the Proposed Project

- Weinstein B, Marconi S, Bohlman S, Zare A, White E. Individual Tree-Crown Detection in RGB Imagery Using Semi-Supervised Deep Learning Neural Networks. Remote Sensing. 2019 June 01; 11(11):1309-. Available from: <https://www.mdpi.com/2072-4292/11/11/1309> DOI: 10.3390/rs11111309
- Zou S, Gader P, Zare A. Hyperspectral tree crown classification using the multiple instance adaptive cosine estimator. [Preprint]. 2018 July 26. DOI: 10.7287/peerj.preprints.27052
- Xiaoxiao Du, Alina Zare. Multiresolution Multimodal Sensor Fusion for Remote Sensing Data With Label Uncertainty. IEEE Transactions on Geoscience and Remote Sensing. 2020 April; 58(4):2755--2769. Available from: <https://doi.org/10.1109/TGRS.2019.2955320> DOI: 10.1109/TGRS.2019.2955320
- Xiaoxiao Du, Alina Zare. Multiple Instance Choquet Integral Classifier Fusion and Regression for Remote Sensing Applications. IEEE Transactions on Geoscience and Remote Sensing. 2019 May; 57(5):2741--2753. Available from: <https://doi.org/10.1109/TGRS.2018.2876687> DOI: 10.1109/TGRS.2018.2876687

5. Jiao C, Chen C, McGarvey R, Bohlman S, Jiao L, Zare A. Multiple instance hybrid estimator for hyperspectral target characterization and sub-pixel target detection. *ISPRS Journal of Photogrammetry and Remote Sensing*. 2018 December; 146:235-250. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S0924271618302314> DOI: 10.1016/j.isprsjprs.2018.08.012

### **Other Significant Products, Whether or Not Related to the Proposed Project**

1. Zare A, Gader Senior P. Sparsity promoting iterated constrained endmember detection with integrated band selection. 2007 IEEE International Geoscience and Remote Sensing Symposium. 2007 IEEE International Geoscience and Remote Sensing Symposium; ; Barcelona, Spain. IEEE; c2007. Available from: <http://ieeexplore.ieee.org/document/4423737/> DOI: 10.1109/IGARSS.2007.4423737
2. Jiao C, Su B, Lyons P, Zare A, Ho K, Skubic M. Multiple Instance Dictionary Learning for Beat-to-Beat Heart Rate Monitoring From Ballistocardiograms. *IEEE Transactions on Biomedical Engineering*. 2018 November; 65(11):2634-2648. Available from: <https://ieeexplore.ieee.org/document/8307229/> DOI: 10.1109/TBME.2018.2812602
3. Zare A, Bolton J, Gader P, Schatten M. Vegetation Mapping for Landmine Detection Using Long-Wave Hyperspectral Imagery. *IEEE Transactions on Geoscience and Remote Sensing*. 2008 January; 46(1):172-178. Available from: <http://ieeexplore.ieee.org/document/4389068/> DOI: 10.1109/TGRS.2007.906438
4. Zare A, Gader P, Casella G. Sampling Piecewise Convex Unmixing and Endmember Extraction. *IEEE Transactions on Geoscience and Remote Sensing*. 2013 March; 51(3):1655-1665. Available from: <http://ieeexplore.ieee.org/document/6297456/> DOI: 10.1109/TGRS.2012.2207905
5. Zare A, Jiao C, Glenn T. Discriminative Multiple Instance Hyperspectral Target Characterization. *IEEE Transactions on Pattern Analysis and Machine Intelligence*. 2018 October 1; 40(10):2342-2354. Available from: <https://ieeexplore.ieee.org/document/8051065/> DOI: 10.1109/TPAMI.2017.2756632

### **(d) SYNERGISTIC ACTIVITIES**

1. Program Chair for Phenome 2020 (as well as other relevant workshops and conferences).
2. Revised undergraduate and graduate level Supervised Machine Learning and Unsupervised Machine Learning courses to be student-centered active learning courses which include in-class individual and group activities.
3. Developed a set of outreach activities for incoming college freshman and high school students to teach remote sensing and spectroscopy concepts. These outreach activities will be implemented at the University of Florida through the STEPUP and Freshman Bridge programs.
4. Participated in technology transfer to multiple government defense agencies by providing programs, papers, and presentations.

# XILEI ZHAO

Department of Civil and Coastal Engineering, University of Florida

504 Weil Hall, 1949 Stadium Rd, Gainesville, FL 32611

o Phone: +01 (352) 294-7159 o Email: xilei.zhao@essie.ufl.edu

o Webpage: <https://faculty.eng.ufl.edu/sermos-lab>

## EDUCATION

---

- |   |                     |
|---|---------------------|
| <b>Johns Hopkins University</b>                                   | Baltimore, Maryland |
| · Ph.D. in Civil Engineering (Concentration: Systems Engineering) | 2017                |
| · M.S.E. in Applied Mathematics and Statistics                    | 2017                |
| · M.S.E. in Civil Engineering                                     | 2016                |
| <b>Southeast University</b>                                       | Nanjing, China      |
| · B.E. in Civil Engineering                                       | 2013                |

## PROFESSIONAL EXPERIENCE

---

- |   |           |
|---|-----------|
| <b>University of Florida (UF)</b>   | 2019-     |
| · Assistant Professor, Department of Civil and Coastal Engineering                    |           |
| · Affiliate Assistant Professor, Department of Industrial and System Engineering      |           |
| · Affiliate Faculty, University of Florida Transportation Institute                   |           |
| <b>Georgia Institute of Technology (GT)</b>   | 2018-2019 |
| · Postdoctoral Fellow, H. Milton Stewart School of Industrial and Systems Engineering |           |
| <b>University of Michigan (UM)</b>  | 2017-2018 |
| · Research Fellow, Department of Industrial and Operations Engineering                |           |
| <b>Johns Hopkins University (JHU)</b>   | 2014-2017 |
| · Research Assistant & Teaching Assistant, Department of Civil Engineering            |           |

## PUBLICATIONS & PATENT

---

(Note: The student supervised by me is underlined.)

### Work in Progress

- [5] Xu, Y., Yan, X., Sisiopiku, V. P., Merlin, L. A., Xing, F., & **Zhao, X.** Micromobility trip origin and destination inference using General Bikeshare Feed Specification (GBFS) data. (Under review)
- [4] Yuan, F., **Zhao, X.**, Liu, R., & Li, M. Supporting crisis response with Internet of Things (IoT) based systems. (Under review)
- [3] Merlin, L., Yan, X., Xu, Y., & **Zhao, X.** A segment-level model of shared scooter origins and destinations. (Under revision)

[2] Xu, Y., Yan, X., Liu, X., & **Zhao, X.** Identifying key factors associated with ride-splitting adoption rate and modeling their nonlinear relationships. (Under revision)

[1] Yan, X., **Zhao, X.**, Han, Y., Van Hentenryck, P., & Dillahun, T. Mobility-on-demand versus fixed-route transit systems: An evaluation of traveler preferences in low-income communities. (Under review)

### Published/In Press

[23] Zhang, X., & **Zhao, X.** (2021). A clustering-aided ensemble method for predicting ridesourcing demand in Chicago. Proceedings of Transportation Research Board 100th Annual Meeting. (Accepted)

[22] Xu, Y., Yan, X., Sisiopiku, V. P., Merlin, L. A., Xing, F., & **Zhao, X.** (2021). Micromobility trip origin and destination inference using General Bikeshare Feed Specification (GBFS) data. Proceedings of Transportation Research Board 100th Annual Meeting. (Accepted)

[21] Noei, S., & **Zhao, X.** (2021). Longitudinal dynamics in traffic microsimulation. Proceedings of Transportation Research Board 100th Annual Meeting. (Accepted)

[20] **Zhao, X.**, Wang, X., Yan, X., & Cao, Z. (2021). Assessing preference heterogeneity for Mobility-on-Demand transit service in low-income communities: A latent segmentation based decision tree method. Proceedings of Transportation Research Board 100th Annual Meeting. (Accepted)

[19] Wang, X., Yan, X., **Zhao, X.**, & Cao, Z. (2021). Identifying latent shared mobility preference segments in low-resourced communities: Ride-hailing, fixed-route bus, and mobility-on-demand transit. Proceedings of Transportation Research Board 100th Annual Meeting. (Accepted)

[18] **Zhao, X.**, Lovreglio, R., Kuligowski, E., & Nilsson, D. (2020). Using Artificial Intelligence for safe and effective wildfire evacuations. Fire Technology.

[17] **Zhao, X.**, Yan, X., Yu, A., & Van Hentenryck, P. (2020). Prediction and behavioral analysis of travel mode choice: A comparison of machine learning and logit models. Travel Behaviour and Society, 20, 22-35.

[16] Yan, X., Liu, X., & **Zhao, X.** (2020). Using machine learning for direct demand modeling of ridesourcing services in Chicago. Journal of Transport Geography, 83, 102661.

[15] **Zhao, X.**, Lovreglio, R., & Nilsson, D. (2020). Modelling and interpreting pre-evacuation decision-making using machine learning. Automation in Construction, 113, 103140.

[14] **Zhao, X.**, Zhou, Z., Yan, X., & Van Hentenryck, P. (2020). Distilling black-box travel mode choice model for behavioral interpretation. Proceedings of Transportation Research Board 99th Annual Meeting, Washington, DC.

[13] **Zhao, X.**, Liu, X., & Yan, X. (2020). Modeling demand for ridesourcing services in the City of Chicago: A direct demand machine learning approach. Proceedings of Transportation Research Board 99th Annual Meeting, Washington, DC.

[12] Liu, X., Van Hentenryck, P., & **Zhao, X.** (2020). Optimization models for estimating transit network origin-destination flows with AVL/APC data. Proceedings of Transportation Research Board 99th Annual Meeting, Washington, DC.

[11] Yan, X., Levine, J., & **Zhao, X.** (2019). Integrating ridesourcing services with public transit: An evaluation of traveler responses combining revealed and stated preference data. Transportation Research Part C: Emerging Technologies, 105, 683-696.

- [10] **Zhao, X.**, Miers, I., Green, M., & Mitrani-Reiser, J. (2019). Modeling the cybersecurity of hospitals in natural and man-made hazards. *Sustainable and Resilient Infrastructure*, 4(1), 36-49.
- [9] **Zhao, X.**, & Spall, J. C. (2019). An integrated model for transportation networks and travel time reliability. *Proceedings of Transportation Research Board 98th Annual Meeting*, Washington, DC.
- [8] **Zhao, X.**, & Spall, J. C. (2018). A Markovian framework for modeling dynamic network traffic. *Proceedings of American Control Conference (ACC)*, 6616-6621, Milwaukee, WI.
- [7] **Zhao, X.**, Chodur, G., Biehl, E., Neff, R., & Mitrani-Reiser, J. (2018). Food security in the aftermath of a seismic event. *Proceedings of 11th National Conference on Earthquake Engineering (11NCEE)*, Los Angeles, CA.
- [6] Chodur, G., **Zhao, X.**, Biehl, E., Mitrani-Reiser, J., & Neff, R. (2018). Assessing food system vulnerabilities: A fault tree modeling approach. *BMC Public Health*, 18(1), 817.
- [5] Links, J. M., Schwartz, B. S., Lin, S., Kanarek, N., Mitrani-Reiser, J., Sell, T. K., Boddie, C. R., Ward, D., Slempe, C., Burhans, R., Gill, K., Igusa, T., **Zhao, X.**, Aguirre, B., Trainor, J., Nigg, J., Inglesby, T., Carbone, E., & Kendra, J. M. (2017). COPEWELL: A conceptual framework and system dynamics model for predicting community functioning and resilience after disasters. *Disaster Medicine and Public Health Preparedness*, 12(1), 127-137.
- [4] **Zhao, X.**, & Mitrani-Reiser, J. (2017). Developing a multi-hazard weighting scheme for community resilience indicators. *Proceedings of the 16th World Conference on Earthquake Engineering (16WCEE)*, Santiago, Chile.
- [3] Lu, J., Dong, X., **Zhao, X.**, Wu, X., & Shu, G. (2017). Form-finding analysis of a new type of cable-strut tensile structures generated by semi-regular tensegrity. *Advances in Structural Engineering*, 20(5), 772–783.
- [2] **Zhao, X.**, & Spall, J. C. (2016). Estimating travel time in urban traffic by modeling transportation network systems with binary subsystems. *Proceedings of American Control Conference (ACC)*, 803–808, Boston, MA.
- [1] Lu, J., Wu, X., **Zhao, X.**, & Shu, G. (2015). Form finding analysis of cable-strut tensile dome based on tensegrity torus. *Engineering Mechanics*, 32(6), 66–71. (in Chinese)

### Patent

- [1] Lu, J., **Zhao, X.**, Shu, G., Qiang, H., Cao, X., & Wang, Z., “A new type of cable-strut tensile roof system and its construction method.” China Patent No.201310237601.X, issued October 23, 2013.

### TEACHING

- 
- |   |                       |
|---|-----------------------|
| <b>Instructor</b> for CGN 4905/6905 Transportation Data Analytics at UF   | Fall 2020             |
| <b>Instructor</b> for CGN 6905 Machine Learning Applications in Civil Engineering at UF<br>Enrollment: 29; Course evaluation: 4.47/5.00 | Spring 2020           |
| <b>Lecturer</b> for Two-Day Workshop of Applying Statistical Methods in Traffic Modeling at Morgan State University                     | Apr 2018              |
| <b>Teaching Assistant</b> for EN.560.220 Civil Engineering Analysis at JHU  | Fall 2014 & Fall 2015 |

### MENTORSHIP

|   |           |
|---|-----------|
| <b>Yiming Xu</b> , UF Ph.D. Student in Civil and Coastal Engineering  | 2019-     |
| <b>Mudit Paliwal</b> , UF M.S. Student in Industrial and Systems Engineering  | 2020-     |
| <b>Zhuoxuan Cao</b> , UF M.S. Student in Civil and Coastal Engineering  | 2020-     |
| <b>Ningzhe Xu</b> , UF M.S. Student in Civil and Coastal Engineering  | 2020-     |
| <b>Kaitai Yang</b> , UF M.S. Student in Civil and Coastal Engineering   | 2020-     |
| <b>Shirin Noei</b> , UF Ph.D. Student in Civil and Coastal Engineering<br>· Current position: Research Assistant Professor at Tennessee Tech University | 2019-2020 |
| <b>Xinyu Liu</b> , GT Ph.D. Student in Industrial and Systems Engineering   | 2018-2019 |
| <b>Alan Yu</b> , UM BS'20 in Computer Science   | 2018-2018 |
| <b>Jacob Ketterer</b> , UM BS'18 in Computer Science  | 2017-2018 |

## GRANTS

---

### Pending Support

#### **Scalable charging and rebalancing solutions for shared connected and automated vehicles**

- **X. Zhao (Co-PI)**, X. Sun (PI)
- NSF S&CC Planning Grant; May, 2020 - May, 2021; \$150,000

#### **Real-time management of micromobility services for smart cities**

- **X. Zhao (PI)**, X. Sun (Co-PI), Y. Yang (Co-PI)
- UF Research Artificial Intelligence Research Catalyst Fund; Jan, 2021 - Dec, 2021; \$50,000

#### **Smart multimodal mobility options for the town of Miami Lakes to link housing, jobs, and activity centers**

- **X. Zhao (Co-PI)**, S. Srinivasan (PI), L. Elefteriadou (Co-PI), L. Du (Co-PI), R. Steiner (Co-PI)
- NSF Civic Innovation Challenge Track A; Dec, 2020 - Mar, 2021; \$49,965

### Current Support

#### **Analyzing wildfire evacuation behavior with GPS data**

- **X. Zhao (PI)**, R. Lovreglio (Co-PI), D. Nilsson (Co-PI), K. Nguyen (Co-PI), E. Kuligowski (Senior Personnel)
- NIST; Sept, 2020 - Aug, 2021; \$99,999

#### **Mobility-on-Demand transit for smart and sustainable cities**

- **X. Zhao (PI)**, N. Kaza (Co-PI), N. Kittner (Co-PI), N., McDonald (Co-PI), V. Sisiopiku (Co-PI), X. Jin (Co-PI), J. LaMondia (Co-PI), X. Yan (Co-PI), A. Broaddus (Co-PI)
- USDOT – STRIDE UTC; Sept, 2019 - Aug, 2020; \$413,430

#### **Modeling of evacuation behavior in the 2019 Kincade Fire, Sonoma County, California**

- **X. Zhao (PI)**, R. Lovreglio (Senior Personnel), E. Kuligowski (Senior Personnel), D. Nilsson (Senior Personnel)



- Natural Hazards Center Quick Response Research Grant Program; Feb, 2020 - Dec, 2020; \$3,000

### **Community-driven evacuation planning and scheduling**

- **X. Zhao (PI)**, R. Liu (Co-PI)
- Florida Sea Grant Program Development Funding; Feb, 2020 - Feb, 2021; \$10,000

### **An IoT-enabled critical infrastructure information network for a future resilient city**

- **X. Zhao (Co-PI)**, R. Liu (PI), X. Yu (Co-PI)
- The Florida Institute for Built Environment Resilience (FIBER) Florida Resilient Cities Program; Jan, 2020 - Jun, 2020; \$6,667

### **Micro-mobility as a solution to reduce urban traffic congestion**

- **X. Zhao (PI)**, V. Sisiopiku (Co-PI), R. Steiner (Co-PI)
- USDOT – STRIDE UTC; Nov, 2019 - Apr, 2020; \$134,759

### **Previous Support**

#### **Mobilizing accessibility in Detroit and Ypsilanti**

Jan, 2018 - Dec, 2018

- **X. Zhao (Co-PI)**, P. Van Hentenryck (PI), X. Yan (Co-PI)
- Total award: \$50,000
- The UM Poverty Solutions' Project Development Funding Program

#### **Modeling and estimation in urban transportation networks**

Sept, 2017 - Aug, 2018

- **X. Zhao (UM Sponsor PI)**, J. Spall (APL PI), E. Kemajou-Brown (MSU PI)
- UM subcontract: \$6,000; Total award: \$100,000
- The Johns Hopkins University Applied Physics Laboratory (APL) IRAD Program

## **INVITED TALKS**

---

[19] Introduction to data analytics for transportation. UFTI Webinar, 2020. (Co-presented with Xiang Yan and Sanjay Ranka)

[18] Stakeholder engagement: Experience with industry partners. The STRIDE webinar on stakeholder engagement, 2020.

[17] Autonomous vehicles and micromobility in a disruptive society and transportation system. The 5th Conference on Sustainable Urban Mobility, 2020. (Co-presented with Lily Elefteriadou and Lili Du)

[16] The need for transportation resilience in the era of climate change. The 10th Annual WTS Symposium, Gainesville, FL, 2020.

[15] Data science applications in transportation. Seminar hosted by WTS UF Student Chapter and ITE UF Student Chapter, Gainesville, FL, 2019.

[14] Data science applications in transportation. The Industrial and Systems Engineering (ISE) Seminar Series, Gainesville, FL, 2019.

[13] Data-driven resilience modeling for critical infrastructure systems. The 3rd Civil Engineering Overseas Chinese Scholars Forum, Nanjing, China, 2019.

- [12] Extracting behavioral insights from black-box models. The 2nd Workshop on Machine Learning Methods to Calibrate Integrated Land Use-Transport Models, Atlanta, GA, 2019.
- [11] Travel behavior modeling using machine learning. Department of Civil and Environmental Engineering, Princeton University, 2019.
- [10] Travel behavior modeling using machine learning. Department of Civil and Environmental Engineering, University of California, Los Angeles (UCLA), 2019.
- [9] Travel behavior modeling using machine learning. Department of Civil and Coastal Engineering, University of Florida, 2019.
- [8] Travel behavior modeling using machine learning. School of Environmental, Civil, Agricultural and Mechanical Engineering, University of Georgia, 2019.
- [7] Travel behavior modeling using machine learning. Department of Civil Engineering, University of Texas, Arlington, 2019.
- [6] Travel behavior modeling using machine learning. Department of Civil and Environmental Engineering, Temple University, 2019.
- [5] Travel behavior modeling using machine learning. Department of Civil and Environmental Engineering and Construction, University of Nevada, Las Vegas, 2019.
- [4] Travel behavior modeling using machine learning. Algorithms, Combinatorics and Optimization (ACO) Student Seminar, Georgia Institute of Technology, 2019.
- [3] Multi-scale community resilience modeling for hazards. Department of Civil and Environmental Engineering, University of Maryland, College Park, 2017.
- [2] Simulation as tool for urban traffic dynamics under hazards. Student Seminar of Applied Mathematics and Statistics, Johns Hopkins University, 2016.
- [1] Estimating travel time in urban traffic by modeling transportation network systems with binary subsystems. Research Expo of Civil Engineering, Johns Hopkins University, 2015.

## CONFERENCE PRESENTATIONS

---

- [14] Can micromobility reduce urban traffic congestion? The 2020 ITE Annual Meeting, 2020. (Co-presented with Virginia Sisiopiku)
- [13] Applying machine learning to investigate human behavior in disasters. The 2020 Natural Hazards Center Researchers Meeting, 2020.
- [12] Distilling black-box travel mode choice model for behavioral interpretation. The Transportation Research Board (TRB) 99th Annual Meeting, Washington, DC, 2019.
- [11] Mobility-on-demand v.s. fixed-route transit systems: An evaluation of traveler preferences in low-income communities. The 2019 INFORMS Annual Meeting, Seattle, WA, 2019.
- [10] Community-driven evacuation planning, scheduling, and recovery. Georgia Sea Grant Research Symposium, Brunswick, GA, 2019.
- [9] An integrated model for transportation networks and travel time reliability. Transportation Research Board 98th Annual Meeting, Washington, DC, 2019.

- [8] A Markovian framework for modeling dynamic network traffic. The American Control Conference, Milwaukee, WI, 2018.
- [7] Food security in the aftermath of a seismic event. The 11th National Conference on Earthquake Engineering, Los Angeles, CA, 2018.
- [6] A case study for redesigning public transit with shared mobility. Data Science for Transportation Research Challenge Symposium, Michigan Institute for Data Science, University of Michigan, 2018.
- [5] Identification of dynamic traffic network: A statistical approach. The Joint Statistical Meetings 2017, Baltimore, MD, 2017.
- [4] Developing a multi-hazard weighting scheme for community resilience indicators. The 16th World Conference on Earthquake Engineering, Santiago, Chile, 2017.
- [3] Estimating travel time in urban traffic by modeling transportation network systems with binary sub-systems. The American Control Conference 2016, Boston, MA, 2016.
- [2] Modeling the interactions between cyber capabilities and critical infrastructure-based societal system functioning in disasters. The Probabilistic Mechanics and Reliability Conference 2016, Nashville, TN, 2016.
- [1] Agent-based modeling and simulation for urban search and rescue after earthquakes. The 67th Annual Meeting of the Earthquake Engineering Research Institute: Old Cities, New Earthquakes, San Fransisco, CA, 2015.

## HONORS & AWARDS

---

|  |                     |
|--|---------------------|
| The 11th National Conference on Earthquake Engineering Registration Grant<br>· Earthquake Engineering Research Institute               | Jun 2018            |
| Applied Mathematics and Statistics Award for Outstanding Master's Research<br>· Johns Hopkins University                               | May 2017            |
| Duncan Fund for the Advancement of Research in Statistics Travel Award<br>· Johns Hopkins University                                   | Jul 2016 & Jul 2017 |
| Whiting School of Engineering Centennial Fellowship<br>· Johns Hopkins University  | 2013 - 2014         |
| First Prize<br>· The 2013 National Civil Engineering Innovation Award for Undergraduate Students (China)                               | Nov 2013            |
| Best Creativity Award & My Favorite Program<br>· The 6th National College Innovation and Entrepreneurship Annual Meeting (China)       | Nov 2013            |
| Second Prize of Teaching Competition<br>· New Oriental Education and Technology Group Inc. (Nanjing Division of China)                 | Dec 2012            |
| Excellent Paper Award & Second Prize of Mutual Support Structure Contest<br>· The 2nd National Civil Engineering Student Forum (China) | Aug 2012            |
| Excellence Award of Structure Innovation Competition<br>· Southeast University   | Apr 2012            |

- Model Student of Academic Records Nov 2011  
 · Maintained ranking of top 5% in the first two academic years at the Southeast University
- Jin Baozhen Alumni Scholarship Apr 2011  
 · Southeast University

## SERVICE AND PROFESSIONAL AFFILIATIONS

---

### Journal/Conference Referee

- *Transportation Research Part A: Policy and Practice*
- *Transportation Research Part C: Emerging Technologies*
- *Transportation Research Part D: Transport and Environment*
- *Transportation Research Part E: Logistics and Transportation Review*
- *Natural Hazards Review*
- *Fire Technology*
- *Safety Science*
- *Journal of Building Engineering*
- *IEEE Transactions on Automatic Control*
- *IEEE Transactions on Intelligent Transportation Systems*
- *IEEE Conference on Decision and Control*
- *American Control Conference*
- *TRB Annual Meetings and Transportation Research Record*
- *International Journal of Sustainable Transportation*

**Steering Committee Member** of the Interstate Transit Research Symposium (2020-)

**Organizer** of the 6th Annual Resiliency Simulation and Workshop at TRB 2021 (2020-)

**Committee Member** of new M.S. degree in AI Systems, UF (2020-)

**Organizer** of 2020 UN International Women and Girls in Science Day at UF (2020)

**Committee Member** of new M.S. degree in Applied Data Science, UF (2019-2020)

**Supervisor**, Undergraduate Senior Design (Project: Redesigning Public Transit Systems for Atlanta), GT (2018-2019)

**Poster Judge**, Undergraduate Research Opportunity Program Symposium, UM (2018)

**Mentor**, Undergraduate Research Opportunity Program, UM (2018-2018)

**President** (2016-2017) and **Vice President** (2015-2016), Earthquake Engineering Research Institute's Student Chapter at JHU

**Academic Coordinator**, Civil Engineering Graduate Board, JHU (2016-2017)

**Organizer**, Emergency Preparedness Patch Program for Girl Scouts, JHU (2016)



**New Master of Science (M.S.) degree with a major in Genetics and Genomics**

Description: The College of Medicine seeks to create a Master of Science (M.S.) degree with a major in Genetics and Genomics.

Board of Governors, State University System of Florida  
**REQUEST TO OFFER A NEW DEGREE PROGRAM**  
 In Accordance with BOG Regulation 8.011  
 (Please do not revise this proposal format without prior approval from Board staff)

University of Florida  
**Institution Submitting Proposal**

Fall 2023  
**Proposed Implementation Term**

Graduate School Multi-college (CALs, CLAS, COM)  
**Name of College(s) or School(s)**

(Dept. in which Genetics Institute members hold appointments)  
**Name of Department(s)/Division(s)**

Genetics and genomics  
**Academic Specialty or Field**

Master of Science with a major in Genetics & Genomics  
**Complete Name of Degree**

26.0801  
**Proposed CIP Code (2020 CIP)**

The submission of this proposal constitutes a commitment by the university that, if the proposal is approved, the necessary financial resources and the criteria for establishing new programs have been met prior to the initiation of the program.

\_\_\_\_\_  
**Date Approved by the University Board of Trustees**

\_\_\_\_\_  
**President's Signature** **Date**

\_\_\_\_\_  
**Board of Trustees Chair's Signature** **Date**

\_\_\_\_\_  
**Provost's Signature** **Date**

**PROJECTED ENROLLMENTS AND PROGRAM COSTS**

Provide headcount (HC) and full-time equivalent (FTE) student estimates for Years 1 through 5. HC and FTE estimates should be identical to those in Appendix A – Table 1. Indicate the program costs for the first and the fifth years of implementation as shown in the appropriate columns in Appendix A – Table 3A or 3B. Calculate an Educational and General (E&G) cost per FTE for Years 1 and 5 by dividing total E&G by FTE.

| <b>Implementation<br/>Timeframe</b> | <b>HC</b> | <b>FTE</b> | <b>E&amp;G<br/>Cost<br/>per FTE</b> | <b>E&amp;G<br/>Funds</b> | <b>Contract<br/>&amp; Grants<br/>Funds</b> | <b>Auxiliary/<br/>Philanthropy<br/>Funds</b> | <b>Total Cost</b> |
|-------------------------------------|-----------|------------|-------------------------------------|--------------------------|--|--|-------------------|
| <b>Year 1</b>                       | 5         | 3.75       | \$0                                 | \$0                      | \$0  | \$0  | \$0               |
| <b>Year 2</b>                       | 7         | 5.25       |                                     |                          |  |  |                   |
| <b>Year 3</b>                       | 11        | 8.25       |                                     |                          |  |  |                   |
| <b>Year 4</b>                       | 15        | 11.25      |                                     |                          |  |  |                   |
| <b>Year 5</b>                       | 20        | 15         | \$0                                 | \$0                      | \$0  | \$0  | \$0               |

## **Additional Required Signatures**

I confirm that I have reviewed and approved Need and Demand Section III.F. of this proposal.

\_\_\_\_\_  
Signature of Equal Opportunity Officer

\_\_\_\_\_  
Date

I confirm that I have reviewed and approved Non-Faculty Resources Section VIII.A. and VIII.B. of this proposal.

\_\_\_\_\_  
Signature of Library Dean/Director

\_\_\_\_\_  
Date

## Introduction

### I. Program Description and Relationship to System-Level Goals

#### A. Describe within a few paragraphs the proposed program under consideration, and its overall purpose, including:

- **degree level(s)**
- **majors, concentrations, tracks, specializations, or areas of emphasis**
- **total number of credit hours**
- **possible career outcomes for each major (provide additional details on meeting workforce need in Section III)**

The University of Florida is proposing a Master of Science (M.S.) degree with a major in Genetics & Genomics. No concentrations, tracks, or specializations are planned, and the non-thesis degree program will be 33 credit hours. A successful Ph.D. program in Genetics & Genomics began in 2006.

Genetics & Genomics is one of the fastest-growing scientific fields with both basic and translational aspects relevant to technological and medical breakthroughs. UF is well-positioned to offer a cost-effective STEM M.S. degree that provides courses in the cutting-edge fields of bioinformatics, computational biology, genomic technology, and artificial intelligence/machine learning, as well as hands-on research experience. As more students earn B.S. degrees, given the increased national support for college education, an M.S. degree will often be needed to remain competitive in the job market and for further graduate education. Students with B.S. degrees in the biological sciences from multiple departments at UF, e.g., Biology, Psychology, Statistics, Zoology, will be prepared for the M.S. degree in Genetics & Genomics.

Successful completion of the M.S. degree will prepare students for an immediate job as a Genetic counselor (SOC 29-9092), Biological Science Teacher, Postsecondary (SOC 25-1042), Biological Technician (SOC 19-4021), or Biological Scientist, All Other (SOC 19-1029). A Genetics & Genomics M.S. will also increase the student's competitiveness for medical school or continuance to the Ph.D. in Genetics & Genomics or a related field.

#### B. If the proposed program qualifies as a Program of Strategic Emphasis, as described in the Florida Board of Governors 2025 System Strategic Plan, please indicate the category.

- **Critical Workforce**
  - Education
  - Health
  - Gap Analysis
- **Economic Development**
  - Global Competitiveness
  - Science, Technology, Engineering, and Math (STEM)
- Does not qualify as a Program of Strategic Emphasis.**



## **II. Strategic Plan Alignment, Projected Benefits, and Institutional Mission and Strength**

### **A. Describe how the proposed program directly or indirectly supports the following:**

- **System strategic planning goals (see link to the 2025 System Strategic Plan on the [New Program Proposals & Resources](#) webpage)**
- **the institution's mission**
- **the institution's strategic plan**

The M.S. degree in Genetics & Genomics (G&G) program directly supports the main SUS goal of increased production of graduates in STEM fields. Genetics & Genomics is one of the most diverse and applicable of the STEM fields and includes all of the fields listed in the first sentence of the 2025 System Strategic Plan - “To be truly great, Florida must have well-educated citizens who are working in diverse fields, from science and engineering to medicine and bioscience to computer science.”

The University of Florida (UF) has made a commitment to STEM fields and specifically to artificial intelligence (AI) and machine learning. The proposed program includes training in bioinformatics, biostatistics, precision medicine, computer science, and machine learning in a 33-credit/4-semester M.S. degree program.

There is a state and national need for more workers trained in STEM fields, and particularly in the high-tech fields of genomic technology, bioinformatics, and computational biology. The M.S. with a major in Genetics & Genomics will address this need by providing two semesters of rigorous coursework in genomics, bioinformatics, and quantitative analysis of ‘big data’ and two semesters of professional development, including hands-on research experience in a UF laboratory or in a biotechnology company in the Gainesville area.

### **B. Describe how the proposed program specifically relates to existing institutional strengths. This can include:**

- **existing related academic programs**
- **existing programs of strategic emphasis**
- **institutes and centers**
- **other strengths of the institution**

The proposed M.S. degree in G&G program builds on the success of the G&G Ph.D. program that began in 2006. Students in the M.S. in G&G program will take the same classes as G&G Ph.D. students in Year 1 Fall and Spring, so no new courses are required for the M.S. degree. The Ph.D. and M.S. degree programs with a major in G&G are collaborative and interdisciplinary in nature so these programs are managed by the UF Genetics Institute (UFGI). UFGI is a multi-college institution with over 200 faculty from more than 50 departments in nine colleges and three centers/institutes at UF. Thus, there is a wealth of faculty, courses, and laboratories to support the M.S. in G&G degree. The strengths and benefits of the M.S. program to UF and the UFGI will be synergistic.

### **c. Provide the date the pre-proposal was presented to the Council of Academic**

**Vice Presidents Academic Program Coordination (CAVP ACG). Specify whether any concerns were raised, and, if so, provide a narrative explaining how each concern has been or will be addressed.**

The pre-proposal was presented and approved at the CAVP review group at the Sept 7, 2022, meeting. There were no concerns.

- D. In the table below, provide a detailed overview and narrative of the institutional planning and approval process leading up to the submission of this proposal to the Board office. Include a chronology of all activities, providing the names and positions of both university personnel and external individuals who participated in these activities.**
- If the proposed program is a bachelor's level, provide the date the program was entered into the APPRiSe system, and, if applicable, provide narrative responding to any comments received from APPRiSe.**
  - If the proposed program is a doctoral-level program, provide the date(s) of the external consultant's review in the planning table. Include the external consultant's report and the institution's responses to the report as Appendix B.**

**Planning Process**

In 2016, a 10-year review of the Genetics & Genomics Ph.D. program recommended expanding the Genetics & Genomics Program to include an M.S. degree option. With the hiring of program specialist Dr. Brittany Hollister in 2019, the appointment of Dr. Connie Mulligan as G&G Ph.D. program coordinator in 2021, and the appointment of Dr. Tom Burris as Director of the UFGI in 2021, a pre-proposal for an M.S. in G&G was submitted in November 2021. The pre-proposal was approved in Sept 2022, and the full proposal was submitted in November 2022.

| <b>Date</b> | <b>Participants</b>  | <b>Planning Activity Description</b>   |
|-------------|--|--|
| Summer 2021 | Genetics Institute Director Dr. Tom Burris<br><br>Genetics & Genomics Graduate Program Coordinator Dr. Connie Mulligan<br><br>Academic program specialist Dr. Brittany Hollister | Based on the 10-year review of the Genetics & Genomics Ph.D. program, we began developing a new M.S. degree in Genetics & Genomics |
| Sept 2021   | Dean of College of Medicine Dr. Colleen Koch   | COM Dean supports the M.S. degree proposal   |
| Nov 2021    | Genetics & Genomics Graduate Program Coordinator Dr. Connie Mulligan   | Pre-proposal is submitted to the Office of the Provost   |
| Sept 2022   | Assistant Provost Dr. Cheryl Gater   | Pre-proposal is approved by the Council of Academic Vice Presidents  |

**E. Provide a timetable of key events necessary for the implementation of the proposed program following approval of the program by the Board office or the Board of Governors, as appropriate, and the program has been added to the State University System Academic Degree Program Inventory.**

### Events Leading to Implementation

All necessary faculty and courses already exist, and recruitment activities for the M.S. degree will build on existing recruitment activities for the G&G Ph.D. program. Nothing else is necessary to implement the M.S. in G&G degree.

| Date         | Implementation Activity                           |
|--------------|---|
| Fall 2022    | Degree Proposal submitted for university approval |
| June 8, 2023 | Board of Trustee Approval                         |
| Summer 2023  | Recruitment and admission of first M.S. cohort    |
| Fall 2023    | Projected implementation of degree program        |

## Institutional and State Level Accountability

### III. Need and Demand

**A. Describe the workforce need for the proposed program. The response should, at a minimum, include the following:**

- **current state workforce data as provided by Florida’s Department of Economic Opportunity**
- **current national workforce data as provided by the U.S. Department of Labor’s Bureau of Labor Statistics**
- **requests for the proposed program from agencies or industries in your service area**
- **any specific needs for research and service that the program would fulfill**

There is a great national and state need for students with MS-level training in Genetics & Genomics. The following table reports data from the FL DEO showing predicted growth of 7.0 – 23.8% for the four occupations specifically associated with the Genetics & Genomics CIP (highlighted in yellow) and positive growth for all related occupations. Furthermore, the table shows that FL DEO recommends M.S. degrees for six of the occupations, in contrast to the US BLS, that only recommends M.S. degrees for two of the occupations, reflecting the FL DEO’s understanding of the value of an M.S. STEM degree.

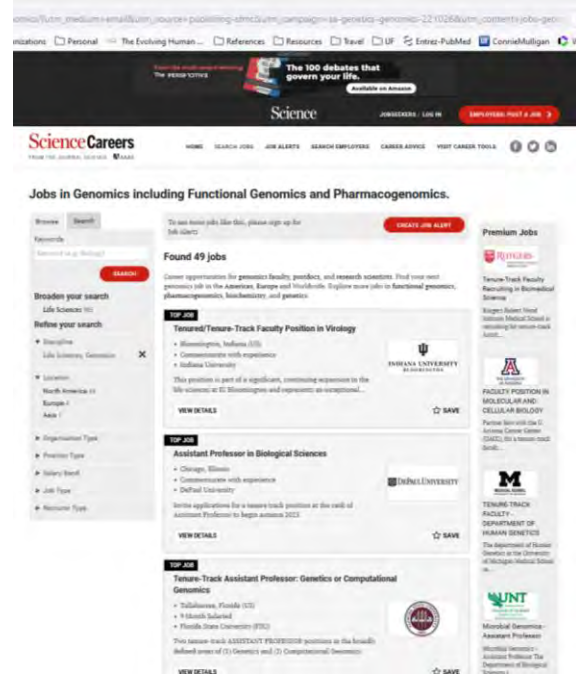
| SOC Code | SOC Title                          | 2022  | 2030  | Percent Growth | Total Job Openings | FL DEO | US BLS |
|----------|------------------------------------|-------|-------|----------------|--------------------|--------|--------|
| 19-1022  | Microbiologists                    | 293   | 327   | 11.6           | 249                | M+     | B      |
| 19-1023  | Zoologists and Wildlife Biologists | 1,628 | 1,719 | 5.6            | 1,250              | B      | B      |
| 19-1029  | Biological Scientists, All Other   | 1,979 | 2,118 | 7.0            | 1,558              | B      | B      |
| 19-1031  | Conservation Scientists            | 603   | 652   | 8.1            | 504                | B      | B      |

|         |   |        |        |      |        |    |   |
|---------|---|--------|--------|------|--------|----|---|
| 19-1032 | Foresters   | 595    | 615    | 3.4  | 459    | B  | B |
| 19-1041 | Epidemiologists   | 139    | 161    | 15.8 | 107    | M+ | M |
| 19-1042 | Medical Scientists, Except Epidemiologists                                      | 4,922  | 5,717  | 16.2 | 3,810  | M+ | D |
| 19-1099 | Life Scientists, All Other  | 92     | 102    | 10.9 | 65     | B  | B |
| 19-4021 | Biological Technicians  | 3,722  | 4,284  | 15.1 | 4,528  | A  | B |
| 25-1042 | Biological Science Teachers, Postsecondary<br>Forestry and Conservation Science | 1,665  | 1,936  | 16.3 | 1,588  | M+ | D |
| 25-1043 | Teachers, Postsecondary   | 91     | 103    | 13.2 | 83     | B  | D |
| 25-1071 | Health Specialties Teachers, Postsecondary                                      | 11,611 | 14,614 | 25.9 | 12,597 | M+ | D |
| 29-9092 | Genetic Counselors  | 84     | 104    | 23.8 | 73     | M+ | M |

In the following table, data from the US BLS that are specific for Florida support the predicted growth of Genetics & Genomics related occupations and demonstrate high annual wages starting at \$40,000-\$77,878.

| CIP2020Code | CIP2020Title          | SOC2018Code | SOC2018Title                                  | FL<br>Employment<br>Change,<br>2021-2029 | FL 2020 Median<br>Annual Wage |
|-------------|-----------------------|-------------|---|--|-------------------------------|
| 26.0801     | Genetics,<br>General. | 19-1029     | Biological Scientists, All Other              | 7.30%                                    | \$ 70,450                     |
|             |                       | 19-4021     | Biological Technicians                        | 14.20%                                   | \$ 40,851                     |
|             |                       | 25-1042     | Biological Science Teachers,<br>Postsecondary | 13.60%                                   | \$ 77,878                     |
|             |                       | 29-9092     | Genetic Counselors                            | NOT<br>AVAILABLE                         | NOT<br>AVAILABLE              |

Finally, students with an M.S. with a major in Genetics & Genomics will be more competitive than students with only a B.S. degree for admission into Ph.D. programs. There are a wealth of jobs for students who complete a Ph.D. in Genetics and Genomics, as evidenced by the October 31, 2022 listing in Science Careers (the journal for the American Association for the Advancement of Science) showing 73 advertised jobs in [Genetics](#) and 49 advertised jobs in [Functional Genomics and Pharmacogenomics](#) (see screenshots below).



**B. Provide and describe data that support student demand for the proposed program. Include questions asked, results, and other communications with prospective students.**

Recognizing the critical and unmet need for training in this cutting-edge area, the University of Florida established an intercollegiate Ph.D. Program in Genetics & Genomics in 2006. The ten-year review of this program obtained input from program students, graduate faculty affiliated with the program, and an external advisory board (see excerpts below and see pages 6-8 of the full report in Table 2 – Appendix I). All three groups recommended expanding the Genetics & Genomics Program to include an M.S. degree option. The benefits of such a program are clear – there is considerable demand for individuals trained in genomic technology, bioinformatics, and computational biology, as provided by the current Genetics & Genomics curriculum, and this demand will grow as data-intensive practices make further inroads into medicine and agriculture. We anticipate high demand for an M.S. degree in Genetics & Genomics.

Excerpts from a 10-year review of the G&G Ph.D. program:

- Student evaluation summary - There was broad support for the development of a Master of Science program to complement the existing Ph.D. program. Some G&G students wish to obtain an M.S. degree in addition to their Ph.D. Others see the inclusion of the M.S. as a way to expand the census of students in the program and strengthen the overall intellectual environment.
- Faculty evaluation summary - The committee recommended adding an M.S. program noting that the focus of the G&G Program on computational approaches if translated to an M.S. program, would fill an important workforce niche. The increasing impact of Big Data on genetics would make such trainees particularly competitive for jobs in both academia and industry. To facilitate the creation of such a program, the committee also suggested exploring the possibility of moving some of the curricula to an online delivery format.
- External advisory board evaluation - Strong employment opportunities for graduates with an M.S. focused on bioinformatics and computational biology

- Final review recommendation - Reviewers were uniform in their recommendation of expanding the G&G Program to include an M.S. degree option. The benefits of such a program are clear—there is considerable demand for individuals with training in bioinformatics and computational biology, and this demand is likely to grow as data-intensive practices make further inroads into medicine and agriculture.

**C. Complete Appendix A – Table 1 (1-A for undergraduate and 1-B for graduate) with projected student headcount (HC) and full-time equivalents (FTE).**

- Undergraduate FTE must be calculated based on 30 credit hours per year
- Graduate FTE must be calculated based on 24 credit hours per year

**In the space below, provide an explanation for the enrollment projections. If students within the institution are expected to change academic programs to enroll in the proposed program, describe the anticipated enrollment shifts and impact on enrollment in other programs.**

Enrollment is expected to start at 5 students in Year 1 and modestly increase to 20 students in Year 5. Enrollment may increase faster since STEM M.S. programs are becoming more popular with students so they can maintain competitiveness in the job market as well as apply to graduate and medical school—if enrollment exceeds our predictions, we will add sections of the existing courses to accommodate more students. We anticipate that the majority of students will come from B.S. degree programs at UF or other public universities in Florida. We expect a small number of out-of-state students and international students. We do not anticipate any students transferring from other graduate programs at UF.

**D. Describe the anticipated benefit of the proposed program to the university, local community, and the state. Benefits of the program should be described both quantitatively and qualitatively.**

University: UF has made a commitment to STEM fields and specifically to artificial intelligence (AI) and machine learning. The proposed program supports UF goals since the curriculum includes training in bioinformatics, biostatistics, precision medicine, computer science, and machine learning.

Local community: The high caliber and entrepreneurship of UF faculty have created a dynamic atmosphere to market UF-developed technologies at Sid Martin Biotech and other start-up companies in the area. M.S. students will be a benefit to these companies while they are in the program through internships in the 3<sup>rd</sup> the 4<sup>th</sup> semesters (see letters of support in Table 1 – Appendix D) and as trained employees after they graduate.

State of Florida: There is a great state need for students with M.S.-level training in Genetics & Genomics that will be provided by the proposed degree program. The table in Section III. A reports data from the FL DEO shows predicted growth of 7.0–23.8% for the four occupations specifically associated with the Genetics & Genomics CIP and positive growth for all related occupations.

- E. If other public or private institutions in Florida have similar programs that exist at the four- or six-digit CIP Code or in other CIP Codes where 60 percent of the coursework is comparable, identify the institution(s) and geographic location(s). Summarize the outcome(s) of communication with appropriate personnel (e.g., department chairs, program coordinators, deans) at those institutions regarding the potential impact on their enrollment and opportunities for possible collaboration in the areas of instruction and research.**

There is currently no M.S. degree under this CIP code within the SUS.

- F. Describe the process for the recruitment and retention of a diverse student body in the proposed program. If the proposed program substantially duplicates a program at FAMU or FIU, provide a letter of support from the impacted institution(s) addressing how the program will impact the institution's ability to attract students of races different from that which is predominant on the FAMU or FIU campus. The institution's Equal Opportunity Officer shall review this Section of the proposal, sign, and date the additional signatures page to indicate that all requirements of this section have been completed.**

The proposed program does not substantially duplicate programs at FAMU or FIU. We plan to build on the success of the current Genetics & Genomics Ph.D. program in recruiting and retaining a diverse student body. The Genetics & Genomics Ph.D. program has traditionally enrolled and graduated a highly diverse student body. Since the program began in 2006, the gender distribution of graduates is 51% female and 49% male, which is unusually balanced for a STEM field. Counting only US residents, the ethnic distribution of graduates is 39% under-represented minorities (URM; Hispanic/Latino, African American, and American Indian students) and 61% whites. The recent incoming cohorts are as follows: 25% URM in 2019, 50% URM in 2020, 50% URM in 2021, and 75% URM in 2022. Furthermore, in the 16 years since the Ph.D. program started, only a single URM student (<5%) has left the program without a Ph.D.

We also plan to recruit first-generation students. Many students who graduate with a B.S. degree in the biological sciences are not yet competitive for a job in biotechnology or for a Ph.D. program. Many of these students are first-generation students, and we plan to actively recruit for the M.S. degree in G&G.

Establishing an M.S. degree in Genetics & Genomics builds on the success of the current Ph.D. program and will diversify UF's graduate student population.

## IV. Curriculum

- A. Describe all admission standards and all graduation requirements for the program. Hyperlinks to institutional websites may be used to supplement the information provided in this subsection; however, these links may not serve as a standalone response. For graduation requirements, please describe any additional requirements that do not appear in the program of study (e.g., milestones, academic engagement, publication requirements).**

Admission standards for coursework are the same as those for the G&G Ph.D. program: A or B in undergraduate courses in genetics, statistics, and Calculus I is expected. Undergraduate research will strengthen a student's application but is not required. Admission to the University of Florida Graduate School includes submission of undergraduate transcripts, resume or curriculum vitae, and letters of recommendation. The GRE is not required for admission.

The M.S. degree program is based on coursework plus two semesters of GMS 5905 Foundations for a Career in Genetics & Genomics—successful completion of these courses with a minimum GPA of 3.0 is required for the M.S. degree.

Oversight for M.S. students will be at the program level through a supervisory committee that will be chaired by the graduate coordinator. Members of the supervisory committee will include instructors of the first-year courses and other faculty who are involved in graduate student mentoring and education.

- B. Describe the specific expected student learning outcomes associated with the proposed program and include strategies for assessing the proposed program's learning outcomes. If the proposed program is a baccalaureate degree, include a hyperlink to the published Academic Learning Compact and the document itself as Appendix C.**

Student Learning Outcomes:

- Students will acquire expertise in genomics, bioinformatics, biostatistics, precision medicine, computer science, and machine learning as assessed by earning a grade of A or B in the relevant coursework.
- Students will acquire hands-on expertise in generating and analyzing genomic data, including the use of biostatistics, bioinformatics, machine learning, and artificial intelligence techniques, as assessed by earning a grade of A or B in GMS 5905 Foundations for a Career in Genetics & Genomics.

- C. If the proposed program is an AS-to-BS capstone, provide evidence that it adheres to the guidelines approved by the Articulation Coordinating Committee for such programs, as outlined in [State Board of Education Rule 6A-10.024](#). Additionally, please list the prerequisites, if any, and identify the specific AS degrees that may transfer into the proposed program.**

**Not applicable to this program because it is not an AS-to-BS Capstone.**



**D. Describe the curricular framework for the proposed program, including the following information where applicable:**

- **total numbers of semester credit hours for the degree**
- **number of credit hours for each course**
- **required courses, restricted electives, and unrestricted electives**
- **a sequenced course of study for all majors, concentrations, tracks, or areas of emphasis**

The non-thesis M.S. degree consists of 33 letter-graded credits taken over 4 semesters – a sample curriculum is provided below:

**Year 1 Fall:**

- PCB 5065 – Advanced Genetics (4 credits)
- PHC 6052 – Introduction to Biostatistical Methods (3 credits)
- GMS 6221 – Ethics in Genetics (1 credit)
- GMS 6290 – G&G seminar (1 credit)

**Year 1 Spring:**

- GMS 6231 – Genomics and Bioinformatics (3 credits)
- PHC 6088 – Statistical Analysis of Genetic Data (3 credits)
- GMS 6290 – G&G seminar (1 credit)
- GMS 6014 – Applications of Bioinformatics to Genetics (1 credit)
- Elective – 1 of the following 1 credit courses:
  - o GMS 6224 – Foundations in Precision Medicine: Medical Molecular Genetics
  - o PHC 6134 – Foundations in Precision Medicine: Genomic Technologies
  - o PHC 6598 – Foundations in Precision Medicine: Genetic Epidemiology

**Year 1 Summer:**

- GMS 5905 – Special topics in Biomedical Sciences/Foundations for a Career in Genetics & Genomics (we will create new course proposal and allow 6 credits/semester, max of 12 credits) (6 credits)

**Year 2 Fall:**

- GMS 5905 – Special topics in Biomedical Sciences/Foundations for a Career in Genetics & Genomics (we will create new course proposal and allow 6 credits/semester, max of 12 credits) (5 credits)
- GMS 6290 – G&G seminar (1 credit)
- Elective - 1 of the following 3 credit courses or related courses:
  - o BSC 6451 – Computational Tools for Research in Biology
  - o ANG 6532 – Molecular Genetics of Disease
  - o STA 6703 – Statistical Machine Learning
  - o BCH 6415 – Advanced Molecular and Cellular Biology

**Major courses for the M.S. degree in Genetics & Genomics include:**

- PCB 5065 – Advanced Genetics (4 credits)
- GMS 6014 – Applications of Bioinformatics to Genetics (1 credit)
- GMS 5905 – Special topics in Biomedical Sciences/Foundations for a Career in Genetics & Genomics (we will create a new course proposal and allow 6 credits/semester, max of

12 credits) (5-6 credits, taken twice)

Final term enrollment of GMS 6290 will serve as the capstone course and culminating experience for the M.S. degree and will include a final oral comprehensive examination.

Transfer of credits: Only graduate-level work (5000-7999) with a grade of B or better is eligible for transfer. A maximum of 9 transfer credits is allowed, and courses must duplicate the material covered in the M.S. in G&G curriculum. Credits must come from UF or institutions approved by UF. Credits transferred from other institutions are applied towards the degree requirements, but grades earned are not computed in the student's grade point average. Acceptance of transfer of credit requires approval by the Coordinator of the Genetics & Genomics Graduate Program and the Dean of the Graduate School.

### **E. Provide a brief description for each course in the proposed curriculum.**

#### Required Courses:

GMS 5905 Special topics in Biomedical Sciences/Foundations for a Career in Genetics & Genomics is a course designed for G&G M.S. students combining experiential learning, critical thinking, and professional development. The course combines a hands-on internship (in a biotechnology company, core laboratory, or faculty laboratory) with weekly discussions of research progress and professional development activities, including resume and cover letter writing, job searches, and mock interviews.

NOTE: The graduate coordinator will be the instructor of record for this course and will be in charge of assigning a letter grade. The grade will reflect performance in weekly discussions as well as performance during the internship, which will be made in consultation with the internship supervisor. A new course proposal is forthcoming and will allow 6 credits/semester, max of 12 credits.

GMS 6014 Applications of Bioinformatics to Genetics is focused on the storage, retrieval, and analysis of information related to genetics.

GMS 6221 Ethics in Genetics - Ethical issues in human subjects research on genetics as well as the clinical ethical issues, are covered, as are informed consent and confidentiality in genetic testing. Other topics include ethical issues raised by whole genome and exome testing, prenatal genetic diagnosis and selective implantation of embryos, ownership and custody of stored biological samples in genetic testing, and legal and policy responses to genetic discrimination and health disparities.

GMS 6231 Genomics and Bioinformatics – GMS 6231 explores the principles of genomic characterization and bioinformatic analysis of eukaryotes, including an overview of analytical platforms, computational tools, experimental design, analysis methods, and databases used to study DNA sequence, gene expression, and protein levels.

GMS 6290 G&G seminar is a weekly seminar that is required for all G&G Ph.D. and M.S. students. GMS 6290 provides students an opportunity to orally present their research as well as learn about possible careers from professionals in the field of Genetics & Genomics and other

professional development. This course will be taken in the final semester as the capstone course for the M.S degree and will include a final oral comprehensive exam.

PCB 5065 Advanced Genetics - The objective of PCB 5065 is to strengthen the students' comprehension of genetic concepts so that they can apply genetic analysis to their own research problems. PCB 5065 is designed to establish a strong foundation for advanced specialty courses in genetics and to complement advanced courses in molecular biology.

PHC 6052 Introduction to Biostatistical Methods – PHC 6052 is a sophisticated introduction to the concepts and methods of biostatistical data analysis. The topics include descriptive statistics, probability, standard probability distributions, sampling distributions, point and confidence interval estimation, hypothesis testing, power and sample size estimation, one and two-sample parametric and non-parametric methods for analyzing continuous or discrete data, and simple linear regression.

PHC 6088 - Statistical Analysis of Genetic Data covers statistical procedures for genetic studies, including basic population/quantitative genetic concepts, QTL mapping, linkage analysis for human diseases, genome-wide association studies, and the analysis of gene expression data for eQTL analysis. This course emphasizes the statistical theory behind methods for analyzing genetic data and its application in useful software tools.

#### Elective Courses:

ANG 6532 Molecular Genetics of Disease is the only course at UF that focuses exclusively on the genetics of human disease. The availability of whole genome sequences, development of high-throughput sequencing platforms, and public databases of genetic variants have greatly accelerated the discovery of genes involved in disease, leading to breakthroughs in diagnosis and treatment. Students in ANG 6532 will learn about the cause, inheritance, diagnosis, and treatment of specific simple and complex diseases.

BCH 6415 Advanced Molecular and Cell Biology – BCH 6415 is a course on current state-of-the-art aspects of molecular biology that focuses on the current scientific literature on nuclear structure and organization, transcription, RNA processing, protein synthesis, post-translational regulation, DNA replication, DNA repair, and DNA recombination, and experimental approaches to understanding these cellular processes.

BSC 6451 Computational Tools for Research in Biology introduces computational tools for research: Linux command line, Python scripting, and databases. BSC 6451 prepares students to conduct large-scale data analysis on high-performance computing resources.

GMS 6224 Foundations in Precision Medicine: Medical Molecular Genetics focuses on human genetics by providing foundational knowledge related to the human genome structure and organization, the molecular pathogenesis at the gene and chromosome level, and the application of genetic knowledge in modern medicine using real work examples.

PHC 6134 Foundations in Precision Medicine: Genomic Technologies focuses on current developments and emerging trends in genomic testing, clinical and research applications of emerging genomic tests, the role of computing and data science, and applications of bioinformatics in genomics

PHC 6598 Foundations in Precision Medicine: Genetic Epidemiology utilizes specialized molecular and statistical methods to identify genetic factors that might be involved in disease etiology. This course provides exposure to fundamental concepts, terminologies, and principles in human population genetics and molecular biology relevant to understanding genetic epidemiologic approaches.

STA 6703 Statistical Machine Learning - Methodology and application of tools of statistical (machine) learning targeted at graduate students in engineering, applied statistics/biostatistics and quantitative life sciences. Statistical approaches to machine learning are emphasized. Application and the intuition behind statistical methods rather than formal derivations and full mathematical proofs of the procedures are prioritized.

**F. For degree programs in medicine, nursing, and/or allied health sciences, please identify the courses that contain the competencies necessary to meet the requirements identified in [Section 1004.08, Florida Statutes](#). For teacher preparation programs, identify the courses that contain the competencies necessary to meet the requirements outlined in [Section 1004.04, Florida Statutes](#).**

**Not applicable to this program because the program is not a medicine, nursing, allied health sciences, or teacher preparation program.**

**G. Describe any potential impact on related academic programs or departments, such as an increased need for general education or common prerequisite courses or increased need for required or elective courses outside of the proposed academic program. If the proposed program is a collaborative effort between multiple academic departments, colleges, or schools within the institution, provide letters of support or MOUs from each department, college, or school in Appendix D.**

The M.S. degree in G&G is built upon the established curriculum for the Genetics & Genomics Ph.D. program and uses all existing courses. The projected enrollment for the M.S. degree is modest, so we do not anticipate significant impacts on other programs. The UFGI does not have primary faculty, i.e., all faculty in the UFGI have their tenure home in their departments, so all courses are based in other departments (see Table 1 – Appendix D for letters of support from home departments for the required courses).

**H. Identify any established or planned educational sites where the program will be offered or administered. If the proposed program will only be offered or administered at a site(s) other than the main campus, provide a rationale.**

The proposed program will be offered on the main UF campus in Gainesville, FL.

**I. Describe the anticipated mode of delivery for the proposed program (e.g., face-to-face, distance learning, hybrid). If the mode(s) of delivery will require specialized services or additional financial support, please describe the projected costs below and discuss how they are reflected in Appendix A –**

### **Table 3A or 3B.**

The mode of delivery will be face-to-face. No specialized services or additional financial support is required.

- J. Provide a narrative addressing the feasibility of delivering the proposed program through collaboration with other institutions, both public and private. Cite any specific queries made of other institutions with respect to shared courses, distance/distributed learning technologies, and joint-use facilities for research or internships.**

The M.S. degree in G&G does not require any shared courses, shared/distributed learning technologies, or joint-use facilities with other institutions. Although we have not made any inquiries, we are open to the idea of collaborating with other institutions in the state that are interested in our M.S. degree program.

- K. Describe any currently available sites for internship and/or practicum experiences. Describe any plans to seek additional sites in Years 1 through 5.**

**Not applicable to this program because the program does not require internships or practicums.**

Internships are a critical component of the M.S. degree in G&G. Internships are included as a component of GMS 5905 – Special topics in Biomedical Sciences/Foundations for a Career in Genetics & Genomics. A new course proposal will be created (6 credits/semester, max 12 credits, letter-graded; see full course description in Section IV.E.)

Internships will provide hands-on experience in the generation and analyzing genetic data, which will prepare the student for an immediate job as a Genetic counselor (SOC 29-9092), Biological Science Teacher, Postsecondary (SOC 25-1042), Biological Technician (SOC 19-4021), or Biological Scientist, All Other (SOC 19-1029). The internships will also provide needed research experience, and increase the student's competitiveness for medical school or their ability to continue to the Ph.D. in Genetics & Genomics or a related field.

The internships will be hosted in biotechnology companies in the Gainesville area, including Cadre Bioscience, Pelagos Pharmaceutical, Inc, and Rapid Genomics, and in faculty laboratories at UF and UF's core service laboratories at the Interdisciplinary Center for Biotechnology Research or (see letters of support in Table 1 – Appendix D). Additional laboratories at local biotechnology companies and at UF will be added between Years 1 and 5 – we do not anticipate any problems adding new internships since there are 200 faculty associated with the UFGI and dozens of biotechnology companies in the Gainesville area.

## **V. Program Quality Indicators - Reviews and Accreditation**

- A. List all accreditation agencies and learned societies that would be concerned with the proposed program. If the institution intends to seek specialized accreditation for the proposed program, as described in [Board of Governors](#)**

**Regulation 3.006, provide a timeline for seeking specialized accreditation. If specialized accreditation will not be sought, please provide an explanation.**

No specialized accreditation is needed for an M.S. degree in G&G. There is no accreditation agency for genetics and genomics. M.S. graduates will be seeking jobs or applying to medical and doctoral programs, all of which will look for evidence of knowledge and hands-on experience in generating and analyzing genetic and genomic data, which will be provided by the M.S. program.

**B. Identify all internal or external academic program reviews and/or accreditation visits for any degree programs related to the proposed program at the institution, including but not limited to programs within academic unit(s) associated with the proposed degree program. List all recommendations emanating from the reviews and summarize the institution's progress in implementing those recommendations.**

In 2016, there was a 10-year review performed for the BOG for the current G&G Ph.D. program (see Table 2 – Appendix I). One of the main recommendations from the review was to add an M.S. degree to the G&G program, which has resulted in the current M.S. degree proposal.

**C. For all degree programs, discuss how employer-driven or industry-driven competencies were identified and incorporated into the curriculum. Additionally, indicate whether an industry or employer advisory council exists to provide input for curriculum development, student assessment, and academic-force alignment. If an advisory council is not already in place, describe any plans to develop one or other plans to ensure academic-workforce alignment.**

A critical component of the M.S. degree in G&G is the required internships. The willingness of biotechnology companies and university laboratories to host M.S. G&G interns indicates they value the training that will be provided by the M.S. program. As part of the internships, we will solicit feedback from the host laboratories to inquire about additional expertise that would make our M.S. students more competitive, and we will develop 1-credit courses focused on specific genetic data platforms or computational expertise.

## **VI. Faculty Participation**

**A. Use Appendix A – Table 2 to identify existing and anticipated full-time faculty who will participate in the proposed program through Year 5, excluding visiting or adjunct faculty. Include the following information for each faculty member or position in Appendix A – Table 2:**

- the faculty code associated with the source of funding for the position
- faculty member's name
- highest degree held
- academic discipline or specialization
- anticipated participation start date in the proposed program

- **contract status (e.g., tenure, tenure-earning, or multi-year annual [MYA])**
- **contract length in months**
- **percent of annual effort that will support the proposed program (e.g., instruction, advising, supervising)**

**This information should be summarized below in narrative form. Additionally, please provide the curriculum vitae (CV) for each identified faculty member in Appendix E.**

The faculty who will participate in the M.S. degree in G&G consist of the Graduate Coordinator, Program Specialist, and instructors of all required courses for the M.S. degree. On average, these faculty have been associated with the UFGI and the G&G Ph.D. program for more than 7 years, including three faculty who have been associated with both the institute and the Ph.D. program since their inception in 2006. These faculty are all committed to the success of the existing Ph.D. program and the proposed M.S. program.

- B. Provide specific evidence demonstrating that the academic unit(s) associated with the proposed program have been productive in teaching, research, and service. Such evidence may include trends over time for average course load, FTE productivity, student HC in major or service courses, degrees granted, external funding attracted, and other qualitative indicators of excellence (e.g., thesis, dissertation, or research supervision).**

The G&G Ph.D. program was established in 2006 and has graduated a total of 49 Ph.D. students with an average time to graduation of 5 years, 1 month. Two G&G Ph.D. students have been awarded prestigious NSF Graduate Research Fellowships, and two have been awarded highly competitive NIH F32/31 fellowships.

UFGI faculty, with 197 members, are very productive. In 2021-2022, UFGI faculty published 785 articles, filed 66 patents, and were awarded \$73.6 M in research grants. See a list of publications by week at <http://ufgi.ufl.edu/>.

## **VII. Budget**

- A. Use Appendix A – Table 3A or 3B to provide projected costs and associated funding sources for Year 1 and Year 5 of program operation. In narrative form, describe all projected costs and funding sources for the proposed program(s). Data for Year 1 and Year 5 should reflect snapshots in time rather than cumulative costs.**

The curriculum for the M.S. degree in G&G uses existing courses that can accommodate the projected 5-20 M.S. students without any changes. Costs and funding sources in Appendix A – Table 3A reflect the percent effort by the course instructors and the program administrators listed in Table 2 and the fact that none of the instructors are supported by funds from the Genetics Institute.

- B. Use Appendix A – Table 4 to show how existing Education & General (E&G)**

**funds will be reallocated to support the proposed program in Year 1. Describe each funding source identified in Appendix A – Table 4, and provide a justification below for the reallocation of resources. Describe the impact the reallocation of financial resources will have on existing programs, including any possible financial impact of a shift in faculty effort, reallocation of instructional resources, greater use of adjunct faculty and teaching assistants, and explain what steps will be taken to mitigate such impacts.**

No funds will be reallocated for the M.S. degree in G&G. Existing courses can accommodate the projected 5-20 M.S. students without any changes or reallocation of funds.

**C. If the institution intends to operate the program through continuing education, seek approval for market tuition rate, or establish a differentiated graduate-level tuition, as described in [Board of Governors Regulation 8.002](#), provide a rationale and a timeline for seeking Board of Governors' approval.**

**Not applicable to this program because the program will not operate through continuing education, seek approval for market tuition rate, or establish a differentiated graduate-level tuition**

**D. Provide the expected resident and non-resident tuition rate for the proposed program for both resident and non-resident students. The tuition rates should be reported on a per credit hour basis, unless the institution has received approval for a different tuition structure. If the proposed program will operate as a continuing education program per [Board of Governors Regulation 8.002](#), please describe how the tuition amount was calculated and how it is reflected in Appendix A – Table 3B.**

Per UF regulation 3.0375, the following tuition will be charged: \$448.73/credit hour for residents and \$1173.45/credit hour for non-residents (<https://www.fa.ufl.edu/directives/2022-23-academic-year-tuition-and-fees/> )

**E. Describe external resources, both financial and in-kind support, that are available to support the proposed program, and explain how this amount is reflected in Appendix A – Table 3A or 3B.**

No external resources are needed for the M.S. degree in G&G because the curriculum uses existing courses that can accommodate the projected 5-20 M.S. students without any changes.

See Table 1 – Appendix D for letters of support from home departments for the required courses.

## **VIII. Non-Faculty Resources**

**A. Describe library resources currently available to implement and/or sustain the**



proposed program through Year 5 below, including but not limited to the following:

- the total number of volumes and serials available in the discipline and related disciplines
- all major journals that are available to the university's students

**The Library Director must sign the additional signatures page to indicate that they have review Sections VIII.A. and VIII.B.**

There are a total of 33,462 genetics or genomics volumes available to UF students. The 82 available genetics and genomics journals are listed in Table 2 – Appendix J and can also be viewed at <https://guides.uflib.ufl.edu/c.php?g=720884&p=5137438>. The current library liaison for the UFGI, Dr. Aida Miró-Herrans, is a former graduate of the G&G Ph.D. program and has been very supportive of both the Ph.D. program and the proposed M.S. program.

**B. Discuss any additional library resources that are needed to implement and/or sustain the program through Year 5. Describe how those costs are reflected in Appendix A – Table 3A or 3B.**

**Not applicable to this program because no additional library resources are needed to implement or sustain the proposed program.**

**C. Describe any specialized equipment and space currently available to implement and/or sustain the proposed program through Year 5.**

The UF Genetics Institute is housed in the Cancer and Genetics Research Complex, with state-of-the-art research and conference/teaching facilities. These facilities include one dedicated classroom, one large auditorium, 4 conference rooms, 27 faculty research labs, 21 shared research support labs plus equipment (e.g., cold rooms and autoclaves), and 27 faculty offices. All of these resources are available for the M.S. in G&G degree program.

**D. Describe any additional specialized equipment or space that will be needed to implement and/or sustain the proposed program through Year 5. Include any projected Instruction and Research (I&R) costs of additional space in Appendix A – Table 3A or 3B. Costs for new construction should be provided in response to Section X.E. below.**

**Not applicable to this program because no new I&R costs are needed to implement or sustain the program through Year 5**

**E. If a new capital expenditure for instructional or research space is required, indicate where this item appears on the university's fixed capital outlay priority list. Appendix A – Table 3A or 3B includes only I&R costs. If non-I&R costs, such as indirect costs affecting libraries and student services, are expected to increase as a result of the program, describe and estimate those expenses in narrative form below. It is expected that high enrollment programs, in particular, would necessitate increased costs in non-I&R**

**activities.**

**Not applicable to this program because no new capital expenditures are needed to implement or sustain the program through Year 5.**

**F. Describe any additional special categories of resources needed to operate the proposed program through Year 5, such as access to proprietary research facilities, specialized services, or extended travel, and explain how those projected costs of special resources are reflected in Appendix A – Table 3A or 3B.**

**Not applicable to this program because no additional special categories of resources are needed to implement or sustain the program through Year 5.**

**G. Describe fellowships, scholarships, and graduate assistantships to be allocated to the proposed program through Year 5, and explain how those are reflected in Appendix A – Table 3A or 3B.**

**Not applicable to this program because no fellowships, scholarships, and/or graduate assistantships will be allocated to the proposed program through Year 5.**

## IX. Required Appendices

The appendices listed in tables 1 & 2 below are required for all proposed degree programs except where specifically noted. Institutions should check the appropriate box to indicate if a particular appendix is included to ensure all program-specific requirements are met. Institutions may provide additional appendices to supplement the information provided in the proposal and list them in Table 4 below.

**Table 1. Required Appendices by Degree Level**

| Appendix | Appendix Title   | Supplemental Instructions  | Included? Yes/No | Required for Degree Program Level |                     |                        |
|----------|--|--|------------------|-----------------------------------|---------------------|------------------------|
|          |  |  |                  | Bachelors                         | Masters/ Specialist | Doctoral/ Professional |
| A        | Tables 1-4   |  |                  | X                                 | X                   | X                      |
| B        | Consultant's Report and Institutional Response           |  |                  |                                   |                     | X                      |
| C        | Academic Learning Compacts                               | Include a copy of the approved or proposed Academic Learning Compacts for the program  |                  | X                                 |                     |                        |
| D        | Letters of Support or MOU from Other Academic Units      | Required only for programs offered in collaboration with multiple academic units within the institution  |                  | X                                 | X                   | X                      |
| E        | Faculty Curriculum Vitae                                 |  |                  | X                                 | X                   | X                      |
| F        | Common Prerequisite Request Form                         | This form should also be emailed directly to the BOG Director of Articulation prior to submitting the program proposal to the Board office for review. |                  | X                                 |                     |                        |
| G        | Request for Exemption to the 120 Credit Hour Requirement | Required only for baccalaureate degree programs seeking approval to exceed the 120 credit hour requirement   |                  | X                                 |                     |                        |
| H        | Request for Limited Access Status                        | Required only for baccalaureate degree programs seeking approval for limited access status   |                  | X                                 |                     |                        |

**Table 2. Additional Appendices**

| <b>Appendix</b> | <b>Appendix Title</b>                      | <b>Description</b>  |
|-----------------|--|---|
| I               | BOG Review Genetics & Genomics Ph.D.       | 10-year review of Genetics & Genomics Ph.D. program from 2016 |
| J               | Genetics & Genomics journal list, Nov 2022 |   |



**COMMITTEE ON ACADEMIC, FACULTY  
AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC  
COMMUNICATIONS  
ACTION ITEM AFSSPRSC4  
June 8, 2023**

**SUBJECT:** Degree Program Termination

---

**BACKGROUND INFORMATION**

The Board of Governors requires periodic reviews of all academic degree programs to determine whether they remain viable academic offerings. Degree programs that have been inactive or which are not planned to be reactivated must be closed.

The College of the Arts is requesting to terminate the Bachelor of Arts in Art Education (CIP code 13.1302). This program was replaced with a certificate that will fulfill the needs of the students wishing to teach art in the K-12 setting. The last student graduated in 2022. The Faculty Senate approved this request at its January 19, 2023, meeting.

**PROPOSED COMMITTEE ACTION**

The Committee on Academic, Faculty and Student Success, Public Relations and Strategic Communications is asked to approve the above degree program termination for recommendation to the Board of Trustees for approval on the Consent Agenda.

**ADDITIONAL COMMITTEE CONSIDERATIONS**

Board of Governors final approval will be required for termination of all doctoral and professional degree programs only.

---

Supporting Documentation Included: Academic Degree Program Termination Form

Submitted by: Joseph Glover, Provost and Senior Vice President for Academic Affairs

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza "Mori" Hosseini, Chair

---

Ben Sasse, President and Corporate Secretary



Board of Governors, State University System of Florida  
**ACADEMIC DEGREE PROGRAM TERMINATION FORM**  
 In Accordance with BOG Regulation 8.012

**INSTITUTION:** Univeristy of Florida, School of Art + Art History

**PROGRAM NAME:** Art Education

**DEGREE LEVEL(S):** BA **CIP CODE:** 13.1302  
 (B., M., Ph.D., Ed.D., etc.) (Classification of Instructional Programs)

**ANTICIPATED TERMINATION TERM:** Fall 2023  
 (First term when no new students will be accepted into the program)

**ANTICIPATED PHASE-OUT TERM:** Fall 2023  
 (First term when no student data will be reported for this program)

*Please use this form for academic program termination. The form should be approved by the University Board of Trustees (UBOT) prior to submission to the Board of Governors, State University System of Florida for consideration. Please fill out this form completely for each program to be terminated in order for your request to be processed as quickly as possible. Attach additional pages as necessary to provide a complete response. In the case of baccalaureate or master's degree programs, the UBOT may approve termination in accordance with BOG Regulation 8.012, and submit this form to the Board of Governors, Office of Academic and Student Affairs. For doctoral level programs, please submit this form with all appropriate signatures for Board of Governor's consideration. The issues outlined below should be examined by the UBOT when approving program terminations.*

**1. Provide a narrative rationale for the request to terminate the program.**

Enrollment numbers have been too low to assess since AY 2018-2019. A request was put in to suspend enrollment in October 2018 and was approved by the BOG in December 2018. Enrollment was suspended beginning fall 2019. Faculty created a certificate that will fulfill the needs of students who wish to teach. The certificate contains the necessary courses for teaching art in a K-12 setting and is suited for students enrolled in the BA or BFA in Art.

- 2. Indicate on which campus(es) the program is being offered and the extent to which the proposed termination has had or will have an impact on enrollment, enrollment planning, and/or the reallocation of resources.**

This degree was offered at the main campus. There will be no impact on enrollment numbers as those had already started to decline. The one remaining student is expected to graduate in 2022. Resources used for the BA will be used for the certificate.

- 3. Explain how the university intends to accommodate any students or faculty who are currently active in the program scheduled to be terminated. State what steps have been taken to inform students and faculty of the intent to terminate the program.**

There is only one student left in the program. This person is expected to graduate in Spring of 2022. Faculty who teach in this program also teach certificate courses as well as in the MA in Art Education degree program. Faculty are the ones to recommend termination of the degree after having temporarily suspended enrollment to see how the certificate would work.

- 4. Please provide the date when the teach-out plan was submitted to SACSCOC. Include a copy of the notification letter with your submission.**

November 5, 2021

- 5. Provide data (and cite sources) on the gender and racial distribution of students in and faculty affiliated with the program. For faculty, also list the rank and tenure status of all affected individuals.**

There is one student left in the program scheduled to graduate in Spring 2022. The university does not provide us with racial information where this information is personally identifiable.

**6. Identify any potential negative impact of the proposed action on the current representation of females, minorities, faculty, and students in the program.**

This is a single faculty program. She will continue to teach certificate courses and in the MA in Art Education programs. There are no student impacts.

**7. If this is a baccalaureate program, please explain how and when the Florida College System (FCS) institutions have been notified of its termination so that students can be notified accordingly.**

The Florida College System was notified of the degree termination via memo on November 5, 2021.

---

*Elizabeth Koss*

Requestor/Initiator

11/5/2021 | 10:08 AM EDT

Date

---

*Melissa Slurry*

Signature of Campus EO Officer

4/19/2023 | 11:27 AM EDT

Date

---

*Ag. Pappas*

Signature of College Dean

11/9/2021 | 3:17 PM EST

Date

---

*Joseph Glover*

Signature of President or Vice President  
for Academic Affairs

4/21/2023 | 11:14 AM EDT

Date

---

Signature of Chair of the  
Board of Trustees

Date

---

Date Approved by the Board of Trustees





**COMMITTEE ON ACADEMIC, FACULTY  
AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC  
COMMUNICATIONS  
ACTION ITEM AFSSPRSC5  
June 8, 2023**

**SUBJECT:** Degree Program Changes

---

**BACKGROUND INFORMATION**

The College of Journalism and Communications is requesting to reduce the number of credit hours from 124 to 120 for the following degrees:

B.S. in Media Production, Management and Technology Specializations (CIP 09.0701):

Digital Film and Television Production

Management and Strategy

Media and Society

B.S. in Journalism and Sports Media (CIP 09.0401)

B.S. in Advertising Specializations (CIP 09.0903):

Persuasive Messaging

Agency

B.S. in Public Relations (CIP 09.0902)

The Accrediting Council on Education in Journalism and Mass Communications rescinded the stipulation on the number of credit hours that students needed to take outside the college and the extra four hours is no longer necessary due to the students being allowed to take over 50 credit hours within the college. These changes were approved by the Curriculum Committee and then by the Faculty Senate at their May 4, 2023, meeting.

**PROPOSED COMMITTEE ACTION**

The Committee on Academic, Faculty and Student Success, Public Relations and Strategic Communications is asked to approve the above degree program changes for recommendation to the Board of Trustees for approval on the Consent Agenda.

**ADDITIONAL COMMITTEE CONSIDERATIONS**

Board of Governors approval is required.

---

Supporting Documentation Included: B.S. in Media Production, Management and Technology, B.S. in Journalism and Sports Media, B.S. in Advertising Specializations and B.S. in Public Relations request forms

Submitted by: Joseph Glover, Provost and Senior Vice President for Academic Affairs

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza "Mori" Hosseini, Chair

---

Ben Sasse, President and Corporate Secretary



Board of Governors, State University System of Florida  
**REMOVAL OF EXCEPTION TO THE 120 CREDIT HOURS REQUIREMENT  
 FOR BACCALAUREATE PROGRAMS REQUEST FORM**

In Accordance with BOG Regulation 8.014

**INSTITUTION:** University of Florida

**PROGRAM NAME:** Media Production, Management, and Technology

**CIP CODE:** 09.0701 \_\_\_\_\_  B.A.     B.S.  
 (Classification of Instructional Programs)

**1. The exception to 120 credit hours was approved because (check all that apply):**

- XXX accreditation requirements
- mandated criteria for professional licensing
- other (please specify): \_\_\_\_\_

**2. When do you propose to implement the removal of 120 credit hours exception? (please specify an effective term and year)**

Fall 2023

**3. What is the justification for the reversion to 120 credit hours to degree?**

Our accreditation board, the Accrediting Council on Education in Journalism and Mass Communications (ACEJMC), used to stipulate that our majors take 90 credit hours outside the College. Because that only left 30 hours of course work within the College, we requested an additional 4 hours (for a total of 124) so that students can be better prepared for the industry. In the summer of 2013, ACEJMC lowered the number of credit hours our students need to take outside the College from 90 to 72. Then in the summer of 2021, ACEJMC rescinded that stipulation altogether, and now students can take only as many hours outside the college as state and university regulations require. That allows our students to take over 50 credit hours within the college, so the four extra credit hours are no longer necessary.

**4. If the program was approved for the exception to 120 credit hours because of accreditation requirements and/or mandated criteria for professional**

**licensing requirements, please explain how these requirements have changed or will be addressed.**

As stated above, our accrediting board, ACEJMC, required our students to take 90 credit hours outside the college. That was reduced to 72 credit hours in the summer of 2013, and now that requirement has been rescinded altogether. This change allows our students to take over 50 hours within the college; hence, 120 credit hours for the degree suffice.

**5. If the removal of the 120 credit hours exception is requested for only one track within a program, please specify the name of the track.**

N/A

---

## Required Signatures

David Ostroff  
Requestor/Initiator

5/10/2023 | 11:52 AM EDT

Date

Joseph Glover  
Signature of Provost

5/11/2023 | 3:35 PM EDT

Date



Board of Governors, State University System of Florida  
**REMOVAL OF EXCEPTION TO THE 120 CREDIT HOURS REQUIREMENT  
 FOR BACCALAUREATE PROGRAMS REQUEST FORM**

In Accordance with BOG Regulation 8.014

**INSTITUTION:** University of Florida

**PROGRAM NAME:** Journalism/Journalism Sports and Media

**CIP CODE:** 09.0401 \_\_\_\_\_  B.A.     B.S.  
 (Classification of Instructional Programs)

**1. The exception to 120 credit hours was approved because (check all that apply):**

- XXX accreditation requirements
- mandated criteria for professional licensing
- other (please specify): \_\_\_\_\_

**2. When do you propose to implement the removal of 120 credit hours exception? (please specify an effective term and year)**

Fall 2023

**3. What is the justification for the reversion to 120 credit hours to degree?**

Our accreditation board, the Accrediting Council on Education in Journalism and Mass Communications (ACEJMC), used to stipulate that our majors take 90 credit hours outside the College. Because that only left 30 hours of course work within the College, we requested an additional 4 hours (for a total of 124) so that students can be better prepared for the industry. In the summer of 2013, ACEJMC lowered the number of credit hours our students need to take outside the College from 90 to 72. Then in the summer of 2021, ACEJMC rescinded that stipulation altogether, and now students can take only as many hours outside the college as state and university regulations require. That allows our students to take over 50 credit hours within the college, so the four extra credit hours are no longer necessary.

**4. If the program was approved for the exception to 120 credit hours because of accreditation requirements and/or mandated criteria for professional**

**licensing requirements, please explain how these requirements have changed or will be addressed.**

As stated above, our accrediting board, ACEJMC, required our students to take 90 credit hours outside the college. That was reduced to 72 credit hours in the summer of 2013, and now that requirement has been rescinded altogether. This change allows our students to take over 50 hours within the college; hence, 120 credit hours for the degree suffice.

**5. If the removal of the 120 credit hours exception is requested for only one track within a program, please specify the name of the track.**

N/A: both tracks

---

## Required Signatures

*Ted Spiker*

Requestor/Initiator

5/10/2023 | 11:40 AM EDT

Date

*Joseph Glover*

Signature of Provost

5/11/2023 | 3:35 PM EDT

Date



Board of Governors, State University System of Florida  
**REMOVAL OF EXCEPTION TO THE 120 CREDIT HOURS REQUIREMENT  
 FOR BACCALAUREATE PROGRAMS REQUEST FORM**

In Accordance with BOG Regulation 8.014

**INSTITUTION:** University of Florida

**PROGRAM NAME:** Advertising

**CIP CODE:** 09.0903 \_\_\_\_\_  B.A.     B.S.  
 (Classification of Instructional Programs)

**1. The exception to 120 credit hours was approved because (check all that apply):**

- XXX accreditation requirements
- mandated criteria for professional licensing
- other (please specify): \_\_\_\_\_

**2. When do you propose to implement the removal of 120 credit hours exception? (please specify an effective term and year)**

Fall 2023

**3. What is the justification for the reversion to 120 credit hours to degree?**

Our accreditation board, the Accrediting Council on Education in Journalism and Mass Communications (ACEJMC), used to stipulate that our majors take 90 credit hours outside the College. Because that only left 30 hours of course work within the College, we requested an additional 4 hours (for a total of 124) so that students can be better prepared for the industry. In the summer of 2013, ACEJMC lowered the number of credit hours our students need to take outside the College from 90 to 72. Then in the summer of 2021, ACEJMC rescinded that stipulation altogether, and now students can take only as many hours outside the college as state and university regulations require. That allows our students to take over 50 credit hours within the college, so the four extra credit hours are no longer necessary.

**4. If the program was approved for the exception to 120 credit hours because of accreditation requirements and/or mandated criteria for professional**



**licensing requirements, please explain how these requirements have changed or will be addressed.**

As stated above, our accrediting board, ACEJMC, required our students to take 90 credit hours outside the college. That was reduced to 72 credit hours in the summer of 2013, and now that requirement has been rescinded altogether. This change allows our students to take over 50 hours within the college; hence, 120 credit hours for the degree suffice.

**5. If the removal of the 120 credit hours exception is requested for only one track within a program, please specify the name of the track.**

N/A

---

### Required Signatures

DocuSigned by:  
*Huan Chen*  
5BEB025774E147D...

2023/2/10

---

Requestor/Initiator

---

Date

*Joseph Glover*

---

Signature of Provost

---

5/11/2023 | 3:35 PM EDT

Date



Board of Governors, State University System of Florida  
**REMOVAL OF EXCEPTION TO THE 120 CREDIT HOURS REQUIREMENT  
 FOR BACCALAUREATE PROGRAMS REQUEST FORM**

In Accordance with BOG Regulation 8.014

**INSTITUTION:** University of Florida

**PROGRAM NAME:** Public Relations

**CIP CODE:** 09.0902 \_\_\_\_\_  B.A.     B.S.  
 (Classification of Instructional Programs)

**1. The exception to 120 credit hours was approved because (check all that apply):**

- XXX accreditation requirements
- mandated criteria for professional licensing
- other (please specify): \_\_\_\_\_

**2. When do you propose to implement the removal of 120 credit hours exception? (please specify an effective term and year)**

Fall 2023

**3. What is the justification for the reversion to 120 credit hours to degree?**

Our accreditation board, the Accrediting Council on Education in Journalism and Mass Communications (ACEJMC), used to stipulate that our majors take 90 credit hours outside the College. Because that only left 30 hours of course work within the College, we requested an additional 4 hours (for a total of 124) so that students can be better prepared for the industry. In the summer of 2013, ACEJMC lowered the number of credit hours our students need to take outside the College from 90 to 72. Then in the summer of 2021, ACEJMC rescinded that stipulation altogether, and now students can take only as many hours outside the college as state and university regulations require. That allows our students to take over 50 credit hours within the college, so the four extra credit hours are no longer necessary.

**4. If the program was approved for the exception to 120 credit hours because of accreditation requirements and/or mandated criteria for professional**

**licensing requirements, please explain how these requirements have changed or will be addressed.**

As stated above, our accrediting board, ACEJMC, required our students to take 90 credit hours outside the college. That was reduced to 72 credit hours in the summer of 2013, and now that requirement has been rescinded altogether. This change allows our students to take over 50 hours within the college; hence, 120 credit hours for the degree suffice.

**5. If the removal of the 120 credit hours exception is requested for only one track within a program, please specify the name of the track.**

N/A

---

**Required Signatures**

12/20/22

---



Requestor/Initiator

---

Date

---

*Joseph Glover*

Signature of Provost

---

5/11/2023 | 3:35 PM EDT

Date



**COMMITTEE ON FINANCE, STRATEGIC PLANNING  
AND PERFORMANCE METRICS**

**AGENDA**

**Thursday, June 8, 2023**

**~11:10 a.m.**

**President’s Room 215B, Emerson Alumni Hall  
University of Florida, Gainesville, FL**

**Committee Members:**

Marsha D. Powers (Chair), David L. Brandon, Christopher T. Corr, Morteza “Mori” Hosseini, Daniel T. O’Keefe, Rahul Patel, Fred S. Ridley, Patrick O. Zalupski

- 1.0 Call to Order and Welcome .....Marsha D. Powers, Chair
- 2.0 Verification of Quorum ..... Vice President Liaison
- 3.0 Review and Approval of Minutes .....Marsha D. Powers, Chair  
[March 16, 2023](#)  
[May 9, 2023](#)
- 4.0 Action Items.....Marsha D. Powers, Chair  
[FSPPM1](#) Preliminary Operating Budget FY24.....Chris Cowen, Senior Vice President and Chief Financial Officer  
[FSPPM2](#) Estimated Direct Support Organization Use of University Resources for FY24...Chris Cowen  
[FSPPM3](#) Enterprise Resource Planning Vendor Software Selection.....Chris Cowen  
[FSPPM4](#) Proposal for Bridge Funding.....Chris Cowen
- 5.0 Discussion Items .....Marsha D. Powers, Chair
  - 5.1 CFO Report..... Chris Cowen
  - [5.2](#) Quarterly Financials..... Chris Cowen
  - [5.3](#) UFICO Update ..... William Reeser, Chief Investment Officer of UFICO
- 6.0 New Business.....Marsha D. Powers, Chair
- 7.0 Adjourn.....Marsha D. Powers, Chair



**COMMITTEE ON FINANCE, STRATEGIC PLANNING  
AND PERFORMANCE METRICS**

**Meeting Minutes**

**March 16, 2023**

**President's Room 215B, Emerson Alumni Hall**

**University of Florida, Gainesville, FL**

**Time Convened: 11:09 a.m.**

**Time Adjourned: 12:14 p.m.**

**Committee and Board members present:**

Marsha D. Powers (Acting Committee Chair), David L. Brandon, Richard P. Cole, Christopher T. Corr, Morteza "Mori" Hosseini (Board Chair), Lauren D. Lemasters, Daniel T. O'Keefe, Rahul Patel, Amanda J. Phalin, Patrick O. Zalupski and Anita G. Zucker.

**Others present:**

Ben Sasse, President; Joseph Glover, Provost and Senior Vice President for Academic Affairs; J. Scott Angle, Vice President for Agriculture and Natural Resources; Chris Cowen, Senior Vice President and Chief Financial Officer; Elias Eldayrie, Vice President and Chief Information Officer; Amy Hass, Vice President and General Counsel; Mark Kaplan, Vice President for Government and Community Relations and University Secretary; Jim Kelly, Interim Chief Executive Officer for UF Health Shands; Charlie Lane, Senior Vice President and Chief Operating Officer; Maria Martin, Interim Vice President for Advancement; Marsha McGriff, Chief Diversity Officer and Senior Advisor to the President; David Nelson, Senior Vice President for Health Affairs and President of UF Health; David Norton, Vice President for Research; Steve Orlando, Interim, Vice President for Strategic Communications and Marketing; Mary Parker, Vice President for Enrollment Management and Associate Provost; Curtis Reynolds, Vice President for Business Affairs; Scott Stricklin, Director of Athletics; Heather White, Vice President for Student Life; William Reeser, Chief Investment Officer of UFICO, Pradeep Kadambi, President and CEO of University of Florida Jacksonville Physicians, Inc., members of the University of Florida community, and the public.

**1.0 Call to Order and Welcome**

Committee Chair Marsha D. Powers welcomed everyone in attendance and called the meeting to order at 11:09 a.m.

**2.0 Verification of Quorum**

Senior Vice President Chris Cowen verified a quorum with all members present.

### **3.0 Review and Approval of Minutes**

The Committee Chair asked for a motion to approve the minutes of the June 1, 2022 and August 10, 2022 workshops, November 14, 2022 and December 8, 2022 committee meetings, and the February 13, 2023 committee pre-meeting, which was made by Trustee Phalin, and a second, which was made by Trustee O'Keefe. The Committee Chair asked for further discussion, and then asked for all in favor of the motion and any opposed and the motion was approved unanimously.

### **4.0 Discussion Items**

#### **4.1 CFO Report**

The CFO Report included a brief overview of the following discussion items but was not discussed as a separate item.

#### **4.2 Quarterly Financials**

SVP Cowen provided an update on the University's financials for the first half of the year. He noted that the University continues to outperform budget and numbers remain strong despite inflation. He explained that the many variances in budget to actual is due to how numbers are presented along with changes to actual investment returns and the way the University budgets research. SVP Cowen mentioned that the variance is not indicative of financial performance and that modifications to the budget for next year will better reflect actuals and be a more useful tool to track budget to actual performance. He briefly reviewed the balance sheet and explained that UF Health, both Gainesville and Jacksonville, is experiencing revenue and expense pressure, resulting in lower than anticipated net income.

SVP Cowen also provided some brief updates on current and upcoming bonds, student housing rates (more to come at the December meeting), the energy plant project (costs significantly above estimates and we are analyzing options to reduce the financial impact while meeting our needs), and the Enterprise Resources Planning project implementation. There were no questions.

#### **4.3 UFICO Update**

Chief Investment Officer of UFICO, William Reeser, provided a quarterly update on the University's Operating and Endowment portfolios. He reviewed the Operating portfolio's current allocation and structure stating that the primary goal is to remain as liquid as possible. He also provided an update on the operating portfolio's investment performance, stating that despite market volatility, it ended the year ahead of benchmarks.

CIO Reeser then reviewed the endowment portfolio's allocation and structure, explaining that it is modestly underweight. He then noted that the portfolio is outperforming the investable alternative benchmark but trailing the CPI+5% target in the 1, 3, 5, and 10-year periods, and provided a brief financial recap. Chair Hosseini questioned the inflow vs. outflow of returns to support the University, resulting in \$19M decrease in the endowment balance, and CIO Reeser confirmed.

CIO Reeser also presented 2022 peer review data and explained that it is used to identify long-term trends and gain insight. He stated that, based on his observations, there seems to be a high



correlation of 1-year returns to the percentage of portfolio allocated to private investments and noted that the University remains at or above median in all categories. CIO Reeser also provided Top 10 public university data, noting the University's return rank in comparison to others. Board Chair Hosseini questioned the difference between UF and UNC's return rank, to which CIO Reeser explained it is primarily due to their allocation of funds to private investments and venture capital.

Finally, there was a discussion about the SVB bank collapse, and what impact that might have on the University's investments going forward. CIO Reeser explained that we expect minimal financial impact and noted that the collapse will primarily impact operations and managers. He stated that UFICO has worked to identify exposure and noted a concern of fraud. Board Chair Hosseini asked about communication to the UFICO Board, to which CIO Reeser explained that communication is constant and rapid. SVP Cowen also mentioned that his team remains in contact with UFICO to assess the potential impact to the University, affiliates and DSOs. There were no additional questions.

#### **4.4 DSO & Affiliate Presentation**

Dr. Pradeep Kadambi, President and CEO of University of Florida Jacksonville Physicians, Inc. (UFJPI), began his presentation by providing an overview and background of the Practice Plan. He explained what UFJPI is and the services they provide, and discussed the entity's governing boards, locations, and overall structure. Dr. Kadambi also provided an overview of the entity's revenue sources and expenses for FY2022, and reviewed UFJPI's financial performance over the past 5 years. Concluding his presentation, Dr. Kadambi provided information on UFJPI's strengths and current challenges, along with how both UFJPI and UF Health Jacksonville are proactively addressing challenges. Board Chair Hosseini mentioned the University's presence in Flagler, and asked Dr. Kadambi to provide information for the September retreat on how UF Health Jacksonville can align with the University's brand of being one of the best. SVP Nelson agreed to work with Dr. Kadambi and return in September with a plan and noted the difference of non-profit and for-profit health business models. President Sasse agreed that more understanding of how the cross-subsidies work to make more intentional decisions is helpful. SVP Nelson noted that Jacksonville is a safety net hospital, which has a different business model than for profit hospitals. Chairman Hosseini agreed and noted that many have taxing districts which may be a conversation to have with the city of Jacksonville and Duval County. Finally, there was a short discussion about geo-expansion, specifically UFJPI exposure in Georgia and whether any limitations on care and expansion in the state exist.

#### **6.0 New Business**

There was no new business to come before the committee.

#### **7.0 Adjourn**

There being no further discussion, Committee Chair Powers adjourned the meeting at 12:14 p.m.



**COMMITTEE ON FINANCE, STRATEGIC PLANNING  
AND PERFORMANCE METRICS**

**Pre-Meeting Minutes**

**Virtual Meeting**

**May 9, 2023**

**Time Convened: 10:30 a.m.**

**Time Adjourned: 10:52 a.m.**

**Committee and Board members present:**

Marsha D. Powers (Committee Chair), David L. Brandon, Richard P. Cole, Christopher T. Corr, Olivia E. Green, Morteza “Mori” Hosseini (Board Chair), Daniel T. O’Keefe, Rahul Patel, Amanda J. Phalin, Fred S. Ridley, Patrick O. Zalupski, and Anita G. Zucker.

**Others present:**

Ben Sasse, President; Chris Cowen, Senior Vice President and Chief Financial Officer; Melissa Curry, Interim Vice President for Human Resources; Elias Eldayrie, Vice President and Chief Information Officer; Joseph Glover, Provost and Senior Vice President for Academic Affairs; Amy Hass, Vice President and General Counsel; Mark Kaplan, Vice President for Government and Community Relations and University Secretary; David Norton, Vice President for Research; Mary Parker, Vice President for Enrollment Management and Associate Provost; Curtis Reynolds, Vice President for Business Affairs; Heather White, Vice President for Student Life; Colt Little, Associate Vice President for Enterprise Projects and Senior Counsel; Brian Mawdsley, Deputy Chief Investment Officer of UFICO; Bill Reeser, Chief Executive Officer and Chief Investment Officer of UFICO; Alan West, Assistant Vice President and Treasurer; members of the University of Florida community, and the public.

**1.0 Call to Order and Welcome**

Committee Chair Marsha D. Powers welcomed everyone in attendance and called the meeting to order at 10:30 a.m.

**2.0 Roll Call**

Senior Vice President Chris Cowen conducted a roll call of all Committee and Board members present.

**3.0 Review Draft Agenda for June Meeting**

The following items were addressed by the Committee:

**3.1 Review Draft Minutes**

- March 16, 2023

### 3.2 Review Action Items

- **Preliminary Operating Budget FY24**

SVP Cowen explained that his office is working with President's Office to understand objectives and develop a preliminary operating budget for next fiscal year. He stated that it will be presented at the June meeting for review and approval and noted that it is preliminary and required by the Board of Governors (BOG).

- **Estimated DSO Use of University Resources for FY24**

SVP Cowen gave a brief overview of the action item stating that it is presented for approval each June as required by BOG. He mentioned that it accounts for both the use of dollars and space by Direct Support Organizations. He explained that the University of Florida Foundation accounts for the biggest use of dollars and University of Florida Athletic Association accounts for the biggest use of space.

- **ERP Vendor Software Selection**

SVP Cowen provided an overview of the action item stating that he and Vice President and Chief Information Officer Elias Eldayrie have engaged in conversations for a new Enterprise Resources Planning software vendor. They were able to negotiate costs down and receive the lowest fees to date from the software vendor, Workday. He explained that this request to the Board will only be to request support and to engage with the software vendor (Workday) with a potential implementation in July 2024. VP Eldayrie noted that the negotiated contract is favorable and one of the best in comparison to other Universities. The cost will be approximately \$160M. Committee Chair Powers and Board Chair Hosseini both noted the efforts of VP Eldayrie and SVP Cowen and reminded the committee of the many needed changes the new ERP will bring. Board Chair Hosseini also explained that there is no funding from the State for this, but he is hopeful to receive funding in the coming year.

SVP Cowen shared a brief update regarding the UFICO Investment Statement. He stated UFICO will speak to it during their quarterly update, but there will be no action item.

- **Line of Credit**

SVP Cowen provided a high-level overview of the action item explaining the need for a line of credit to provide flexibility to fund capital projects by using it to bridge philanthropy gifts. He stated that the University received a line of credit proposal from J.P. Morgan for up to \$100M on a future gift. Board Chair Hosseini mentioned his support of the request and noted that this has not been done at another university. He also stated that the request will go to the Board of Governors in June for approval if needed. Committee Chair Powers also mentioned her support for the line of credit and suggested it would support the required internal discipline on capital projects and help ensure they stay on track. President Sasse added his thanks to SVP Cowen for all of his work at UF.

### 3.3 Review Discussion Items

- **CFO Report**

SVP Cowen indicated that the CFO Report is available for the committee and Board to review. There are no significant changes to note.

- **Quarterly Financials**

SVP Cowen stated that his office is currently assembling information from the third quarter which will be provided and reviewed at the June meeting. He explained that the University is still in line and costs are increasing as expected.

SVP Cowen also gave a brief bond rating agency update, stating that the University received top ratings. He indicated that he would provide additional information at June meeting along with noted strengths and suggested opportunities.

- **UFICO Update**

SVP Cowen explained this regular update will be presented and discussed at the June Board of Trustees meeting by Bill Reeser, Chief Executive Officer and Chief Investment Officer of UFICO, and Brian Mawdsley, Deputy Chief Investment Officer, from UFICO.

Prior to ending the discussion, SVP Cowen stated that he will provide a couple of presentations at the June BOT Retreat. Committee Chair Powers asked the committee members to reach out if they had any additional recommendations.

#### **4.0 New Business**

There was no new business to come before the committee.

#### **5.0 Adjourn**

There being no further discussion, Committee Chair Powers adjourned the meeting at 10:52 a.m.



**COMMITTEE ON FINANCE, STRATEGIC PLANNING  
AND PERFORMANCE METRICS  
ACTION ITEM FSPPM1  
June 8, 2023**

**SUBJECT:** Preliminary Operating Budget FY24

---

**BACKGROUND INFORMATION**

The Board of Trustees is requested to approve the University's Preliminary Budget of Revenues and Expenses for the Fiscal Year ending June 30, 2024.

**PROPOSED COMMITTEE ACTION**

The Committee on Finance, Strategic Planning and Performance Metrics is asked to approve the University's Preliminary Budget of Revenues and Expenses for the Fiscal Year ended June 30, 2024 for recommendation to the Board of Trustees for approval on the Consent Agenda and for submission by the University of Florida to the BOG for final approval.

**ADDITIONAL COMMITTEE CONSIDERATIONS**

Board of Governors final approval is required for the 2023-2024 preliminary budget of revenues and expenses.

---

Supporting Documentation Included: Preliminary Operating Budget FY 23-24

Submitted by: Christopher Cowen, Senior Vice President and Chief Financial Officer

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza "Mori" Hosseini, Chair

---

Ben Sasse, President and Corporate Secretary

**University of Florida**  
**Preliminary 2023-2024 Operating Budget - Enterprise Summary**  
(in thousands)

| FY 2022-2023 Operating Budget     |                       |                      |                  |               |                    |                     |                |               |                  |
|-----------------------------------|-----------------------|----------------------|------------------|---------------|--------------------|---------------------|----------------|---------------|------------------|
|                                   | University of Florida | Athletic Association | Faculty Practice | UF Foundation | Shands Gainesville | Shands Jacksonville | GatorCare      | Other DSOs    | Total            |
| <b>Revenues</b>                   |                       |                      |                  |               |                    |                     |                |               |                  |
| Tuition and Fees                  | 421,705               | 0                    | 0                | 0             | 0                  | 0                   | 0              | 0             | 421,705          |
| State Appropriations              | 984,210               | 0                    | 0                | 0             | 7,050              | 0                   | 0              | 17,125        | 1,008,385        |
| Contracts and Grants              | 500,004               | 0                    | 0                | 0             | 0                  | 0                   | 0              | 0             | 500,004          |
| Federal and State Financial Aid   | 233,370               | 0                    | 0                | 0             | 0                  | 0                   | 0              | 0             | 233,370          |
| Patient Service Revenue           | 0                     | 0                    | 910,137          | 0             | 2,642,549          | 954,342             | 0              | 0             | 4,507,028        |
| Contributions/Donations           | 0                     | 0                    | 0                | 110,500       | 6,564              | 0                   | 254,301        | 37,972        | 409,337          |
| Investment Income                 | 6,186                 | 800                  | 48               | 98,529        | 18,484             | 794                 | 300            | 14,321        | 139,462          |
| Licensing and Royalties           | 0                     | 69,366               | 0                | 0             | 0                  | 0                   | 0              | 52,315        | 121,681          |
| Sales of Goods & Services         | 211,475               | 41,988               | 243,253          | 0             | 0                  | 0                   | 1,640          | 19,376        | 517,732          |
| Other Cash Receipts               | 17,012                | 419                  | 60,055           | 7,467         | 60,092             | 35,873              | 0              | 17,386        | 198,304          |
| Component Unit Transfers In/(Out) | 1,021,308             | 36,556               | (791,395)        | (140,000)     | (75,245)           | (70,694)            | 0              | (88,537)      | (108,007)        |
| <b>Total Revenues</b>             | <b>3,395,270</b>      | <b>149,129</b>       | <b>422,098</b>   | <b>76,496</b> | <b>2,659,494</b>   | <b>920,315</b>      | <b>256,241</b> | <b>69,958</b> | <b>7,949,001</b> |
| <b>Transfers In/(Out)</b>         |                       |                      |                  |               |                    |                     |                |               |                  |
| Salaries & Benefits               | 2,569,789             | 70,330               | 130,749          | 28,354        | 1,124,660          | 445,692             | 1,532          | 8,903         | 4,380,009        |
| Other Operating Expenses          | 833,664               | 86,485               | 309,337          | 24,344        | 1,597,207          | 473,874             | 254,709        | 59,022        | 3,638,642        |
| <b>Total Expenses</b>             | <b>3,403,453</b>      | <b>156,815</b>       | <b>440,086</b>   | <b>52,698</b> | <b>2,721,867</b>   | <b>919,566</b>      | <b>256,241</b> | <b>67,925</b> | <b>8,018,651</b> |
| <b>Net Change</b>                 | <b>(8,183)</b>        | <b>(7,686)</b>       | <b>(17,988)</b>  | <b>23,798</b> | <b>(62,373)</b>    | <b>749</b>          | <b>0</b>       | <b>2,033</b>  | <b>(69,650)</b>  |

| FY 2023-2024 Preliminary Operating Budget |                       |                      |                  |               |                    |                     |                |                |                  |
|---|-----------------------|----------------------|------------------|---------------|--------------------|---------------------|----------------|----------------|------------------|
|   | University of Florida | Athletic Association | Faculty Practice | UF Foundation | Shands Gainesville | Shands Jacksonville | GatorCare      | Other DSOs     | Total            |
| <b>Revenues</b>                           |                       |                      |                  |               |                    |                     |                |                |                  |
| Tuition and Fees                          | 469,364               | 0                    | 0                | 0             | 0                  | 0                   | 0              | 0              | 469,364          |
| State Appropriations                      | 1,080,000             | 0                    | 0                | 0             | 9,674              | 0                   | 0              | 12,175         | 1,101,849        |
| Contracts and Grants                      | 834,675               | 0                    | 0                | 0             | 7,050              | 0                   | 0              | 1,185          | 842,910          |
| Federal and State Financial Aid           | 235,543               | 0                    | 0                | 0             | 0                  | 0                   | 0              | 0              | 235,543          |
| Patient Service Revenue                   | 0                     | 0                    | 893,836          | 0             | 2,724,300          | 954,342             | 0              | 0              | 4,572,478        |
| Contributions/Donations                   | 0                     | 0                    | 0                | 150,000       | 0                  | 0                   | 277,636        | 40,556         | 468,192          |
| Investment Income                         | 40,000                | 800                  | 3,333            | 65,000        | 63,719             | 794                 | 300            | 14,832         | 188,778          |
| Licensing and Royalties                   | 0                     | 78,094               | 0                | 0             | 0                  | 0                   | 0              | 53,750         | 131,844          |
| Sales of Goods & Services                 | 207,323               | 47,073               | 231,067          | 0             | 0                  | 0                   | 1,666          | 17,150         | 504,279          |
| Other Cash Receipts                       | 20,098                | 611                  | 64,594           | 9,243         | 61,808             | 35,873              | 310            | 16,459         | 208,996          |
| Component Unit Transfers In/(Out)         | 1,072,373             | 40,802               | (794,228)        | (165,000)     | 0                  | (70,694)            | 0              | (91,699)       | (8,446)          |
| <b>Total Revenues</b>                     | <b>3,959,375</b>      | <b>167,380</b>       | <b>398,602</b>   | <b>59,243</b> | <b>2,866,551</b>   | <b>920,315</b>      | <b>279,912</b> | <b>64,408</b>  | <b>8,715,786</b> |
| <b>Expenses</b>                           |                       |                      |                  |               |                    |                     |                |                |                  |
| Salaries & Benefits                       | 2,882,290             | 73,892               | 130,749          | 24,677        | 1,198,600          | 445,692             | 1,344          | 15,343         | 4,772,587        |
| Other Operating Expenses                  | 1,019,619             | 93,351               | 298,489          | 25,556        | 1,564,300          | 473,874             | 278,568        | 53,660         | 3,807,417        |
| <b>Total Expenses</b>                     | <b>3,901,909</b>      | <b>167,243</b>       | <b>429,238</b>   | <b>50,233</b> | <b>2,762,900</b>   | <b>919,566</b>      | <b>279,912</b> | <b>69,003</b>  | <b>8,580,004</b> |
| <b>Net Change</b>                         | <b>57,467</b>         | <b>137</b>           | <b>(30,636)</b>  | <b>9,010</b>  | <b>103,651</b>     | <b>749</b>          | <b>0</b>       | <b>(4,595)</b> | <b>135,783</b>   |



**COMMITTEE ON FINANCE, STRATEGIC PLANNING  
AND PERFORMANCE METRICS  
ACTION ITEM FSPPM2  
June 8, 2023**

**SUBJECT:** Estimated Direct Support Organization Use of University Resources for FY24

---

**BACKGROUND INFORMATION**

The Auditor General in their Operational Audit Report No. 2019-193 for the FY2016 recommended that the BOT consider a number of actions to improve its understanding and oversights of the university DSOs and their use of University resources. In response, UF staff working with DSOs and BOT leadership have accumulated estimated summary information regarding the DSO use of University personnel, facilities and systems for the coming FY 2024.

**PROPOSED COMMITTEE ACTION**

The Committee on Finance, Strategic Planning and Performance Metrics is asked to approve the Estimated Summary of the University Support for UF DSOs for the Fiscal Year ended June 30, 2024 for recommendation to the Board of Trustees for approval on the Consent Agenda.

**ADDITIONAL COMMITTEE CONSIDERATIONS**

None.

---

Supporting Documentation: Estimated DSO Use of University Resources for FY24 report

Submitted by: Olga Weider, Assistant Vice President and University Controller

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza "Mori" Hosseini, Chair

---

Ben Sasse, President and Corporate Secretary

University Support for UF Direct Support Organizations  
Estimates For the Fiscal Year Ended June 30, 2024

| University Resources used by the DSO:                  | UF Foundation | University Athletic Association | Cattle Enhancement Board | Citrus Research & Development Foundation | UF Development Corporation | Florida Foundation Seed Producers | Florida 4-H Club Foundation | Gator Boosters | GatorCare Health Management Corporation | UF Leadership & Education Foundation | UF Historic St. Augustine | UF Investment Corporation | UF Research Foundation |
|--|---------------|---------------------------------|--------------------------|--|----------------------------|-----------------------------------|-----------------------------|----------------|---|--------------------------------------|---------------------------|---------------------------|------------------------|
| University FTEs  | 364           | 7                               | 0                        | 3.75                                     | 1                          | 5                                 | 1.25                        | 0              | 0                                       | 7                                    | 3                         | 0                         | 40.4                   |
| University Personnel Salary Costs                      | \$ 43,863,874 | \$ 1,215,000                    | \$ -                     | \$ 380,000                               | \$ 100,000                 | \$ 597,644                        | \$ 123,000                  | \$ -           | \$ -                                    | \$ 583,000                           | \$ 292,000                | \$ -                      | \$ 5,217,000           |
| Salary Amount Reimbursed to the University             | \$ 27,754,686 | \$ 1,215,000                    | \$ -                     | \$ 380,000                               | \$ 100,000                 | \$ 597,644                        | \$ 123,000                  | \$ -           | \$ -                                    | \$ 583,000                           | \$ 292,000                | \$ -                      | \$ 5,217,000           |
| Main Source of Reimbursements to the University        | DSO Revenues  | DSO Revenues                    | DSO Revenues             | DSO Revenues                             | DSO Revenues               | DSO Revenues                      | DSO Revenues                | DSO Revenues   | DSO Revenues                            | DSO Revenues                         | DSO Revenues              | N/A                       | DSO Revenues           |
| Travel Expenses using State Funds*                     | \$ -          | \$ -                            | \$ -                     | \$ -                                     | \$ -                       | \$ -                              | \$ -                        | \$ -           | \$ -                                    | \$ -                                 | \$ -                      | \$ -                      | \$ -                   |
| Administrative Overhead/Other                          | \$ 775,000    | \$ 3,078,000                    | \$ 12,000                | \$ -                                     | \$ -                       | \$ 3,202                          | \$ 582,100                  | \$ -           | \$ -                                    | \$ -                                 | \$ 42,000                 | \$ -                      | \$ 1,100,000           |
| University Facilities - (number of buildings occupied) | 5             | 36                              | NONE                     | 2  | 1                          | NONE                              | 1                           | 2              | NONE                                    | 1                                    | 1                         | NONE                      | 4                      |
| University Facilities - (square feet utilized)         | 70,074        | 1,116,893                       | NONE                     | 1,480                                    | 1,584                      | NONE                              | 310                         | 9,556          | NONE                                    | 4,426                                | 250                       | NONE                      | 5,805                  |

\*Per FS 1004.28 it is not permitted for any university DSO to use State Funds for travel expenses.

Other University Services:

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PeopleSoft System                            | Y | N | Y | Y | Y | Y | Y | N | N | Y | Y | N | Y |
| AP Processing                                | Y | N | Y | Y | Y | Y | Y | N | N | Y | Y | N | Y |
| Payroll Processing                           | Y | N | Y | Y | Y | Y | Y | N | N | Y | Y | N | Y |
| Pcard Issuance                               | N | N | N | Y | N | N | Y | N | N | N | Y | N | N |
| Purchase Order Issuance                      | N | N | N | N | N | Y | N | N | N | N | Y | N | Y |
| Travel Processing                            | Y | N | Y | N | Y | N | Y | N | N | Y | Y | N | Y |
| Transaction Processing by UF Shared Services | N | N | Y | N | Y | N | N | N | N | N | Y | N | N |
| Support for Financial Statement Preparation  | N | N | Y | N | Y | N | N | N | N | N | Y | N | N |



---

## Estimated DSO Use of University Resources for FY 24

---

The Auditor General in their Operational Audit Report No. 2019-193 for the FY2016 recommended that the BOT consider a number of actions to improve its understanding and oversights of the university DSOs and their use of University resources.

In response, UF staff working with DSOs and BOT leadership have accumulated estimated summary information regarding the DSO use of University personnel, facilities and systems for the coming FY 2024.

The attached report provides estimates for the fiscal year that begins July 1, 2023 and ends June 30, 2024. All 13 currently active DSOs are represented in this report and summarized in the report is as follows:

- University FTE's – number of full-time positions paid through the UF payroll system
- University personnel salary costs – estimated costs of salary and benefits for budgeted positions
- Salary amount reimbursed to the University – amount of personnel costs the DSO is expected to reimburse the University
- Main source of reimbursement to the University – revenue source the DSO will use to reimburse
- Travel expenses using State funds – payment not allowed by State statute
- Administrative overhead/other – amount of administrative overhead or other expenses paid by the DSO
- University facilities – number of University owned buildings occupied by DSO
- University facilities – square feet of University space utilized

The table at the bottom of the report (orange/blue blocks) represents other University services directly supporting the DSO activities such as use of PeopleSoft Accounting System.



**COMMITTEE ON FINANCE, STRATEGIC PLANNING  
AND PERFORMANCE METRICS  
COMMITTEE ACTION ITEM FSPPM3  
June 8, 2023**

**SUBJECT:** Enterprise Resource Planning Vendor Software Selection

---

**BACKGROUND INFORMATION**

Following an on-campus presentation by Workday to the technical review committee, the university entered conversations with Workday to negotiate the terms of a contract as software provider. We were able to negotiate a cost reduction from over \$82 million to \$67 million over 15 years. To move this initiative forward in a timely and effective manner, UF continues our planning and readiness efforts to begin a 30-month Phase 1 implementation. We have determined that it is most beneficial for us to continue organizing internally over the next year and targeting to select an implementation partner and begin the process in July 2024. Sources of funding for these needs of approximately \$160 million over 3 years will need to be identified.

**PROPOSED COMMITTEE ACTION**

The Committee on Finance, Strategic Planning and Performance Metrics is asked to approve the Workday contract for Enterprise Resource Planning for recommendation to the Board of Trustees for approval on the Consent Agenda.

**ADDITIONAL COMMITTEE CONSIDERATIONS**

None.

---

Supporting Documentation Included: UF Enterprise Resource Planning System Procurement Update report

Submitted by: Christopher Cowen, Senior Vice President and Chief Financial Officer

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza "Mori" Hosseini, Chair

---

Ben Sasse, President and Corporate Secretary

# UF Enterprise Resource Planning (ERP) System – Procurement Update

Prepared for the UF Board of Trustees Committee: Finance, Strategic Planning, and Performance Metrics

## ERP Vendor Software Selection

UF received Workday's negotiated offer on April 26, 2023.

- The contract is a 15-year term at a total cost of \$66,975,000. This represents a \$15,646,184 reduction from the initial offer in March 2023.
- The contract amount will be paid on the following schedule over 15 years to provide a three-year runway at a significantly reduced annual rate:
  - Year 1: \$100,000
  - Year 2: \$500,000
  - Year 3: \$3,000,000
  - Years 4 – 15: \$5,281,250
- The average price per employee per year is \$186, which represents the lowest publicly known negotiated price. The total full-service equivalent negotiated is 23,970, which includes 4% growth at no additional cost.
  - University of Florida: \$186 per employee per year
  - University of Wisconsin System: \$205 per employee per year
  - University of Maryland: \$242 per employee per year
  - Arizona State University: \$320 per employee per year
  - University Central Florida: \$322 per employee per year
- A 5-year renewal is available at Consumer Price Index (CPI) + 2%, not to exceed a 4% increase in any year.
- Price holds for additional modules are available should UF decide to implement later:
  - 5-year price hold for additional finance and HCM modules
  - 6-year price hold for student, not to exceed \$65 per student FTE

## Next Steps

- The negotiated Workday contract information will be presented for UF BOT approval during the June 8 meeting.
- This negotiated contract assumes Workday and UF execute the final agreement no later than June 23, 2023. UF will leverage the UCF contract terms as a starting point.
- The UF General Counsel Office continues to negotiate the legal terms with Workday for a contract closing date no later than June 23, 2023.



**COMMITTEE ON FINANCE, STRATEGIC PLANNING  
AND PERFORMANCE METRICS  
ACTION ITEM FSPPM4  
June 8, 2023**

**SUBJECT:** Proposal for Bridge Funding

---

**BACKGROUND INFORMATION**

When the cost of a capital project exceeds the state funding available for such project, donor funds are often used to support the project, though donor pledges of gifts typically involve multi-year payment schedules that may not align with desired project construction timelines. When the University cannot proceed with a capital project until it receives all funds from multiple sources, construction may be delayed and become more expensive, and the University may see a reduced return on investment on the project.

Historically, the University has used internal reserves as bridge financing to support its donor-funded capital projects until such time as the donor funds have been received. This strategy was effective when the University's projects were of limited scale and had short construction timelines, but continued reliance on internal reserves is unsustainable and inefficient (for example, University reserves that are used for internal loans cannot be simultaneously deployed in the University's investment portfolio). University staff believes that utilizing finite internal reserves for bridge funding to support increasingly lengthy and expensive capital projects will result in suboptimal resource allocation and hinder the University's strategic objectives.

University staff believes it is in the University's best interest to join many peer institutions in using commercial lending sources to provide bridge financing based on donor pledges for donor-funded capital projects as doing so would: (1) eliminate the need wait for receipt of funds from multiple sources for a single project; (2) enable projects to proceed more expeditiously upon receipt of donor pledges (rather than payments) for a project; and (3) allow the University to use more of its reserves for other, more productive purposes. Proposals were requested from several lenders to determine the viability of the University pursuing external bridge financing, though only JPMorgan Chase Bank, N.A ("JPMorgan") responded.

JPMorgan provided the attached commitment letter ("Commitment Letter") summarizing the terms on which JPMorgan is willing to establish a framework that would provide up to five tranches of bridge financing to support future University capital projects. The essential terms of the Commitment Letter can be summarized as follows:

- JPMorgan will commit to purchasing up to five promissory notes (“Notes”) from the University in an aggregate amount not exceeding \$30,000,000 (but with an accordion structure that may be expanded to permit up to \$100,000,000 at JPMorgan’s discretion).
- The University will have the right to request that JPMorgan purchase the Notes, and provide the corresponding loans to the University, for up to three years following execution of a definitive agreement between the University and JPMorgan.
- Each Note will be a revolving note with a repayment term of five years, and each could be drawn down in \$100,000 increments (\$1,000,000 minimum) during its term.
- Notes will be taxable, interest rates will be fixed and based on the applicable SOFR Swap Index at the time of issuance plus an indicative spread of 90-110 bps.
- The Notes will be secured by donor pledges specific to the capital project funded by the bridge financing associated with a particular Note.
- JPMorgan will assess an Unused Facility Fee, likely in the range of 15-25 bps.
- Implementation of the Commitment Letter through a definitive agreement will require mutual agreement between the University and JPMorgan.

#### **PROPOSED COMMITTEE ACTION**

The Committee on Finance, Strategic Planning and Performance Metrics is asked to approve, for recommendation to the Board of Trustees for its approval, the Commitment Letter and authorization for the University President or his designee(s) to negotiate, finalize, and execute a definitive agreement between the University and JPMorgan implementing the terms and conditions of the Commitment Letter.

#### **ADDITIONAL COMMITTEE CONSIDERATIONS**

This transaction is exempt from Board of Governors’ approval under the Debt Management Guidelines but will be presented to the Board of Governors as an information item. Additionally, unless the financing(s) associated with any project(s) has received legislative pre-approval under sec. 1010.62, *Florida Statutes*, legislative approval of such financing(s) must be obtained in accordance with the statute.

---

Supporting Documentation Included: JPMorgan Commitment Letter

Submitted by: Christopher Cowen, Senior Vice President and Chief Financial Officer

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza “Mori” Hosseini, Chair

---

Ben Sasse, President and Corporate Secretary

# J.P.Morgan

## Delivery Via E-Mail

May 31, 2023

Chris Cowen  
Chief Financial Officer  
University of Florida

Dear Chris,

On behalf of JPMorgan Chase Bank, N.A (together with its affiliates, “JPMorgan”), we are pleased to indicate JPMorgan’s interest in providing credit facilities in an aggregate amount up to \$30,000,000 in favor of the University of Florida within the parameters set forth below:

|                       |  |
|-----------------------|--|
| <b>Borrowers:</b>     | The University of Florida Board of Trustees and University of Florida Foundation as co-Borrowers OR The University of Florida Board of Trustees as Borrower and University of Florida Foundation as Guarantor.   |
| <b>Commitment:</b>    | <p>Note Purchase Agreement (the “Purchase Agreement”) between the Borrower and JPMorgan pursuant to which the Bank will purchase up to five (5) Individual Notes (the “Note” or “Notes”) issued by the Borrower in an aggregate amount not exceeding \$30,000,000 (the “Commitment”). The Purchase Agreement will include a \$70,000,000 accordion feature with Notes under the accordion to be advanced at JPMorgan’s sole discretion.</p> <p>While held by the Bank, the Notes shall not be rated by any rating agency, shall not be DTC eligible, shall not be assigned a CUSIP number, and shall not be marketed pursuant to any official statement.</p> |
| <b>Purpose:</b>       | To provide financing for various capital improvement projects across the University campus.  |
| <b>Term:</b>          | <p>Drawdown Period: The Borrower will have up to three (3) years from the closing date (the “Commitment Expiry Date”) to request purchases of Notes by the Bank. The Purchase Agreement will expire on the Commitment Expiry Date, whereupon the borrowing(s) will be governed by the Note(s) and related loan document(s).</p> <p>Each Note will have a repayment term of 5 years from the date of issuance of the Note.</p>  |
| <b>Note Drawdown:</b> | Notes may be drawn down in multiple advances, after providing three (3) business days’ notice to the Bank, in minimum denominations of \$1,000,000 and integral multiples of \$100,000 in excess thereof. Amounts  |

In providing this letter of interest JPMorgan is not acting as a fiduciary or agent of the recipient, nor as an advisor to the recipient, including a “Municipal Advisor” as defined in Section 15B of the Securities and Exchange Act of 1934, as amended, and in related rules (17 CFR Pars 200, 240, 249) and the contemplated transaction would be within the Bank exemption in such rules. This letter and any ensuing discussions regarding the potential transaction does not and will not constitute any recommendation or advice to the recipient irrespective of whether JPMorgan or any of its affiliate has provided other services, including advisory services, to the recipient. JPMorgan and its affiliates have financial and other interests that differ from those of the recipient and the recipient should consult with its own financial, legal, accounting, tax and other advisors to the extent it deems appropriate.

# J.P.Morgan

|                                    |  |
|------------------------------------|--|
|                                    | <p>drawn and subsequently repaid under a Note may be borrowed again prior to the termination date of the respective Note.</p> <p>Each draw down request will be accompanied by a report of Sources and Uses and a fundraising report for the applicable project.</p>   |
| <b>Note Optional Redemption:</b>   | Fixed Rate Notes: No optional redemption. Make-whole prepayment penalty applies to any redemption prior to the maturity date of the Note(s).   |
| <b>Interest Rate:</b>              | See Appendix. Interest on the notes shall be Taxable.  |
| <b>Fees:</b>                       | See Appendix.  |
| <b>Security:</b>                   | Revenue pledge consisting of a pledge of fundraising revenues received by the University of Florida Foundation for each project to be financed with each Note.   |
| <b>Covenants:</b>                  | The University will maintain a minimum investment grade public debt rating. It will be an Event of Default if the University's public rating shall fall below investment grade.  |
| <b>Documentation / Legal Fees:</b> | <p>JPMorgan will engage outside legal counsel to draft the appropriate credit agreement(s) and other legal documentation associated with the Purchase Agreement and each Note. All legal fees will be at the Borrower's expense.</p> <p>The Purchase Agreement and each Note will include, but not be limited to, the terms and conditions outlined herein as well as JPMorgan's standard provisions with respect to representations and warranties, covenants, events of default, remedies, indemnification (gross negligence standard), waiver of jury trial, right of set-off, OFAC and anti-corruption, waiver of sovereign immunity, most favored nations, and full protection against increased costs and changes in capital adequacy requirements (including, without limitation, in connection with the Dodd Frank Act and Basel III, regardless of the date enacted).</p> |

Please note that these parameters are provided solely for purposes of facilitating further discussion and are indicative only, based upon current market conditions and our current knowledge of the University of Florida's financial condition and credit standing, and are subject to due diligence and credit approval. Nothing expressed or implied in this letter constitutes an offer or commitment by JPMorgan or any of its affiliates to lend or provide any financial services either on the terms outlined above or on any other terms. Such obligations would arise only under separate, mutually acceptable written agreements between us.

JPMorgan has been a market leader in public finance credit for over 35 years and our deep familiarity with this sector is viewed as a strong benefit by our higher education clients. We believe our experience in providing financing solutions and our extensive experience in deal execution foster efficient and cost effective transactions for our customers.

In providing this letter of interest JPMorgan is not acting as a fiduciary or agent of the recipient, nor as an advisor to the recipient, including a "Municipal Advisor" as defined in Section 15B of the Securities and Exchange Act of 1934, as amended, and in related rules (17 CFR Pars 200, 240, 249) and the contemplated transaction would be within the Bank exemption in such rules. This letter and any ensuing discussions regarding the potential transaction does not and will not constitute any recommendation or advice to the recipient irrespective of whether JPMorgan or any of its affiliate has provided other services, including advisory services, to the recipient. JPMorgan and its affiliates have financial and other interests that differ from those of the recipient and the recipient should consult with its own financial, legal, accounting, tax and other advisors to the extent it deems appropriate.

# J.P.Morgan

We look forward to further discussing terms and conditions of a potential facility in greater detail, and, subject to your interest in pursuing such a facility, the commencement of due diligence. Our contact information is provided below:

Thank you for your consideration.

Sincerely,

Mark Meyer  
Executive Director  
450 S Orange Ave, Floor 10  
Orlando, FL, 32801-3383  
(407) 236-5385  
[mark.w.meyer@jpmorgan.com](mailto:mark.w.meyer@jpmorgan.com)

Jackie Young  
Executive Director, Credit Risk  
450 S Orange Ave, Floor 10  
Orlando, FL, 32801-3383  
(407) 236-5382  
[jackie.young@jpmorgan.com](mailto:jackie.young@jpmorgan.com)

Tim Bittel  
Executive Director  
383 Madison Ave, Floor 3  
New York, NY 10179  
(212) 270-2169  
[timothy.j.bittel@jpmorgan.com](mailto:timothy.j.bittel@jpmorgan.com)

In providing this letter of interest JPMorgan is not acting as a fiduciary or agent of the recipient, nor as an advisor to the recipient, including a "Municipal Advisor" as defined in Section 15B of the Securities and Exchange Act of 1934, as amended, and in related rules (17 CFR Pars 200, 240, 249) and the contemplated transaction would be within the Bank exemption in such rules. This letter and any ensuing discussions regarding the potential transaction does not and will not constitute any recommendation or advice to the recipient irrespective of whether JPMorgan or any of its affiliate has provided other services, including advisory services, to the recipient. JPMorgan and its affiliates have financial and other interests that differ from those of the recipient and the recipient should consult with its own financial, legal, accounting, tax and other advisors to the extent it deems appropriate.



## APPENDIX

### INTEREST RATES AND FEES

---

|                       |   |
|-----------------------|---|
| <b>Upfront Fee:</b>   | None.   |
| <b>Interest Rate:</b> | The Notes will bear interest at a <u>taxable</u> fixed rate.  |
| <b>Fixed Rate:</b>    | <p>The Fixed Rate Notes (the “Fixed Rate Notes”) would accrue interest at a fixed rate determined based on the applicable SOFR Swap Index + an indicative spread of 90-110 bps.</p> <p>The Fixed Rate for each Note will be determined at the time of draw.</p> |
| <b>Facility Fees:</b> | <p>Unused Facility Fee will be payable quarterly in arrears on the unused component of the Facility.</p> <ul style="list-style-type: none"><li>• Indicative Unused Facility Fee of 15-25 bps.</li></ul>   |

In providing this letter of interest JPMorgan is not acting as a fiduciary or agent of the recipient, nor as an advisor to the recipient, including a “Municipal Advisor” as defined in Section 15B of the Securities and Exchange Act of 1934, as amended, and in related rules (17 CFR Pars 200, 240, 249) and the contemplated transaction would be within the Bank exemption in such rules. This letter and any ensuing discussions regarding the potential transaction does not and will not constitute any recommendation or advice to the recipient irrespective of whether JPMorgan or any of its affiliate has provided other services, including advisory services, to the recipient. JPMorgan and its affiliates have financial and other interests that differ from those of the recipient and the recipient should consult with its own financial, legal, accounting, tax and other advisors to the extent it deems appropriate.



**UF ENTERPRISE  
FINANCIAL REPORT  
Q3 FY2023**



# QUARTERLY FINANCIALS

Financial Statements are presented under the “One UF” model, representing University of Florida Enterprise, including the University of Florida, its Direct Support Organizations and Affiliates. This presentation provides a comprehensive financial profile, which facilitates governance and strategic management.

The information presented on the following pages has three objectives:

- Enhance transparency by utilizing the university's Enterprise Resource Planning (ERP) system to facilitate decision-making and governance
- Be repeatable and readily calculated with generally accepted standards and based on established higher education financial indicators
- Provides ability to compare and benchmark results with industry standards to provide information on institutional health and/or the performance of peer institutions

# Table of Contents



Q3 at a Glance  
**Page 1**



Enterprise and UF Financial Dashboards  
**Page 2 - 9**



Quarterly Executive Summaries  
**Page 10 - 27**



Appendices  
**Page 28**



Contact Information

# Q3 at a Glance

UF Contracts  
& Grants



+10%  
+\$58M\*



Patient Service  
Revenue



+\$87M

Advancement



Contributions  
+25%  
+\$60M

Digital **GATORONE** ID's  
introduced to allow  
for more convenient,  
faster transactions.

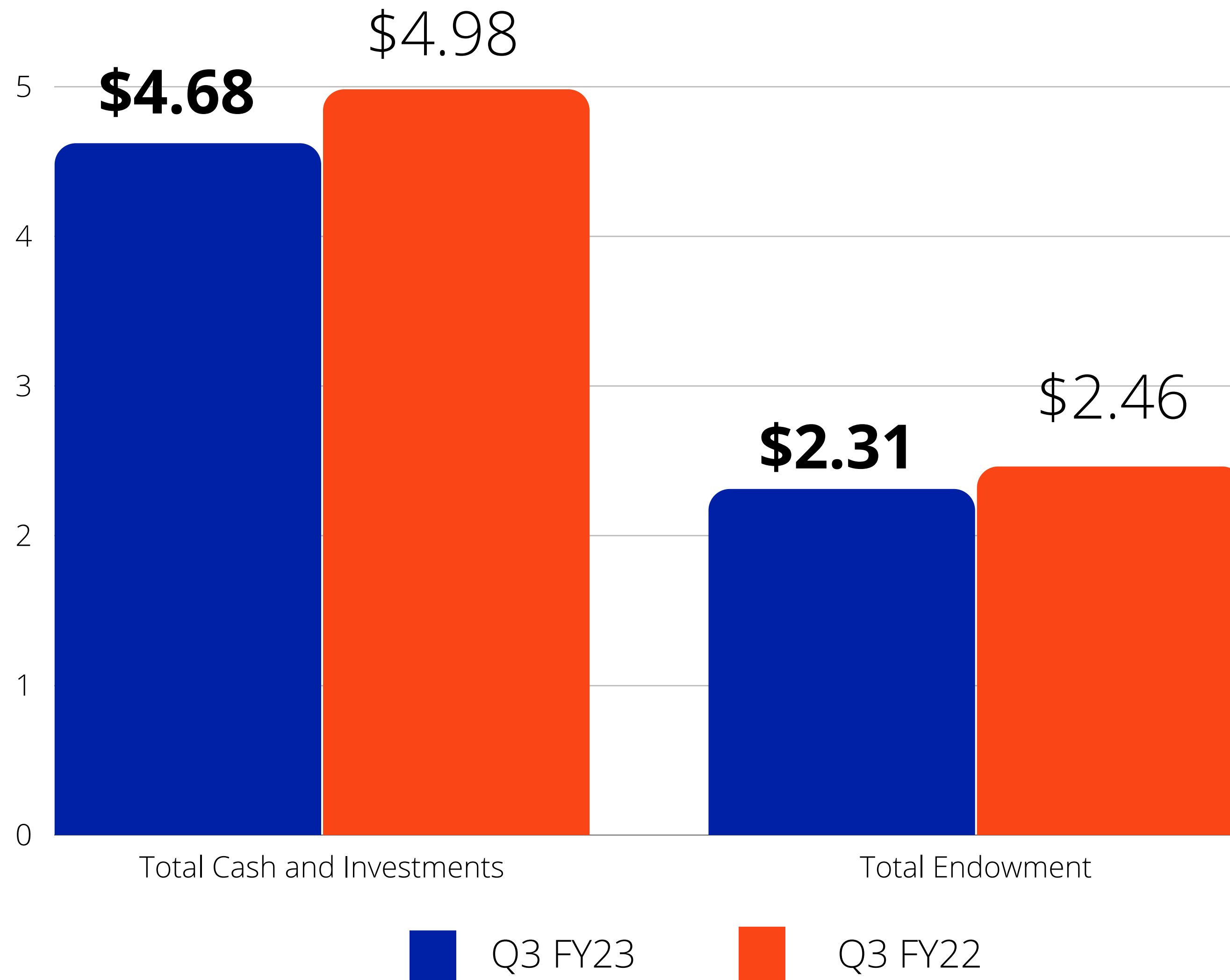


UF ranked **#2** among  
public universities for  
economic return by  
Degree Choices

\*Compared to Q3 of FY22

# UF Enterprise Cash & Investments

Year-over-year decrease of \$455M for cash and investments and endowments as a result of losses experienced across the enterprise during the last quarter of FY22 and first two quarters of FY23 due to unfavorable market conditions.



**\$455M decrease from FY22**  
for cash and investments and endowment

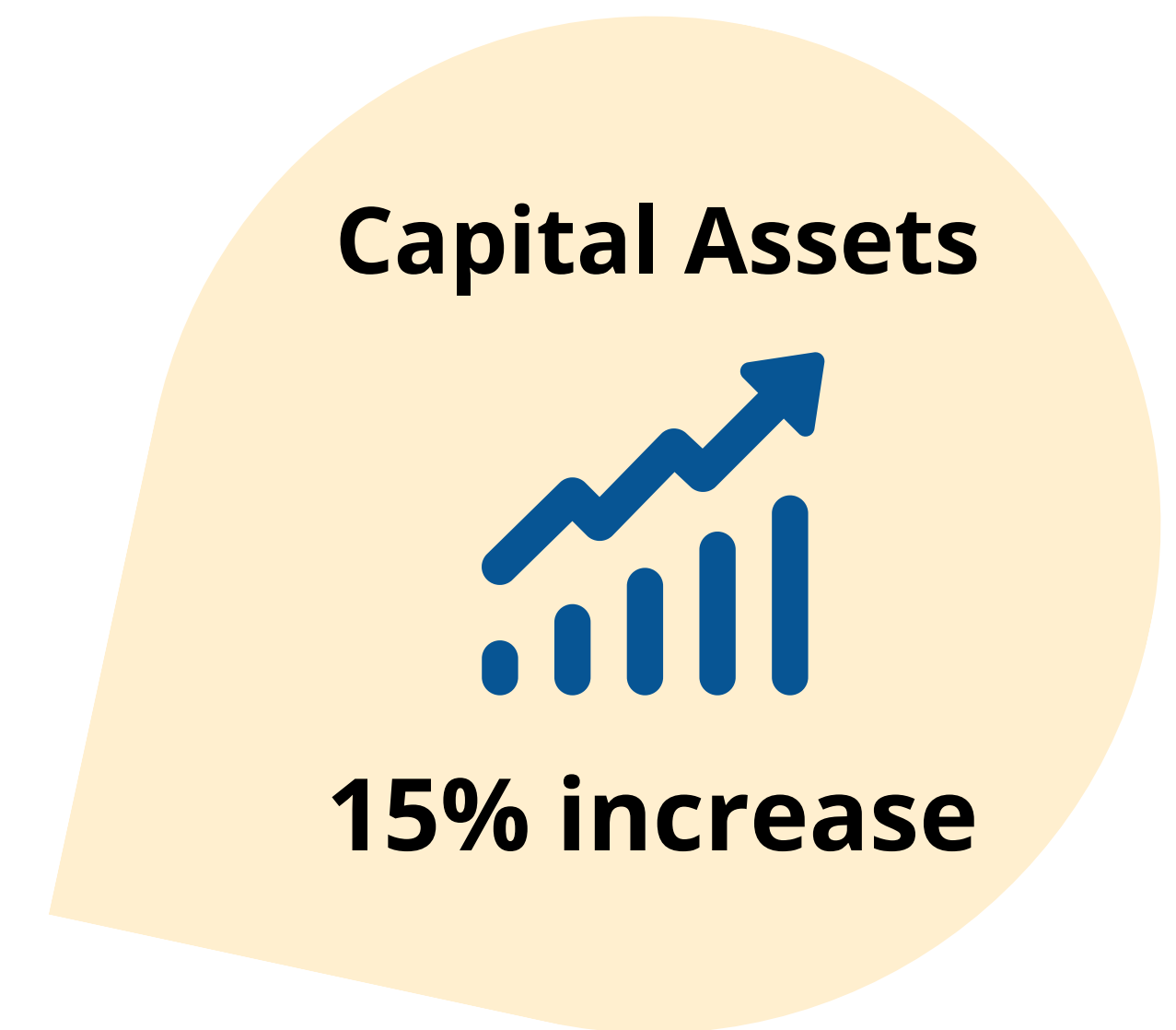
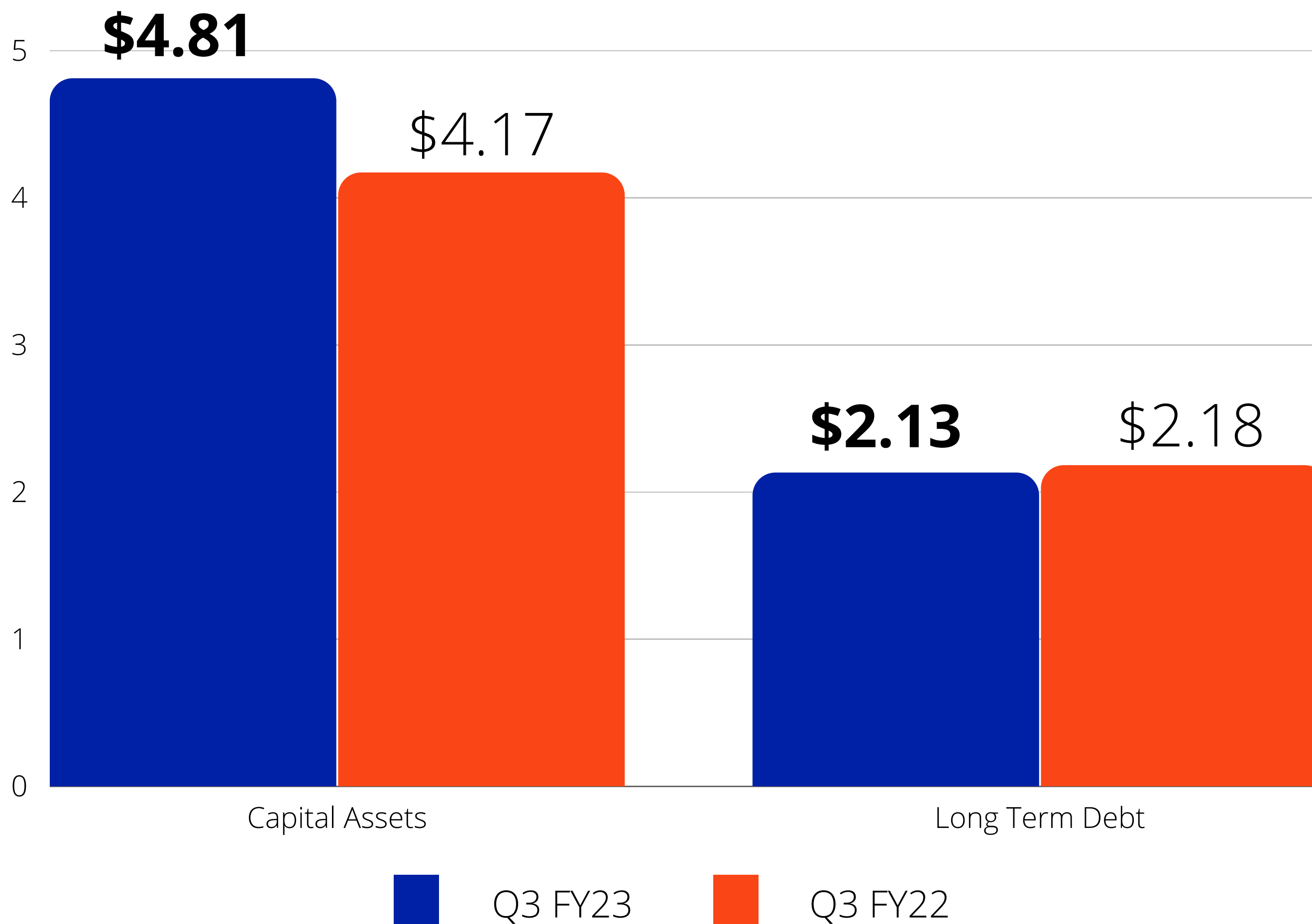
The callout box features a light blue background and a white arrow pointing left towards the main chart. It contains the text '\$455M decrease from FY22 for cash and investments and endowment'. Below the text is a small icon consisting of a bar chart with four bars of varying heights, a green dollar sign above the first bar, and an orange arrow pointing downwards from the top of the chart.

\*Amounts expressed in billions

# UF Enterprise Capital Assets & Debt

Includes the key projects shown below to advance the capital improvement plan:

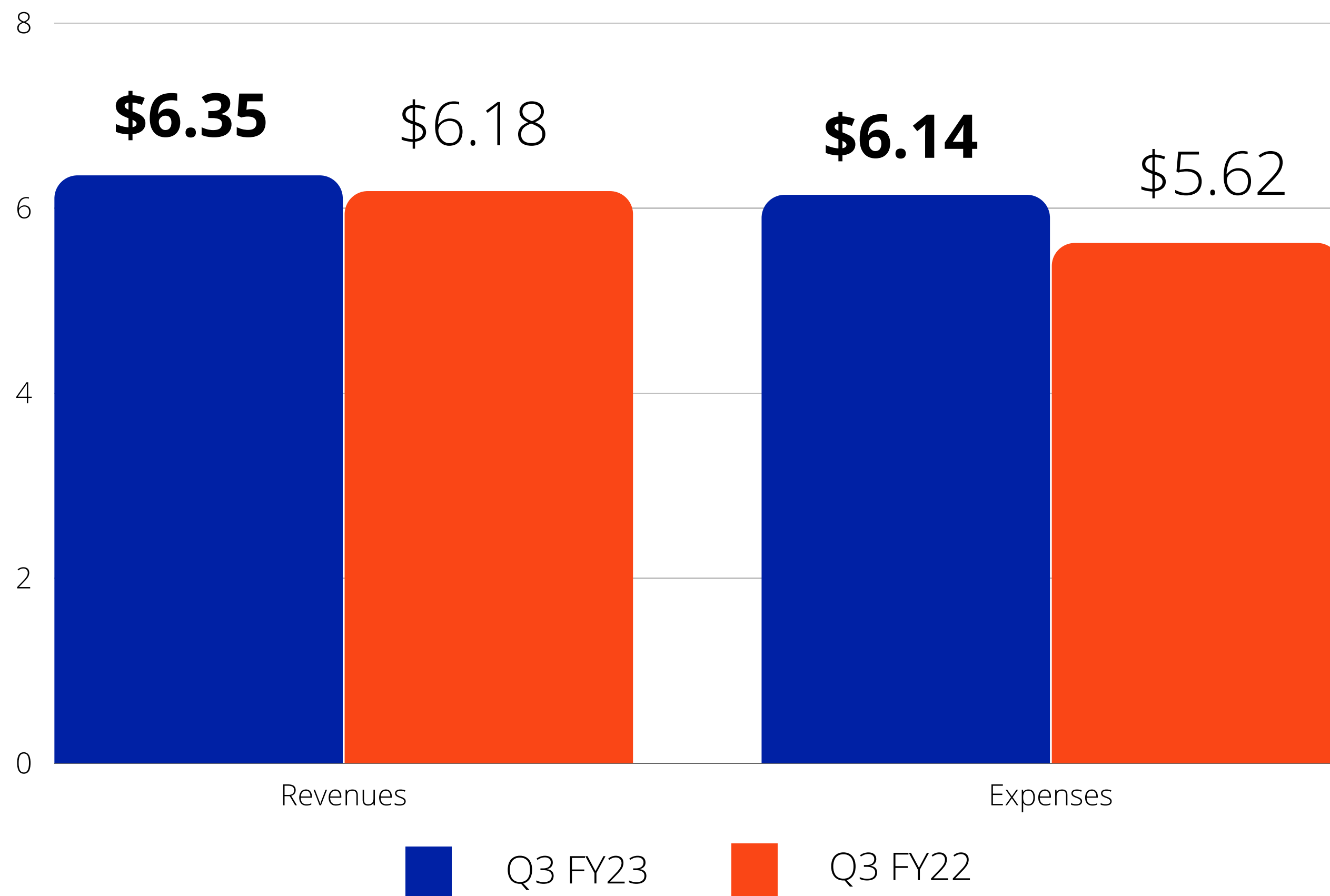
- Capital Assets increased due to the integration of Herbert Wertheim UF Scripps Institute for Biomedical Innovation & Technology in April 2022 and construction in progress including the Honors Residential College and the Data and Information Technology Building.



\*Amounts expressed in billions

# UF Enterprise Revenues & Expenses

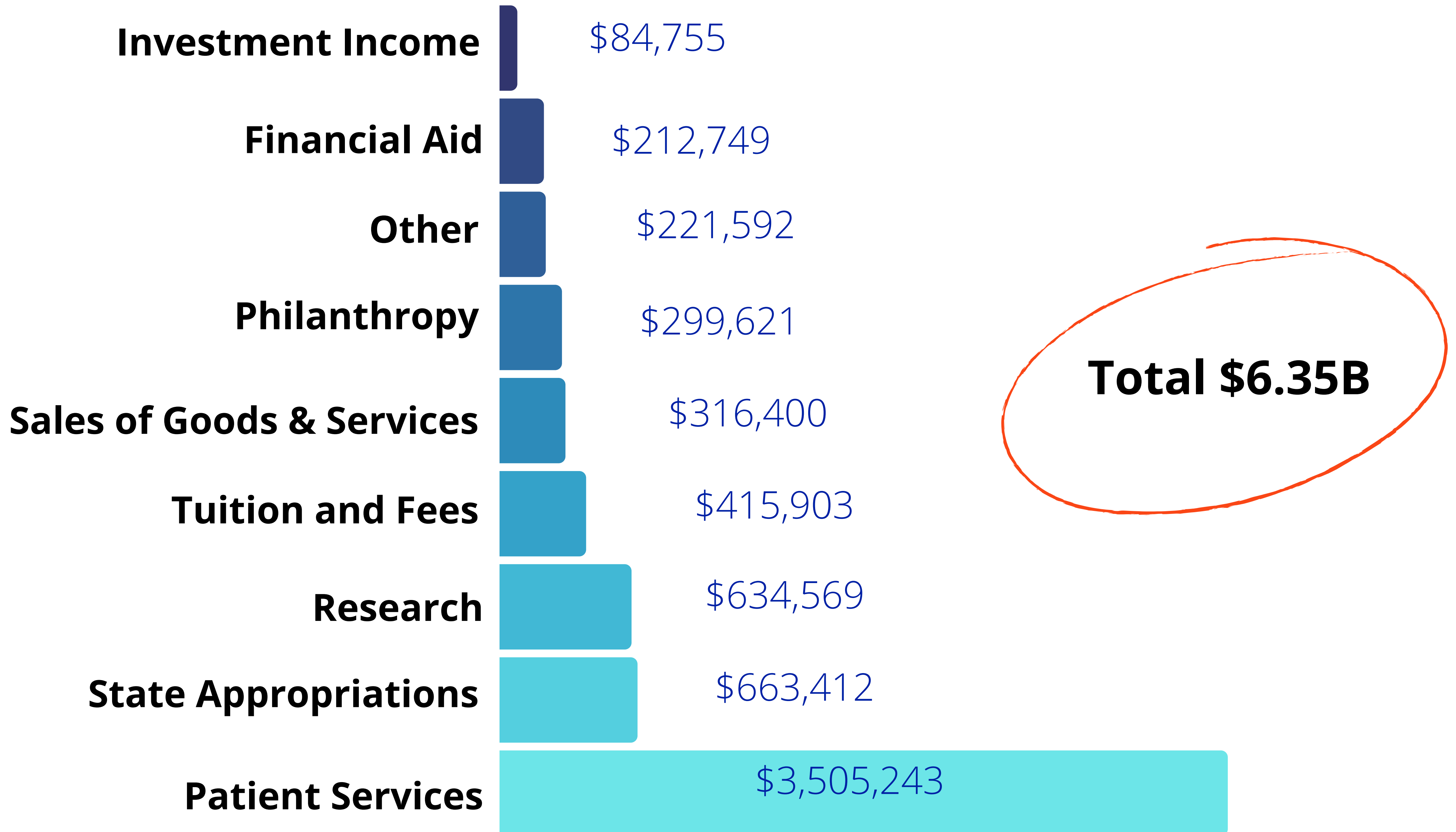
- Revenues have increased 3% (\$172M) driven by increases Contracts & Grants, Patient Services Revenues, and Contributions.
- Expenses increased 10% (\$517M) with increases in salaries and wages related to staffing increases, talent recruitment, and retention, particularly in healthcare providers, as well as higher costs for services and supplies driven by inflation.





# UF Enterprise Revenue Sources

Q3 FY23

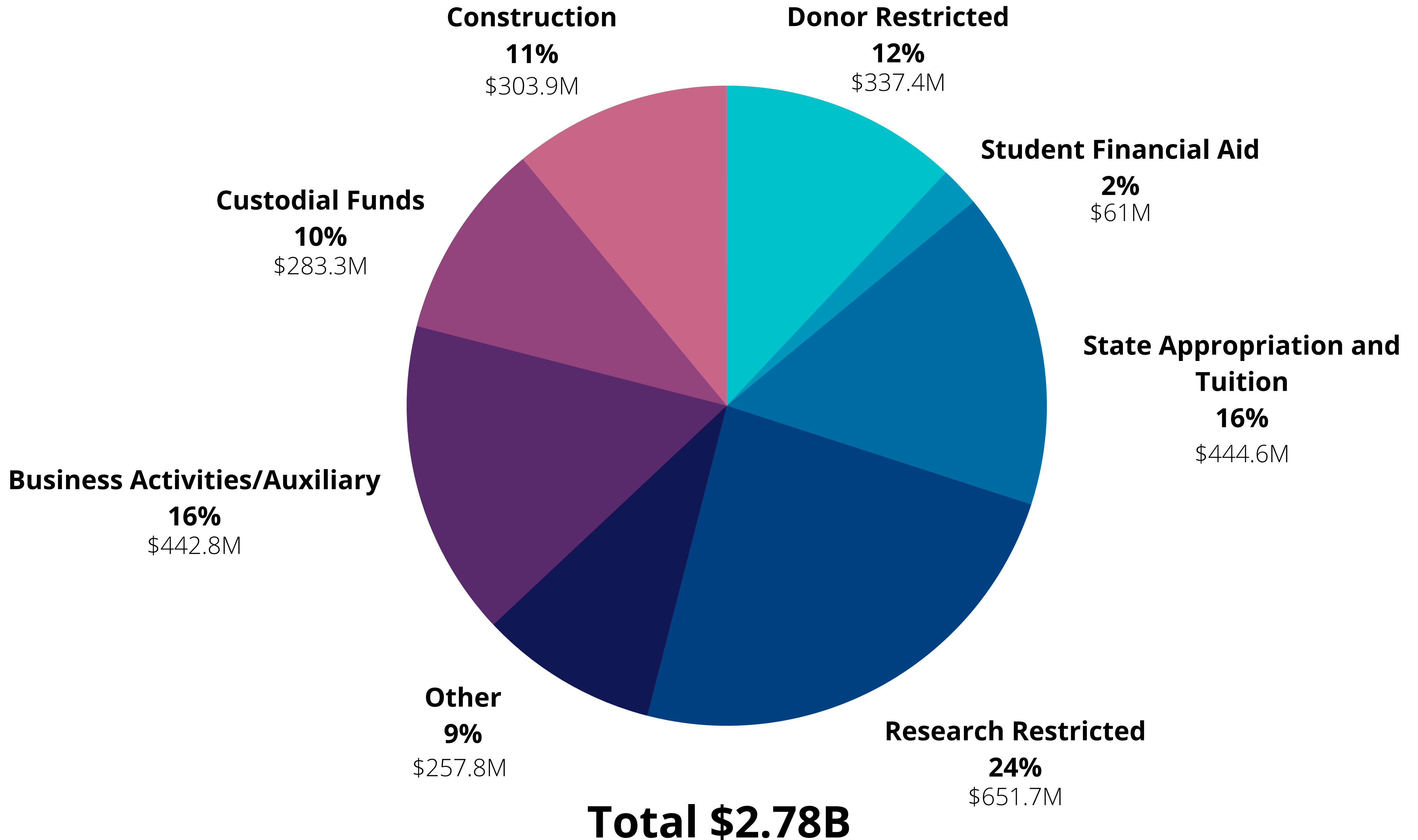


\*Amounts expressed in thousands

# UF Cash & Investments

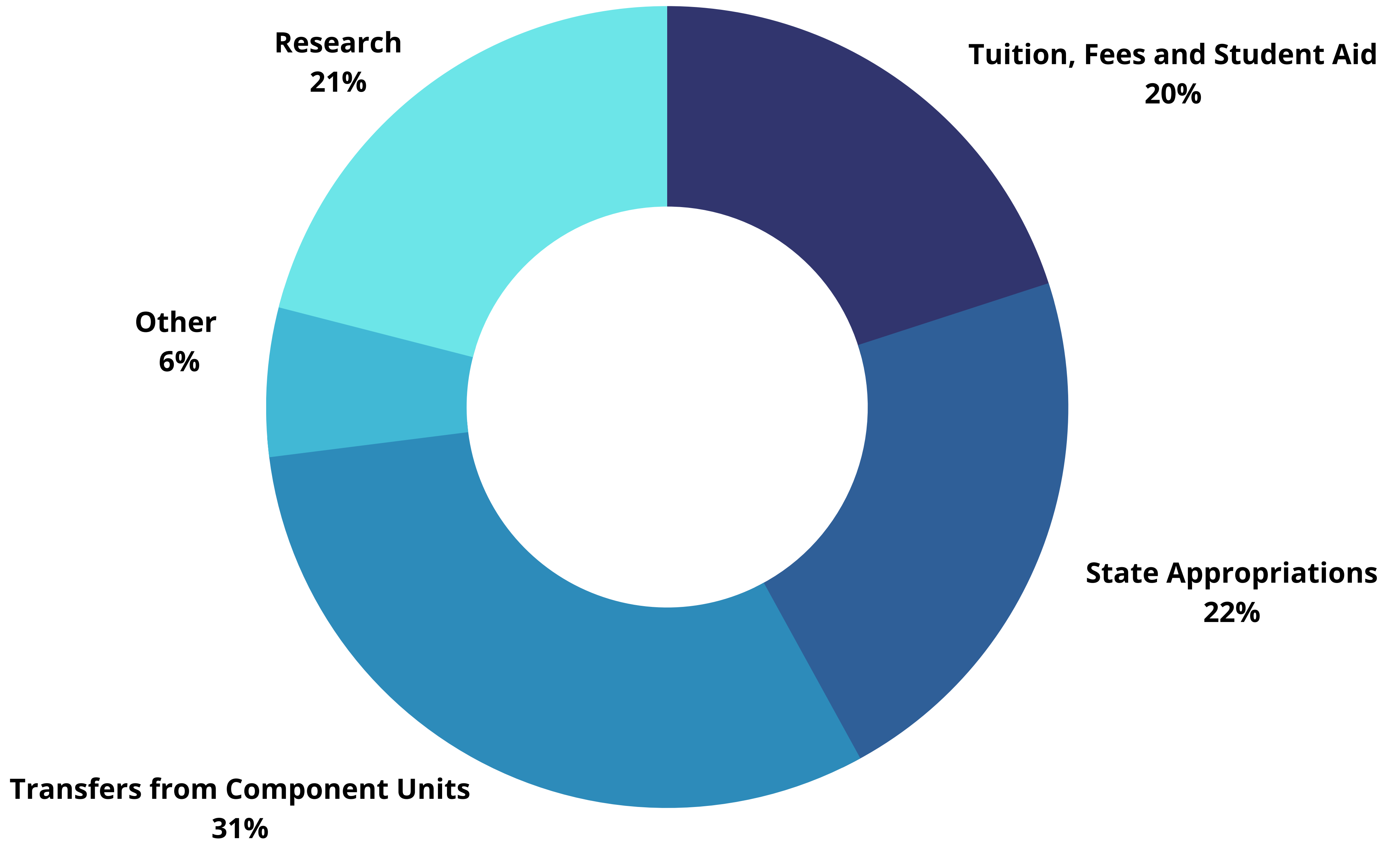
## Q3 FY23

(as of 03/31/2023)



# UF Revenue Sources

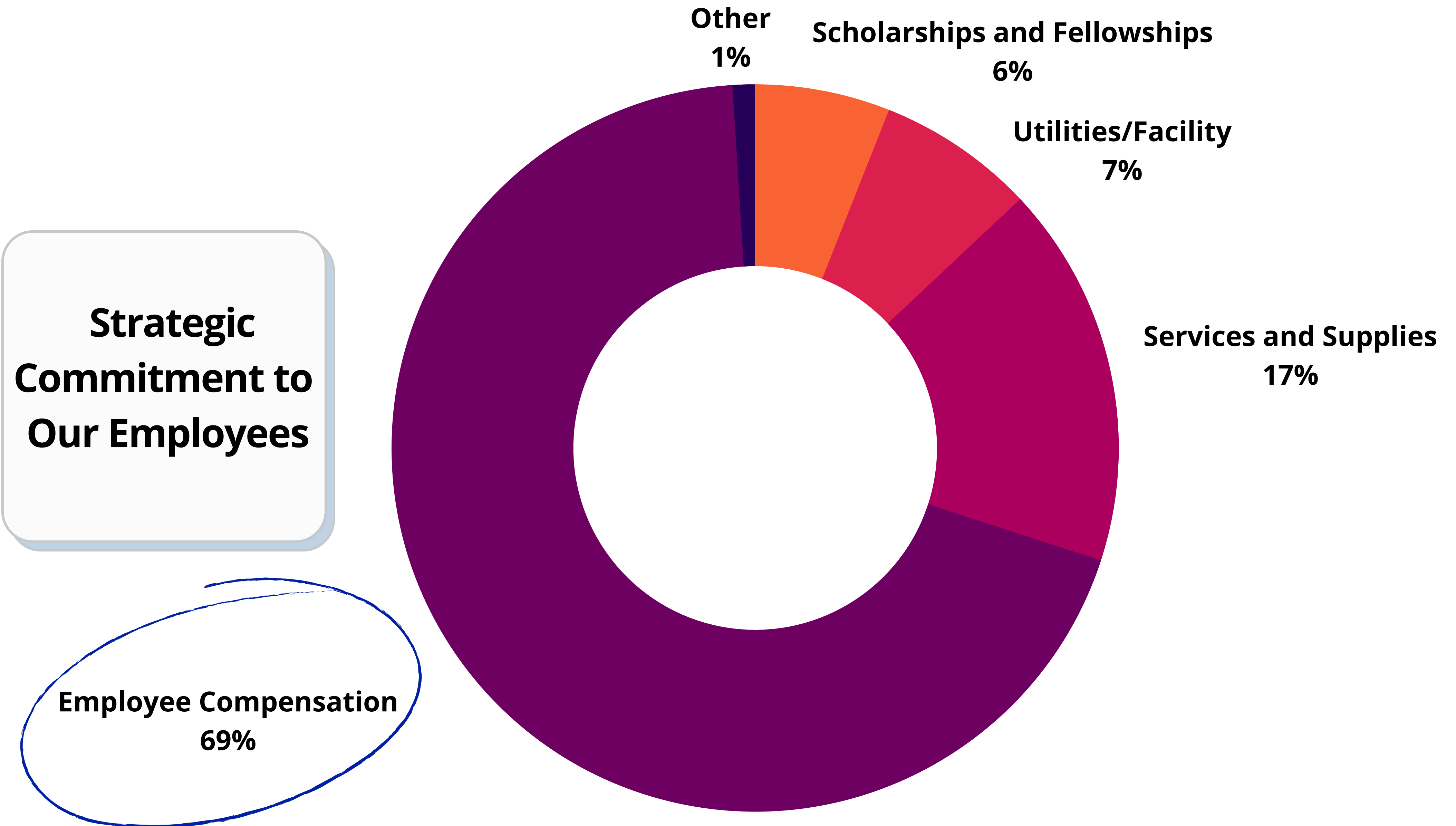
Q3 FY23



**Total \$3.07B**

# UF Expenses

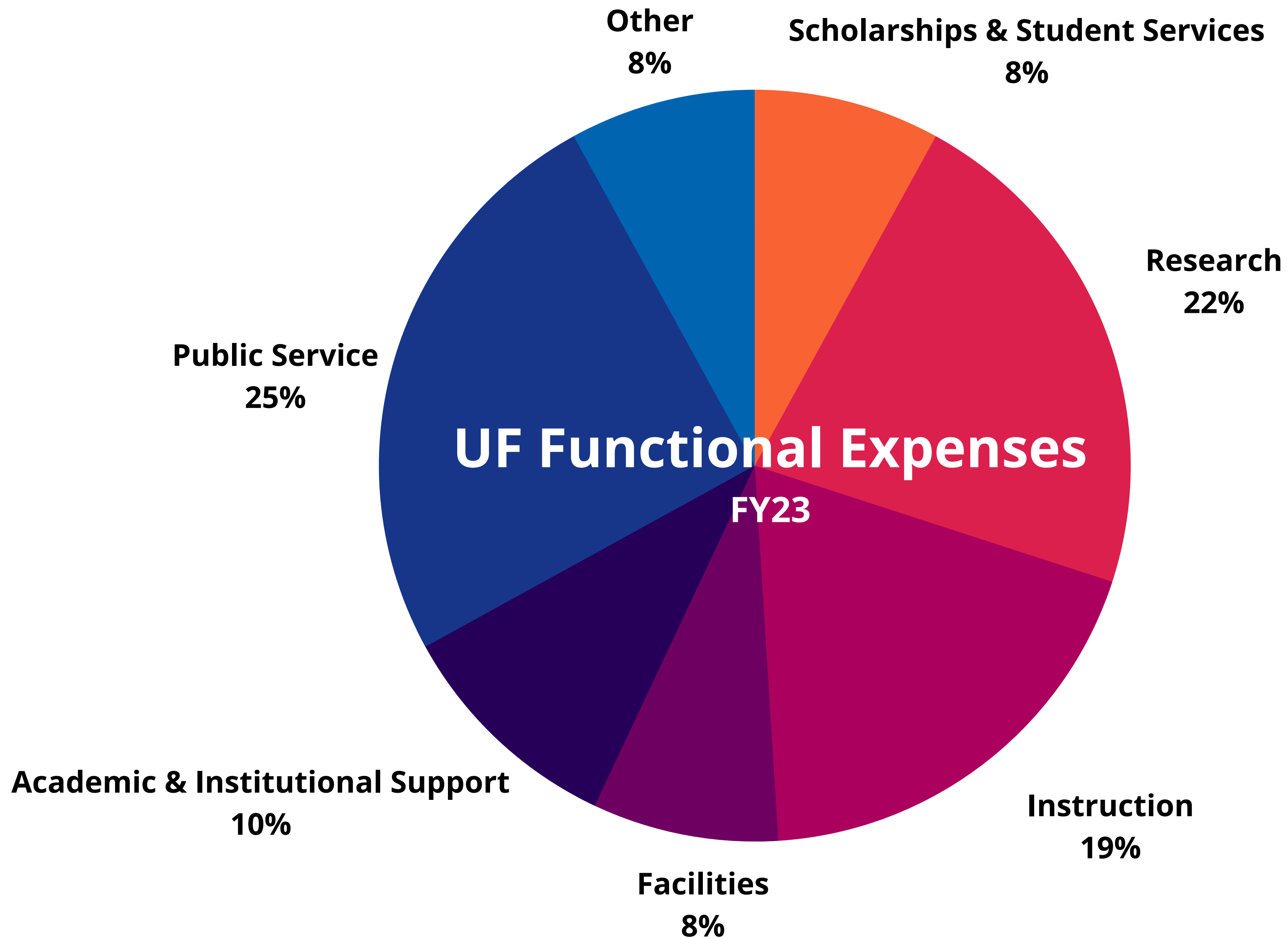
## Q3 FY23



**Total \$2.98B**

# UF Mission

## Teaching, Research and Service



# QUARTERLY EXECUTIVE SUMMARIES



# Quarterly Executive Summaries

## UNIVERSITY OF FLORIDA

Compared to prior Q3 fiscal year-to-date, revenues in FY23 increased by 3% (\$92M) and expenses increased by 11% (\$286M). Net Income decreased by 68% (\$193M) year-over-year, mainly driven by investment losses, final tranche of one-time Higher Education Emergency Relief Funding (HEERF), and increases in employee compensation and operating expenses.

### Revenues

The revenue increase year-over-year was driven by gains in Contract and Grants and Transfers from Component Units, offset by reductions in Investment Income and Other Revenue.

Contracts and Grants revenues were up 10% (\$58M) from additional federal agency funding, in particular the Department of Health and Human Services with the integration of the Herbert Wertheim UF Scripps Institute for Biomedical Innovation and Technology and from the Department of Defense.

Transfers from Component Units increased 10% (\$87M) largely driven by transfers from Clinical Practice Plans due to increased patient billing and transfers from the University of Florida Foundation related to the New World Reading Initiative.

There was a decrease of 164% (\$27M) in Investment Income compared to prior year due to continued market volatility. A reduction in Other Revenue of 62% (\$73M) is the result of decreased distributions of Higher Education Emergency Relief Funding (HEERF) which was a part of one-time funding.

# Quarterly Executive Summary

## UNIVERSITY OF FLORIDA CONTINUED

### Expenses

Notable items for the University's year-to-date expenses include increases in Employee Compensation, Services and Supplies, and Utilities due to rising labor costs and inflationary pressures.

An increase of 9% (\$166.8M) year-over-year to Employee Compensation was driven by the hiring of regional physicians and clinical faculty for UF Health, the additional employees that joined the University in April 2022 with the Herbert Wertheim UF Scripps Institute for Biomedical Innovation and Technology integration, and more graduate and OPS students.

Scholarships and Fellowships decreased by 7% (\$14.5M) year-over-year mainly driven by the decrease in distributions of one-time student financial aid funded by the Higher Education Emergency Relief Fund (HEERF).

Services and supplies increased by 21% (86.1M) due to increased sponsored research activities (\$62M), increased spending against Component Unit Transfers (\$7M Foundation and remaining in Clinical Practice Plans). Utilities expenses were up 50% (\$20M) due to timing of delayed billings from vendors in FY22 (\$8M), the additional utilities associated with the Herbert Wertheim UF Scripps Institute for Biomedical Innovation and Technology (\$3M), and rising utility rates in electric and steam.

Other Non-Operating Expenses increased 102% (\$20.7M) from a combination of increased repair and maintenance capital projects and furniture and equipment for capital projects.



# Quarterly Executive Summary

## UNIVERSITY OF FLORIDA CONTINUED

### Buildings and Equipment

The Buildings and Equipment balance significantly increased since the end of the same quarter last year with the integration of the Herbert Wertheim UF Scripps Institute for Biomedical Innovation and Technology in April 2022 (\$156M in capital assets) and the ongoing construction projects on campus, notably the Honors Residential College, and the Data Science and Information Technology Building.

# Quarterly Executive Summaries

## THE UNIVERSITY ATHLETIC ASSOCIATION, INC.

The University Athletic Association (UAA) has made a full recovery from the pandemic impact that was experienced over the past two years. Revenues and expenses are operating as expected and in alignment with the full-year budget. The UAA experienced a decrease in Employee Compensation and Benefits compared to the same time last year, primarily related to football operations. Home game event attendance has returned to those similar to the 2019 season. College athletics continues to experience change at a relatively rapid pace. This includes changes around permissible benefits to student athletes and NIL, along with legislative and judicial rulings on a national level.



### About

*The University of Florida Athletic Association, Inc. (UAA) conducts various inter-collegiate athletic programs for and on behalf of the University.*

---

## UF FOUNDATION, INC.

Items of note through the quarter ended March 31, 2023 were:

- Pledges receivable were up \$96M, particularly due to a major \$50M pledge secured in June 2022 and several large pledges secured during FY23. Additionally, contributions exceeded budgeted amounts by \$131M, primarily due to large endowed and private equity contributions received during FY23 as well as these large FY23 pledges.
- Preliminary endowment returns through the end of Q3 FY23 were 3.1%, and the endowment value was \$2.3B.



### About

*University of Florida Foundation, Inc. (UFF) solicits, collects, manages, and directs contributions to the various academic departments and programs of the University and assists the University in fund raising, public relations, and maintenance of alumni records. Their financial statements include the activities of the University of Florida Alumni Association, Inc.*

# Quarterly Executive Summaries



## About

*Shands Teaching Hospital & Clinics, Inc. (Shands) was incorporated October 15, 1979, as a not-for-profit corporation. Shands, a major tertiary care teaching institution, is a leading referral center in the state of Florida and the southeast United States and facilitates medical education programs at the University.*

## SHANDS TEACHING HOSPITAL AND CLINICS, INC.

UF Health has seen significant improvements in its financial performance from FY23 Q2 to Q3. Revenue is up 7% (\$129M) year-over-year, with Patient Services revenue now pacing ahead of last year and up to budget. Additionally, investment losses experienced during the first two quarters of FY23 have turned to gains, opposite of the losses experienced at the same time in Q3 of FY22. The revenue gains have been offset by increased expenses of 10% (\$185M) as a result of increases in both Employee Compensation and Benefits and Supplies and Services. Overall Net Income is flat to budget.

The financial results through FY23 Q3 have been significantly impacted by the following factors:

### Revenues

- Investment gains of \$46.5M in FY23 compared to investment losses of \$59.3M in FY22 due to changes in global financial markets.
- Federal Stimulus funds of \$20.9M received in FY22, not recurring in FY23.
- A \$42.8M increase in patient revenue, which is due a \$75.1M increase in revenue from patient care activities driven by increased patient volume and inflationary increases in payor payment rates. This is partially offset by a \$32.3M decrease in state supplemental Medicaid payments due to certain one-time payments in FY22, not recurring in FY23.

### Expenses

- A \$95.4M increase in salaries and benefits due to increased use of contract labor and increased staff wages due to market adjustments.
- A \$42.6M increase in employee benefits expense due to increases in the defined benefit pension costs.
- An increase of \$27.8M in supply costs from inflationary pricing increases from suppliers.

# Quarterly Executive Summaries



## About

*Shands Jacksonville HealthCare, Inc. (SJH) is a Florida not-for-profit corporation. Shands Jacksonville was organized primarily to provide healthcare and related services to the community, including the City of Jacksonville and surrounding counties, and to support the teaching and research missions of the University.*

## SHANDS JACKSONVILLE HEALTHCARE, INC.

### Revenues

- Trends identified through Q2 FY23 continued in Q3, with acute patient volume below budget, while observations cases are higher. Because observation case reimbursement is lower than acute inpatient case reimbursement, net patient revenue is unfavorably impacted. Surgical, birth and outpatient volumes are also below budget and impacting net patient revenue.
- Q3 FY22 included the entire first year of the Medicaid Direct Payment Program (DPP) based upon the City of Jacksonville passing a resolution establishing a Local Provider Participation Fund on 9/28/2021, resulting in \$32.1M being recognized in September 2022, while in FY23 DPP has been budgeted to be recorded each month, resulting in slightly lower revenues.

### Expenses

- Q3 FY23 employee compensation and benefits costs have improved, although they remain higher than Q3 FY22 from the impact of costly contract labor utilization and nursing incentives, which have recently been phased out. Nurse recruiting efforts are progressing and have favorably impacted these cost reductions. Comparing to budget, Q3 FY23 employee compensation and benefits costs are favorable related to the mix of contract labor to permanent employees resulting in lower 401k and FICA costs.
- In total, supplies, services and other expenses for Q3 FY23 are fairly consistent with Q3 FY22, but are lower than budget as a result of lower spending on medical supplies with lower patient volumes.

# Quarterly Executive Summaries



## About

*The Florida Clinical Practice Association (FCPA) bills and collects clinical professional fees to support the educational, research, and service programs of the University of Florida College of Medicine.*

### **FLORIDA CLINICAL PRACTICE ASSOCIATION, INC.**

The Florida Clinical Practice Association, Inc. (FCPA) generated increases in revenue during Q3 FY23 compared to Q3 FY22 that were offset by increases in both Transfers to the University and Supplies and Services driven by higher labor expense. While there is a variance comparing to Q3 of FY22, overall financial performance is in line with budget.

Total revenue is up 0.5% (\$3.5M) to budget and 6.5% (\$40.7M) when compared to Q3 of the prior year. Patient Service Revenue increased 7% (\$40.2M) compared to prior year. The direct patient service revenue setbacks experienced through the second quarter, resulting from the hurricane clinic closures and patient cancellations, started to turn around during the third quarter.

Transfers to the University increased 2% (\$10.3M) to budget through Q3 FY23 as the labor market challenges experienced during the first half of the year continue to persist. Significant pressure in the labor market, especially for healthcare providers, has required higher pay levels to maintain a stable and reliable workforce. Services and supplies had a 12.7% (\$13.5M) favorable variance to budget, but represented a 17.9% (\$23M) increase to Q3 FY22.

Cash and Investments at 03/31/23 decreased \$30.7M compared to 03/31/22, due in part to an \$8.8M debt reduction, return of \$6M of unused Provider Relief Funds (a reduction to accrued liabilities) and a \$3.6M repayment of a Medicaid advance. In addition, funding the increasing labor costs and lower than expected Hospital support has also contributed to the decrease in cash.

# Quarterly Executive Summaries

## UF JACKSONVILLE PHYSICIANS, INC.

The University of Florida Jacksonville Physicians operating results for Q3 FY23 reflect changes to assets and liabilities as a result of the implementation of GASB 87 with the recording of right to use assets and deferred inflows for revenue leases as well as lease liabilities. They were also impacted by the timing of receipts from affiliates and the opening of the UF Health East.

There was a 3.7% (\$9.5M) increase in revenues year-over-year due to increases in HMO Fee-for-Service businesses as well as accrual recognition of Low Income Pool (LIP) revenues that were previously recognized only when received. Expenses were impacted by increased Transfers to UF and an increased cost of Supplies and Services related to market adjustments and contract salary increases.



### About

*University of Florida Jacksonville Physicians (UFJP) bills and collects professional fees from the clinical practice of the University of Florida physicians in order to fund and promote the educational, clinical and research missions, and to support the clinical activities, of the Jacksonville campus of the College of Medicine.*

---

## GATORCARE HEALTH MANAGEMENT CORPORATION

GatorCare continued to see an increase in claims expense for both medical and pharmacy compared to prior year, partially due to the COVID-19 cases as well as the admin fees for COVID-19 testing and vaccines.

Although COVID cases declined from prior year, there was a continued increase in claims when comparing to the same period prior year due to the addition of UF Health Central Florida (CFH) employees to the GatorCare insurance plans. This addition of CFH to GatorCare has also increased the employer contribution for that period.

GatorCare also experienced a change in the pharmacy rebates related to the 340B drug pricing program claims, which has negatively impacted the rebate credits that were received compared to prior year.

### About

*GatorCare Health Management Corporation coordinates and facilitates the management of the self-insured health insurance plan of the University and its participating affiliated employers, collecting and paying employer and employee premiums.*

# Quarterly Executive Summaries

## UF INVESTMENT CORPORATION

During Q3 of FY23, UFICO did not have any notable major events to report. Operations were normal and aligned with the budget as expected.

Management fees are billed on a quarterly basis based on budget for the year. The average assets under management as of the end of the third quarter are approximately \$4.5B.

For Q3 of FY23, the UFICO expense ratio (total expenses divided by average assets under management) was 14.0 basis points.

### About

*The University of Florida Investment Corporation (UFICO) promotes the educational purposes of the University of Florida by providing investment research, advice, counsel, and management to and for the University Board of Trustees and affiliated organizations of the University.*

---

## UF RESEARCH FOUNDATION, INC.

UF Research Foundation had another strong quarter.

UFRF's revenues maintained a positive performance, pacing ahead of variance and slightly below prior year. Gatorade royalties increased compared to last year and related department allocations increased, even after Brammer royalties were discontinued. Other operating costs were slightly under budget and in line with prior year.

### About

*The University of Florida Research Foundation Inc. (UFRFI) promotes, encourages, and assists research activities of the University through income derived from or related to the development and commercialization of intellectual properties, which include inventions, discoveries, processes, and work products.*

# Quarterly Executive Summaries

## Agricultural DSOs

### FLORIDA 4-H CLUB FOUNDATION, INC.

Assets were lower than in the prior year due to investments fluctuating from market volatility, as well as liquidating some investments to cover expenses during FY23.

Revenue was lower than budgeted as registration participation to 4-H Camps and other 4-H Programs was less than anticipated.

Expenses were higher than budget due to fixed costs required to conduct programs regardless of participation numbers, as well as rising costs for food and supplies. It has been slightly slower than anticipated in the FY23 Budget, however, Florida 4-H is seeing a healthy comeback post-pandemic, as is evidenced by increased revenue in FY23 over the two years prior.

#### About

*The Florida 4-H Club Foundation, Inc. promotes the educational objectives of the 4-H Youth Development Program, an official part of the Florida Cooperative Extension Service.*

---

### FLORIDA FOUNDATION SEED PRODUCERS, INC.

Operating revenues are slightly lower than Q3 FY23 budget due to timing of reports and payments from royalty licenses.

Operating expenses are higher than Q3 FY23 budget largely due to increase in royalty revenues in FY22 which increases the amounts distributed to UF/FAES and faculty inventors in FY23.

#### About

*The Florida Foundation Seed Producers, Inc. supplies Florida farmers and producers with crop seed and nursery stock. This organization stocks foundation seed of the best known varieties acceptable to Florida climate and soils in adequate quantities and at reasonable prices.*



# Quarterly Executive Summaries

## Agricultural DSOs

### **CITRUS RESEARCH AND DEVELOPMENT FOUNDATION, INC.**

CRDF experienced the usual variance in expenses due to slower than expected spending on approved research agreement budgets, which in turn creates a reduction of revenue with the source of most revenue generated by the institution billings of reimbursable research expenses.

Once the \$5M project with the Citrus Research and Field Trial (CRAFT) DSO within the Florida Department of Agriculture and Consumer Services (FDACS) for large scale field trials completes their Technical Working Group's project approvals, expected in the fourth quarter, there should be a reduction in the variance.

#### **About**

*The Citrus Research and Development Foundation, Inc. (CRDF) advances disease and production research and product development activities to ensure the survival and competitiveness of Florida's citrus growers through innovation.*

---

### **UF LEADERSHIP AND EDUCATION FOUNDATION, INC.**

University of Florida Leadership and Education Foundation, Inc (UFLEF) Q1 FY23 revenues increased 29% (\$120K) year-over-year as a result of a combination of factors. First, two sponsor payments from a conference held in Q4 FY22 were received in Q1 FY23.

Additionally, UFLEF received four new sponsorships for an unbudgeted conference and booked a last-minute group that generated \$11K in registration revenues. Finally, another group whose activity has been increasing created an additional \$30K.

#### **About**

*The University of Florida Leadership and Education Foundation, Inc. furthers agriculture and natural resources education and related activities, promotes agriculture and natural resources leadership, and makes contributions to and confers benefits upon the University.*

# Quarterly Executive Summaries

## UF CATTLE ENHANCEMENT BOARD, INC.

During Q3 of FY23, the Cattle Enhancement Board disbursed payments to external auditors for finalization of the 2022 audit report, financial statement, and Form 990 tax form preparations (originally budgeted to be disbursed in Q4). Majority of remaining cash on hand is to be disbursed to subgrantees for interim invoice submissions in the following quarter. Prior FY variances are aligned with more timely receipt of state appropriations during FY23.

### About

*The University of Florida Cattle Enhancement Board, Inc. promotes research, education, and extension at, or for the benefit of, the Institute of Food and Agricultural Sciences at the University of Florida on issues related to the Florida cattle industry, including, but not limited to, production, disease prevention, forage development, genetic research and technology.*

---

## FACULTY ASSOCIATES, INC.

Professional fees were lower through Q3 FY23 compared to Q3 FY22 and were under budget by over \$1.28M. Clinical revenues were impacted by hurricane closure days in FY23 and by the slowing economy/inflation as patients delay dental care. Additionally, ongoing vacancies in faculty positions resulted in reduced clinical revenues. Investment income is higher and Medicaid Supplemental funds were slightly higher than budgeted and as compared to the previous year.

Faculty Associates, Inc. also received \$2.57M in federal Provider Relief Funds in August, 2022 from a Phase 3 CARES reconsideration application, contributing to the higher total revenues through Q3 FY23 compared to prior year.

Expenses were up slightly from Transfers to UF and payment to the Medicaid Supplement Intergovernmental Transfer (IGT). Overall Net Income through Q3 FY23 is \$5.95M, ahead of budget and prior year.

The cash position has increased compared to last year. The college has preserved these funds to support its share of funding for a new addition and renovations to the existing dental sciences building. Although there is slight increase in accounts receivable, the majority is less than 90 days old.

### About

*Faculty Associates, Inc. bills and collects clinical professional fees to support the educational, research, and service programs of the University of Florida College of Dentistry.*

# Quarterly Executive Summaries

## Other DSO and Affiliates

### UF COLLEGE OF PHARMACY FACULTY PRACTICE ASSOCIATION, INC.

The College of Pharmacy Faculty Practice Association is expecting a decrease of approximately 55-60% of revenue and consequently expenditures (Transfers to UF). This is primarily due to the loss of one of the customers serviced by the Center of Quality Medication (CQM) and an approximate 35% cut in contractual rates to the remaining customer. This resulted in the necessary cut of staffing to accommodate the business decline to operate in a lean capacity while trying to develop on business prospects.

The College of Pharmacy Faculty Practice Association also lost the ability to service one of the resident filled pharmacy sites post Q1, which accounts for 2% of total budgeted revenue.

#### About

*The UF College of Pharmacy Faculty Practice Association, Inc. performs billing and collection of fees to support the educational, research, and service programs of the University of Florida College of Pharmacy.*

---

### FLORIDA VETERINARY MEDICINE FACULTY ASSOCIATION, INC.

The third quarter of FY23 showed continued revenue growth with the UF PETS clinic remaining busy. Additionally, the new location at the World Equestrian Center continues to see a large increase in equine patients, in particular during Q3 from the winter show series occurring January through March. The revenue performance is expected to continue through Q4 as the spring months are historically the busiest.

Planned renovations have been placed on hold and the related funds transferred to construction will be returned. This will reduce the need for transfers to assist hospital operations through the end of the fiscal year and, as a result, transfers should remain relatively flat through year end and assets should increase.

#### About

*The Florida Veterinary Medicine Faculty Association, Inc. bills and collects clinical professional fees to support the educational, research, and service programs of the University of Florida College of Veterinary Medicine.*

# Quarterly Executive Summaries

## Other DSO and Affiliates

### FLORIDA HEALTH PROFESSIONS ASSOCIATION, INC.

Florida Health Professional Association's (FHPA) Q3 FY23 Net Income is similar to prior year and in line with budget. In FY22, FHPA discovered ineligible claims to Medicare and Tricare during FY15-FY21 totaling \$511K. The ineligible claims were refunded to the providers resulting in a significant one time increase in expenses.

During Q2 of FY23, FHPA transferred an additional \$544K above budget to the University in support of new college initiatives.

#### About

*The Florida Health Professions Association, Inc. performs billing and collection of clinical professional fees to support the educational, research, and service programs of the University of Florida College of Public Health and Health Professions.*

---

### UF COLLEGE OF NURSING FACULTY PRACTICE ASSOCIATION, INC.

Professional fees revenues are up slightly with the hiring of additional providers, enabling capacity for increased patient visits. Expenses increased compared to prior year due to timing of transfers, with the variance expected to decrease after Q4.

Overall results are flat to budget.

#### About

*University of Florida College of Nursing Faculty Practice Association, Inc. performs billing and collection of professional fees to support the educational, research, and service programs of the University of Florida College of Nursing.*

# Quarterly Executive Summaries

## Other DSO and Affiliates

### **FACULTY CLINIC, INC.**

Faculty Clinic revenue is generated from lease payments for clinical and office space from UF Jacksonville Physicians and Shands Jacksonville, and also consists of operating and maintenance (O&M) funding granted by the State Legislature for the space occupied by University of Florida functions. Because of the nature of the business, operating revenue and expenses do not fluctuate significantly from quarter to quarter.

Year-to-date rental revenue has remained stable as a result of operations returning to normal post-pandemic. Faculty Clinic implemented GASB 87, recording a lease receivable in the amount of \$9.1M and a Deferred Inflow of Revenues of \$8.9M. This is significantly different from prior year performance since the standard is newly implemented. Furthermore, expenses increased 18% year-over-year driven by repairs and maintenance and utilities, including additional costs for chiller and elevator maintenance.

#### **About**

*Faculty Clinic, Inc. operates primarily as a facility management company that leases space to Shands Jacksonville and University of Florida Jacksonville Physicians, Inc.*

---

### **GATOR BOOSTERS, INC.**

During the first three quarters of FY23 football, men's basketball, and baseball contributions were normal relative to having full capacity seating. Major giving contributions consist of donors paying as scheduled or pre-paying their scheduled gift agreements. Other Revenues include contributions made from donors to support program expenses for various sports.

The contributions received have been transferred to the University Athletic Association to support the athletic programs and provide scholarships to student athletes.

#### **About**

*Gator Boosters, Inc. solicits funds for the benefit of the University athletic programs.*

# Quarterly Executive Summaries

## Other DSO and Affiliates

### UF DEVELOPMENT CORPORATION

The new roof that started construction in FY22 has been completed. In addition, the implementation of GASB 87 had a significant impact on the audited statements with an \$8M receivable being booked for all future rents with the offset being a deferred inflow.

Revenue is flat to prior year with base rents and parking fees from individuals returning to the office and occupying the building remaining constant post-pandemic.

Services and Supplies were higher primarily due to the property manager's annual salary being reimbursed to the University in Q1 and higher legal fees. Other expenses increased due to higher electricity and gas expense as more individuals occupy office space along with more maintenance.

Finally, the \$5M note with Shands Hospital was forgiven in September 2022 in exchange for the long-term use of an asset.

#### About

*The University of Florida Development Corporation, Inc. develops and maintains Innovations Square where the University-owned Florida Innovation Hub is located.*

---

### UF HISTORIC ST. AUGUSTINE, INC.

Rents from property and parking increased compared to the same period last year as several new leases began at the start of July at higher rates. The documentary film performed very well in Q3 with an increase to \$48K in revenue. The Colonial Quarter continued to perform well with revenue of \$210K, compared to \$170K prior year. Other Revenue was significantly higher as \$200K was received from FEMA.

Operating expenses decreased overall with lower expenditures through Q3 on building preservation. Overall, the increased revenues and lower expenses have generated a net income of \$636K.

#### About

*The University of Florida Historic St. Augustine, Inc. ensures the long-term preservation and interpretation of State-owned historic properties in St. Augustine.*

# Quarterly Executive Summaries

## Other DSO and Affiliates

### UF SELF-INSURANCE PROGRAM & HEALTHCARE EDUCATION INSURANCE COMPANY

Revenues increased as of Q3 FY23 due to positive investment returns compared to prior year.

A 5-year average was used to estimate FY23 loss adjustment expenses. It is difficult to compare the loss expense and loss adjustment expenses to previous quarters because of the nature of how claims are presented and paid. Claims that are brought to court incur additional legal expenses and the current variance to prior year is due to reserves being increased during the fiscal year.

#### About

*The University of Florida Self-Insurance Program (the Program) was created by the Florida Board of Regents, succeeded by the Florida Board of Governors, pursuant to Section 1004.24, Florida Statutes.*

*The Program provides comprehensive general liability and professional liability (malpractice) coverage for the University of Florida and affiliated teaching hospitals that are providing education in healthcare or veterinary services.*

*Healthcare Education Insurance Company (HEIC) was created on September 1, 1994, as a self-insurance mechanism created pursuant to Section 1004.24, Florida Statutes. HEIC writes coverage for the participants of the Self-Insurance Program (the Program) for loss exposure above the Program's retention. HEIC obtains excess loss reinsurance coverage from commercial insurance carriers for certain layers of exposure.*

# Appendices: Quarterly Financial Reports

## UF Enterprise

- University of Florida
- The University Athletic Association, Inc.
- UF Foundation, Inc.
- Shands Teaching Hospital and Clinics, Inc.
- Shands Jacksonville Healthcare, Inc.
- Florida Clinical Practice Association, Inc.
- UF Jacksonville Physicians, Inc.
- GatorCare Health Management Corporation
- UF Investment Corporation
- UF Research Foundation, Inc.

- Agricultural DSOs
  - Florida 4-H Club Foundation, Inc.
  - Florida Foundation Seed Producers, Inc.
  - Citrus Research and Development Foundation, Inc.
  - UF Leadership and Education Foundation, Inc.
  - UF Cattle Enhancement Board, Inc.
- Other DSO and Affiliates
  - Faculty Associates, Inc.
  - UF College of Pharmacy Faculty Practice Association, Inc.
  - Florida Veterinary Medicine Faculty Association, Inc.
  - Florida Health Professions Association, Inc.
  - UF College of Nursing Faculty Practice Association, Inc.
  - Faculty Clinic, Inc.
  - Gator Boosters, Inc.
  - UF Development Corporation
  - UF Historic St. Augustine, Inc.
  - UF Self-Insurance Program and Healthcare Education Insurance Company

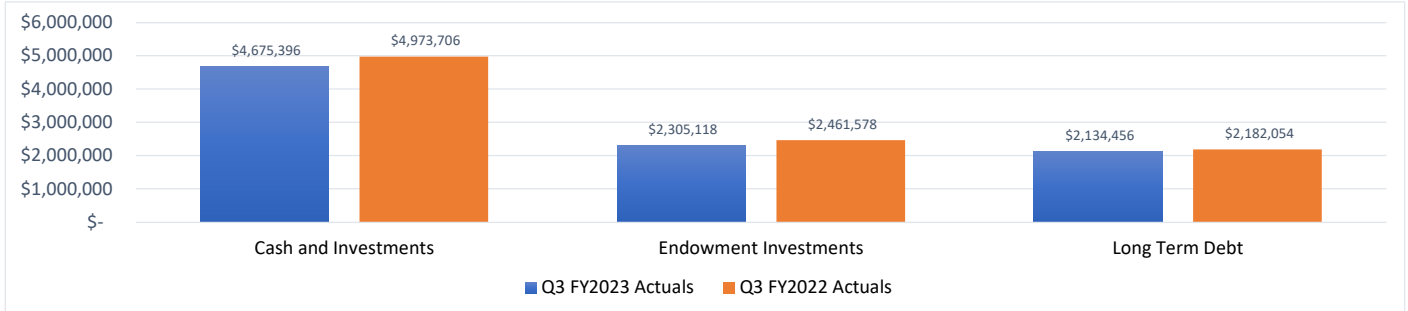


## University of Florida Enterprise

### Quarterly Financial Report

For the nine months ending 3/31/2023 (amounts expressed in thousands)

#### Assets and Liabilities



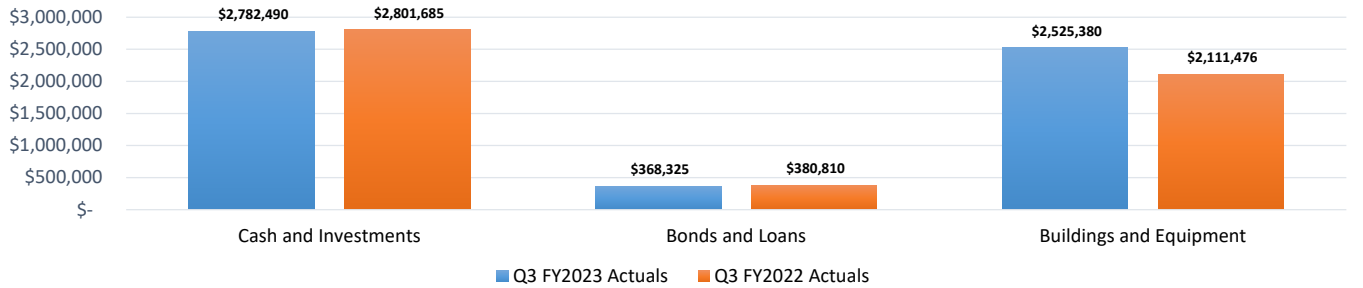
| Revenues and Expenses              | Q3 FY23             | Q3 FY23 Budget      | Actuals to Budget Variance | Q3 FY22             | FY23 to FY22 Variance |
|------------------------------------|---------------------|---------------------|----------------------------|---------------------|-----------------------|
| <b>Revenues</b>                    |                     |                     |                            |                     |                       |
| Tuition and Fees                   | \$ 415,903          | \$ 378,133          | \$ 37,771                  | \$ 397,532          | \$ 18,371             |
| State Appropriations               | 663,412             | 701,262             | (37,850)                   | 656,585             | 6,827                 |
| Contracts and Grants               | 634,569             | 379,451             | 255,118                    | 575,339             | 59,230                |
| Federal and State Financial Aid    | 212,749             | 207,699             | 5,050                      | 209,456             | 3,293                 |
| Patient Service Revenue            | 3,505,243           | 3,499,347           | 5,896                      | 3,417,914           | 87,329                |
| Sales of Goods & Services          | 316,400             | 300,261             | 16,139                     | 296,646             | 19,754                |
| Contributions                      | 299,621             | 165,256             | 134,365                    | 239,852             | 59,769                |
| Investment Income                  | 84,755              | 125,516             | (40,761)                   | 173,684             | (88,929)              |
| Other Revenues                     | 221,592             | 142,526             | 79,066                     | 215,125             | 6,466                 |
| <b>Total Revenues</b>              | <b>\$ 6,354,244</b> | <b>\$ 5,899,450</b> | <b>\$ 454,794</b>          | <b>\$ 6,182,133</b> | <b>\$ 172,111</b>     |
| <b>Expenses</b>                    |                     |                     |                            |                     |                       |
| Employee Compensation and Benefits | \$ 3,459,616        | \$ 3,278,076        | \$ 181,540                 | \$ 3,156,707        | \$ 302,909            |
| Services & Supplies                | 1,956,232           | 1,843,986           | 112,246                    | 1,768,258           | 187,974               |
| Other Expenses                     | 722,743             | 672,705             | 50,039                     | 696,267             | 26,476                |
| <b>Total Expenses</b>              | <b>\$ 6,138,591</b> | <b>\$ 5,794,767</b> | <b>\$ 343,825</b>          | <b>\$ 5,621,233</b> | <b>\$ 517,359</b>     |
| <b>Net Income</b>                  | <b>\$ 215,652</b>   | <b>\$ 104,683</b>   | <b>\$ 110,969</b>          | <b>\$ 560,901</b>   | <b>\$ (345,248)</b>   |

# University of Florida

## Quarterly Financial Report

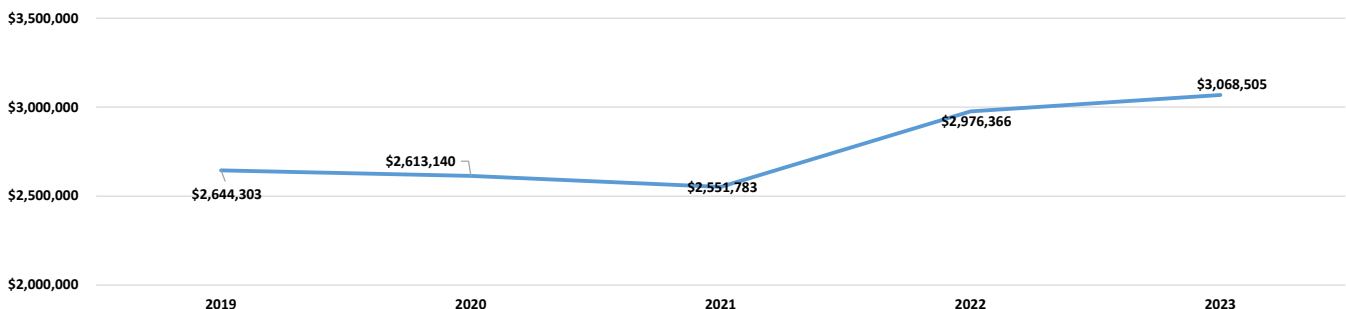
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses           | Q3 FY23             | Q3 FY23 Budget      | Actuals to Budget Variance | Q3 FY22             | FY23 to FY22 Variance |
|---------------------------------|---------------------|---------------------|----------------------------|---------------------|-----------------------|
| <b>Revenues</b>                 |                     |                     |                            |                     |                       |
| Tuition and Fees                | \$ 415,903          | \$ 378,133          | \$ 37,771                  | \$ 397,532          | \$ 18,371             |
| State Appropriations            | 661,577             | 697,116             | (35,539)                   | 652,837             | 8,740                 |
| Contracts and Grants            | 630,953             | 375,003             | 255,950                    | 572,748             | 58,205                |
| Federal and State Financial Aid | 212,749             | 207,699             | 5,050                      | 209,456             | 3,293                 |
| Investment Income               | (10,577)            | 4,638               | (15,215)                   | 16,515              | (27,092)              |
| Sales of Goods & Services       | 160,331             | 158,606             | 1,725                      | 143,419             | 16,912                |
| Other Revenue                   | 44,108              | 12,759              | 31,349                     | 117,502             | (73,394)              |
| Transfers From Component Units  | 953,461             | 765,981             | 187,480                    | 866,357             | 87,104                |
| <b>Total Revenues</b>           | <b>\$ 3,068,505</b> | <b>\$ 2,599,935</b> | <b>\$ 468,570</b>          | <b>\$ 2,976,366</b> | <b>\$ 92,139</b>      |
| <b>Expenses</b>                 |                     |                     |                            |                     |                       |
| Employee Compensation           | \$ 2,046,212        | \$ 1,927,341        | \$ 118,871                 | \$ 1,879,332        | \$ 166,880            |
| Other Operating Expenses        |                     |                     |                            |                     |                       |
| Services and Supplies           | 500,770             | 438,709             | 62,061                     | 414,647             | 86,123                |
| Utilities                       | 60,168              | 51,902              | 8,266                      | 40,092              | 20,076                |
| Scholarships and Fellowships    | 193,835             | 134,637             | 59,198                     | 208,387             | (14,552)              |
| Total Other Operating Expenses  | 754,773             | 625,248             | 129,525                    | 663,125             | 91,648                |
| Depreciation                    | 135,058             | 135,000             | 58                         | 128,226             | 6,832                 |
| Other Non Operating Expenses    | 40,991              | -                   | 40,991                     | 20,279              | 20,712                |
| <b>Total Expenses</b>           | <b>\$ 2,977,034</b> | <b>\$ 2,687,589</b> | <b>\$ 289,445</b>          | <b>\$ 2,690,962</b> | <b>\$ 286,072</b>     |
| <b>Net Income</b>               | <b>\$ 91,471</b>    | <b>\$ (87,654)</b>  | <b>\$ 179,125</b>          | <b>\$ 285,403</b>   | <b>\$ (193,932)</b>   |

### Total Revenue - Five Year Trend

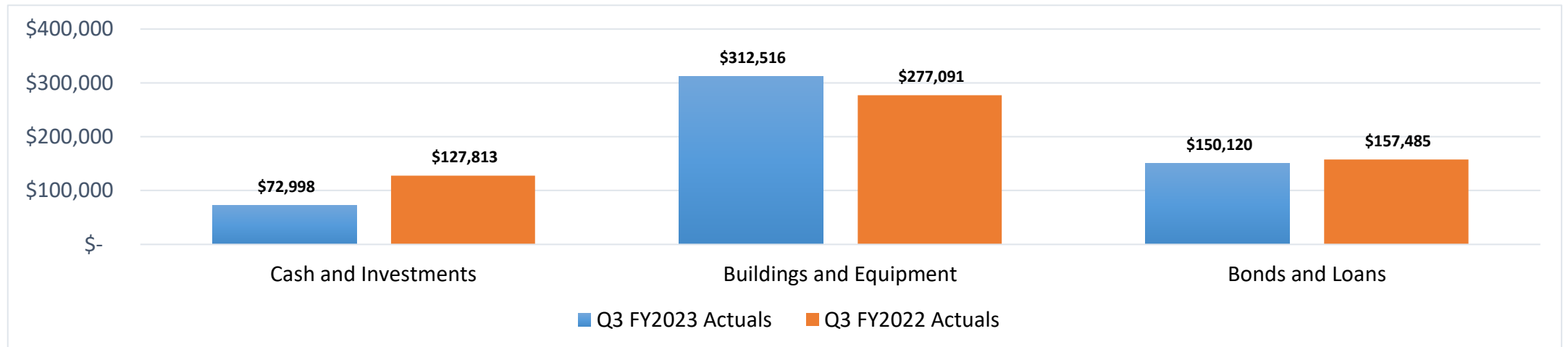


# University Athletic Association, Inc.

## Quarterly Financial Report

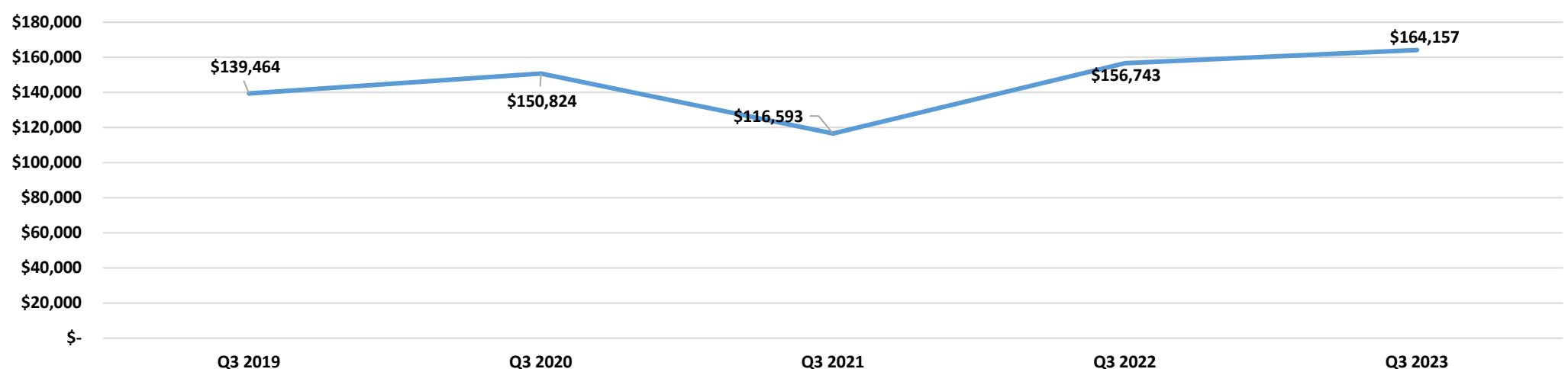
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses                    | Q3 FY23           | Q3 FY23 Budget    | Actuals to Budget Variance | Q3 FY22           | FY23 to FY22 Variance |
|--|-------------------|-------------------|----------------------------|-------------------|-----------------------|
| <b>Revenues</b>                          |                   |                   |                            |                   |                       |
| Ticket Sales                             | \$ 35,246         | \$ 31,335         | \$ 3,911                   | \$ 34,059         | \$ 1,187              |
| SEC and NCAA Distributions               | 45,977            | 43,216            | 2,761                      | 46,271            | (294)                 |
| Contributions                            | 38,396            | 35,664            | 2,732                      | 36,703            | 1,693                 |
| Investment Income                        | 5,114             | 409               | 4,705                      | (3,484)           | 8,598                 |
| Royalties and Sponsorships               | 17,723            | 15,466            | 2,257                      | 15,552            | 2,171                 |
| Transfers from Gator Boosters            | 8,520             | 230               | 8,290                      | 17,306            | (8,786)               |
| Other Revenues                           | 13,180            | 7,577             | 5,603                      | 10,337            | 2,843                 |
| <b>Total Revenues</b>                    | <b>\$ 164,156</b> | <b>\$ 133,897</b> | <b>\$ 30,259</b>           | <b>\$ 156,744</b> | <b>\$ 7,412</b>       |
| <b>Expenses</b>                          |                   |                   |                            |                   |                       |
| Employee Compensation and Benefits       | \$ 55,649         | \$ 50,362         | \$ 5,287                   | \$ 65,498         | \$ (9,849)            |
| Football and Direct Sports Team Expenses | 28,263            | 22,082            | 6,181                      | 23,853            | 4,410                 |
| Scholarships                             | 16,623            | 14,426            | 2,197                      | 12,600            | 4,023                 |
| Other Expenses                           | 31,576            | 23,927            | 7,649                      | 31,540            | 36                    |
| <b>Total Expenses</b>                    | <b>\$ 132,111</b> | <b>\$ 110,797</b> | <b>\$ 21,314</b>           | <b>\$ 133,491</b> | <b>\$ (1,380)</b>     |
| <b>Net Income</b>                        | <b>\$ 32,045</b>  | <b>\$ 23,100</b>  | <b>\$ 8,945</b>            | <b>\$ 23,253</b>  | <b>\$ 8,792</b>       |

**Total Revenue - Five Year Trend**

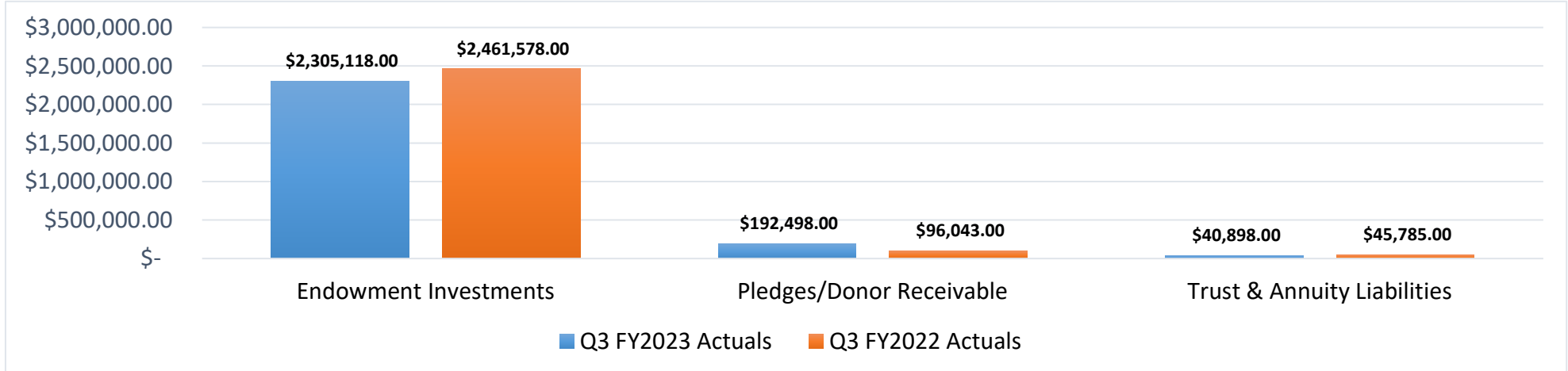


# UF Foundation, Inc.

## Quarterly Financial Report

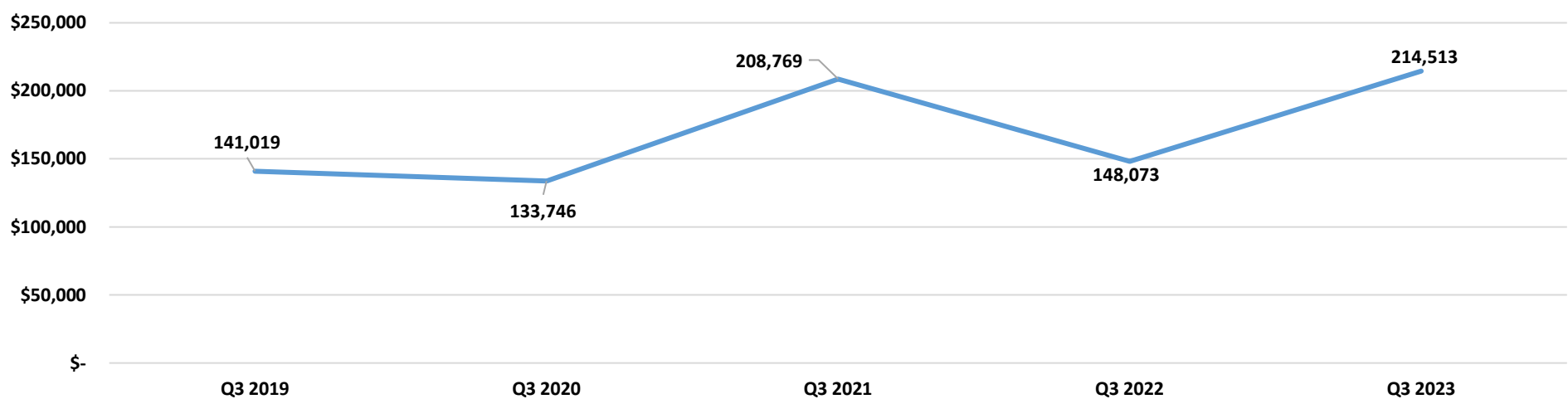
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses                       | Q3 FY23           | Q3 FY23 Budget    | Actuals to Budget Variance | Q3 FY22           | FY23 to FY22 Variance |
|---|-------------------|-------------------|----------------------------|-------------------|-----------------------|
| <b>Revenues</b>                             |                   |                   |                            |                   |                       |
| Contributions                               | \$ 214,513        | \$ 83,072         | \$ 131,441                 | \$ 148,073        | \$ 66,440             |
| Investment Income                           | 47,386            | 83,750            | (36,364)                   | 128,041           | (80,655)              |
| Other Revenues                              | 12,636            | 7,033             | 5,603                      | 18,398            | (5,762)               |
| <b>Total Revenues</b>                       | <b>\$ 274,535</b> | <b>\$ 173,855</b> | <b>\$ 100,680</b>          | <b>\$ 294,512</b> | <b>\$ (19,977)</b>    |
| <b>Expenses</b>                             |                   |                   |                            |                   |                       |
| Transfers to the University/Component Units | \$ 161,673        | \$ 108,726        | \$ 52,947                  | \$ 132,066        | \$ 29,607             |
| Employee Compensation and Benefits          | 17,729            | 19,720            | (1,991)                    | 16,174            | 1,555                 |
| Other Operating Expenses                    | 13,032            | 14,456            | (1,424)                    | 9,263             | 3,769                 |
| <b>Total Expenses</b>                       | <b>\$ 192,434</b> | <b>\$ 142,902</b> | <b>\$ 49,532</b>           | <b>\$ 157,503</b> | <b>\$ 34,931</b>      |
| <b>Net Income</b>                           | <b>\$ 82,101</b>  | <b>\$ 30,953</b>  | <b>\$ 51,148</b>           | <b>\$ 137,009</b> | <b>\$ (54,908)</b>    |

### Total Revenue - Five Year Trend

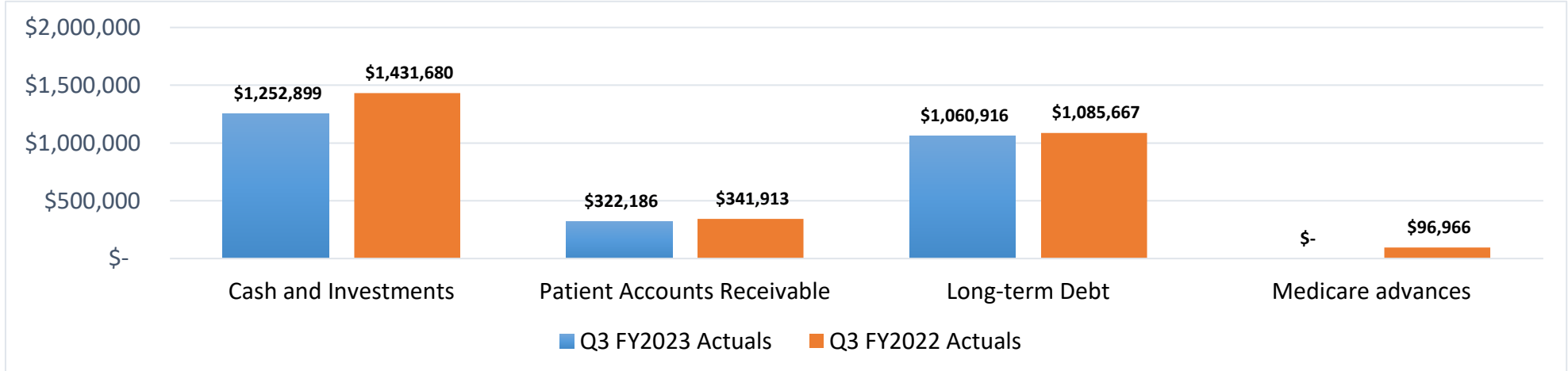


# Shands Teaching Hospital & Clinics, Inc.

## Quarterly Financial Report

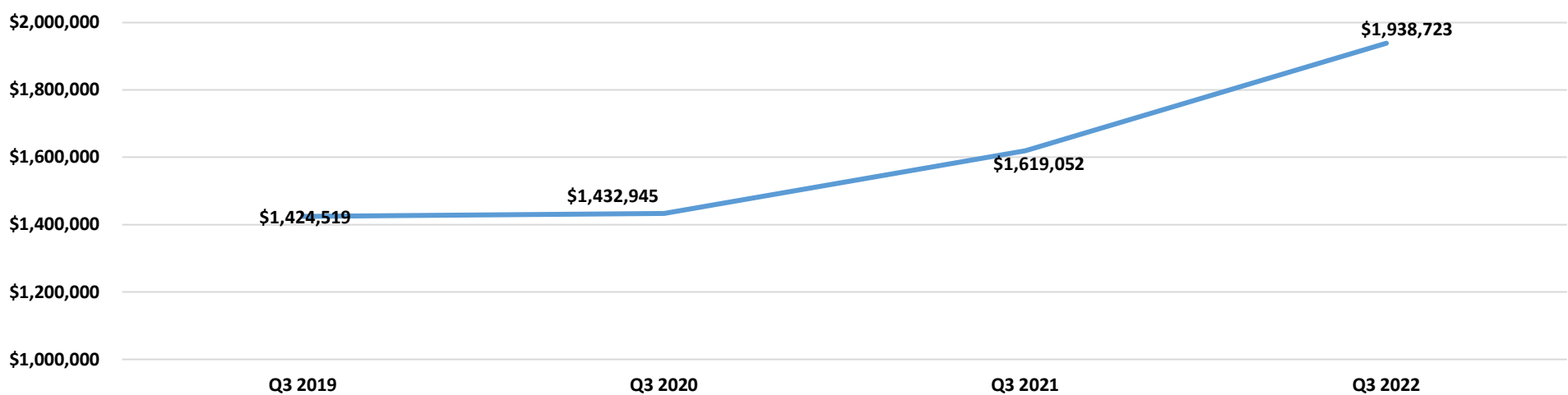
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



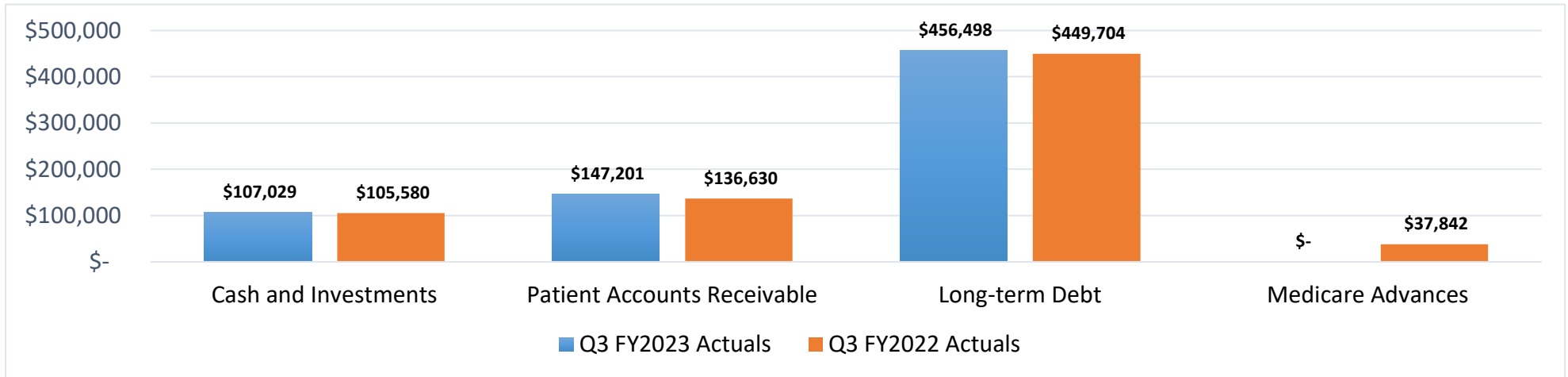
| Revenues and Expenses              | Q3 FY23             | Q3 FY23 Budget      | Actuals to Budget Variance | Q3 FY22             | FY23 to FY22 Variance |
|------------------------------------|---------------------|---------------------|----------------------------|---------------------|-----------------------|
| <b>Revenues</b>                    |                     |                     |                            |                     |                       |
| Patient Service Revenue            | \$ 1,981,544        | \$ 1,929,280        | \$ 52,264                  | \$ 1,938,723        | \$ 42,821             |
| Other Operating Revenue            | 46,671              | 45,333              | 1,338                      | 42,582              | 4,089                 |
| Nonoperating Revenue, Net          | 20,779              | (4,357)             | 25,136                     | (61,513)            | 82,292                |
| <b>Total Revenues</b>              | <b>\$ 2,048,994</b> | <b>\$ 1,970,256</b> | <b>\$ 78,738</b>           | <b>\$ 1,919,792</b> | <b>\$ 129,202</b>     |
| <b>Expenses</b>                    |                     |                     |                            |                     |                       |
| Employee Compensation and Benefits | \$ 910,641          | \$ 844,862          | \$ 65,779                  | \$ 772,846          | \$ 137,795            |
| Supplies and Services              | 902,995             | 879,334             | \$ 23,661                  | 854,407             | 48,588                |
| Other Expenses                     | 188,324             | 198,906             | \$ (10,582)                | 189,712             | (1,388)               |
| <b>Total Expenses</b>              | <b>\$ 2,001,960</b> | <b>\$ 1,923,102</b> | <b>\$ 78,858</b>           | <b>\$ 1,816,965</b> | <b>\$ 184,995</b>     |
| <b>Net Income</b>                  | <b>\$ 47,034</b>    | <b>\$ 47,154</b>    | <b>\$ (120)</b>            | <b>\$ 102,827</b>   | <b>\$ (55,793)</b>    |

### Patient Service Revenue - Five Year Trend



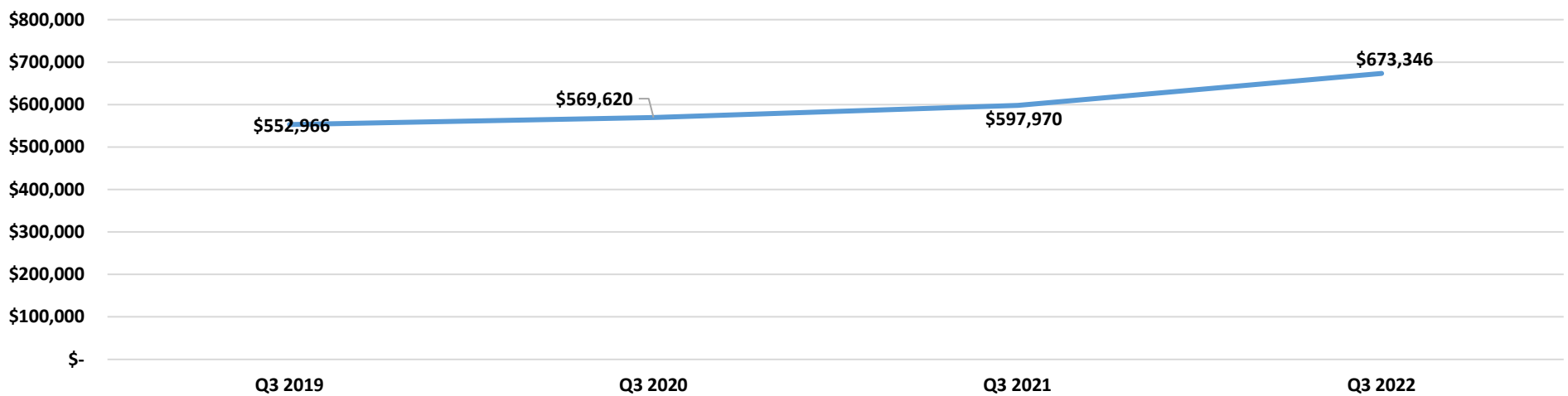
**Shands Jacksonville Healthcare, Inc.**  
**Quarterly Financial Report**  
For the nine months ending 3/31/2023 (amounts expressed in thousands)

**Assets and Liabilities**



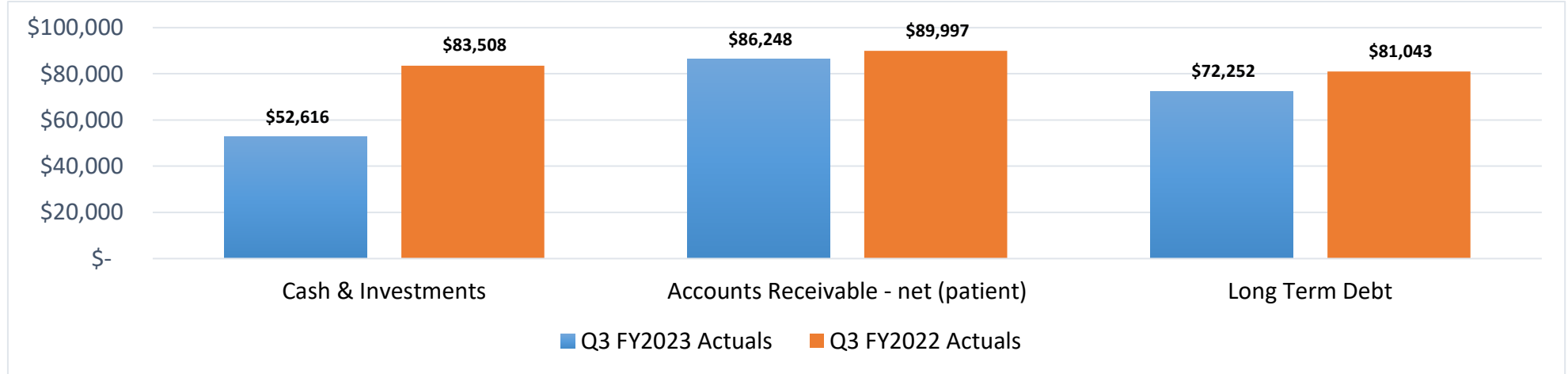
| Revenues and Expenses                 | Q3 FY23           | Q3 FY23 Budget    | Actuals to Budget Variance | Q3 FY22           | FY23 to FY22 Variance |
|---------------------------------------|-------------------|-------------------|----------------------------|-------------------|-----------------------|
| <b>Revenues</b>                       |                   |                   |                            |                   |                       |
| Patient Service Revenue               | \$ 662,445        | \$ 708,913        | \$ (46,468)                | \$ 673,346        | \$ (10,901)           |
| Investment and Other Income           | 33,743            | 27,525            | 6,219                      | 39,322            | (5,579)               |
| <b>Total Revenues</b>                 | <b>\$ 696,188</b> | <b>\$ 736,438</b> | <b>\$ (40,250)</b>         | <b>\$ 712,668</b> | <b>\$ (16,480)</b>    |
| <b>Expenses</b>                       |                   |                   |                            |                   |                       |
| Employee Compensation and Benefits    | \$ 329,620        | \$ 331,494        | \$ (1,874)                 | \$ 323,504        | \$ 6,116              |
| Supplies, Services and Other Expenses | 321,155           | 340,750           | (19,595)                   | 317,628           | 3,527                 |
| <b>Total Expenses</b>                 | <b>\$ 650,775</b> | <b>\$ 672,244</b> | <b>\$ (21,469)</b>         | <b>\$ 641,132</b> | <b>\$ 9,643</b>       |
| <b>Net Income</b>                     | <b>\$ 45,413</b>  | <b>\$ 64,194</b>  | <b>\$ (18,781)</b>         | <b>\$ 71,536</b>  | <b>\$ (26,123)</b>    |

**Patient Service Revenue - Five Year Trend**



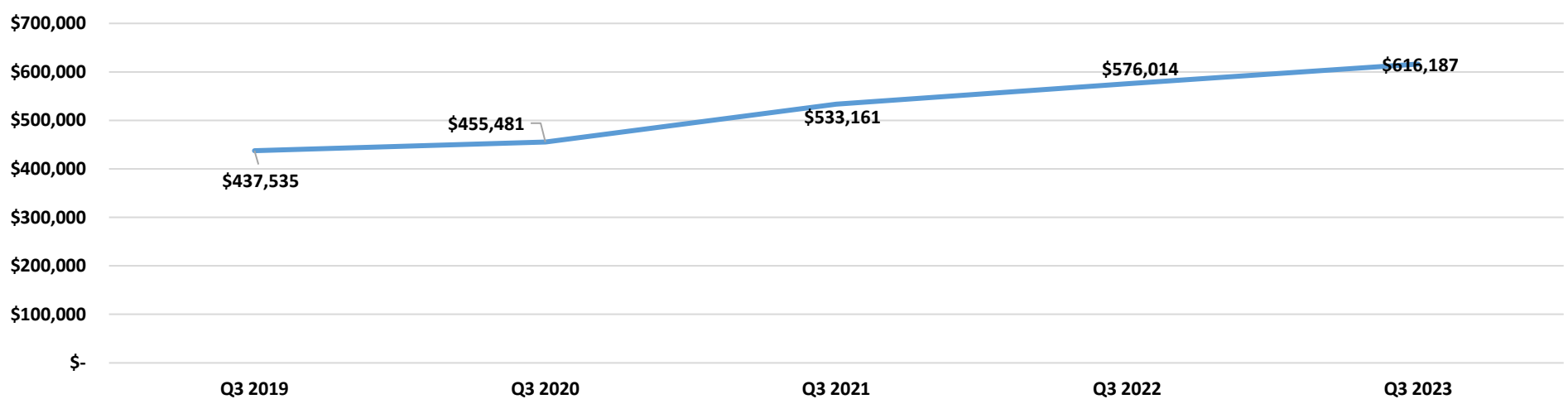
**Florida Clinical Practice Association, Inc.**  
**Quarterly Financial Report**  
For the nine months ending 3/31/2023 (amounts expressed in thousands)

**Assets and Liabilities**



| Revenues and Expenses   | Q3 FY23            | Q3 FY23 Budget     | Actuals to Budget Variance | Q3 FY22            | FY23 to FY22 Variance |
|-------------------------|--------------------|--------------------|----------------------------|--------------------|-----------------------|
| <b>Revenues</b>         |                    |                    |                            |                    |                       |
| Patient Service Revenue | \$ 616,187         | \$ 612,987         | \$ 3,200                   | \$ 576,014         | \$ 40,173             |
| Hospital support        | 42,872             | 49,125             | (6,253)                    | 40,500             | 2,372                 |
| Investment Income       | 1,728              | -                  | 1,728                      | 937                | 791                   |
| Other Revenue           | 4,775              | -                  | 4,775                      | 7,457              | (2,682)               |
| <b>Total Revenues</b>   | <b>\$ 665,562</b>  | <b>\$ 662,112</b>  | <b>\$ 3,450</b>            | <b>\$ 624,908</b>  | <b>\$ 40,654</b>      |
| <b>Expenses</b>         |                    |                    |                            |                    |                       |
| Transfers to University | \$ 534,902         | \$ 524,554         | \$ 10,348                  | \$ 493,053         | \$ 41,849             |
| Supplies and Services   | 153,437            | 166,903            | (13,466)                   | 130,115            | 23,322                |
| Depreciation            | 9,400              | 3,373              | 6,027                      | 9,408              | (8)                   |
| Other Expenses          | 2,948              | 1,350              | 1,598                      | 2,799              | 149                   |
| <b>Total Expenses</b>   | <b>\$ 700,687</b>  | <b>\$ 696,180</b>  | <b>\$ 4,507</b>            | <b>\$ 635,375</b>  | <b>\$ 65,312</b>      |
| <b>Net Income</b>       | <b>\$ (35,125)</b> | <b>\$ (34,068)</b> | <b>\$ (1,057)</b>          | <b>\$ (10,467)</b> | <b>\$ (24,658)</b>    |

**Patient Service Revenue - Five Year Trend**

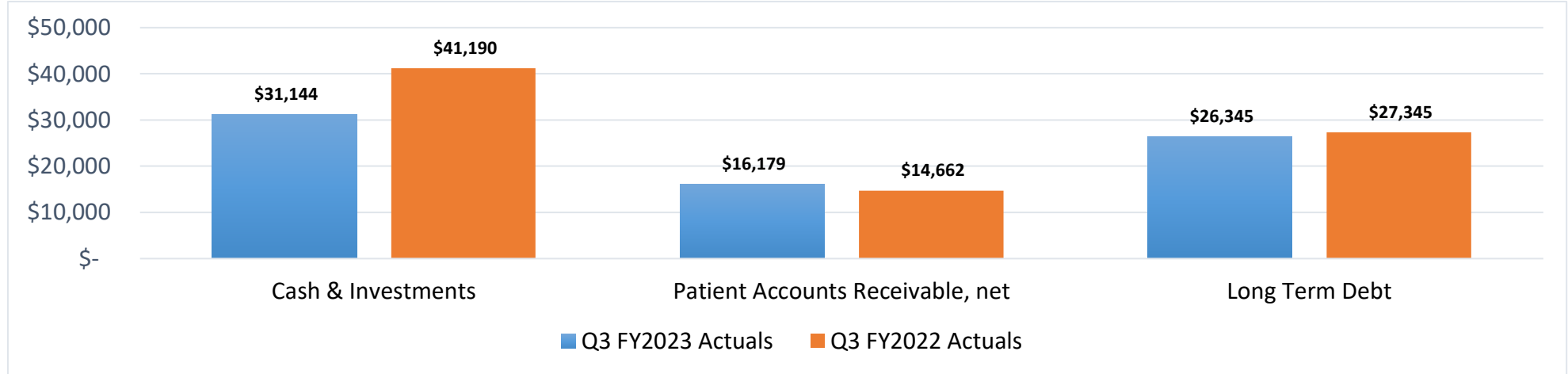


# University of Florida Jacksonville Physicians, Inc.

## Quarterly Financial Report

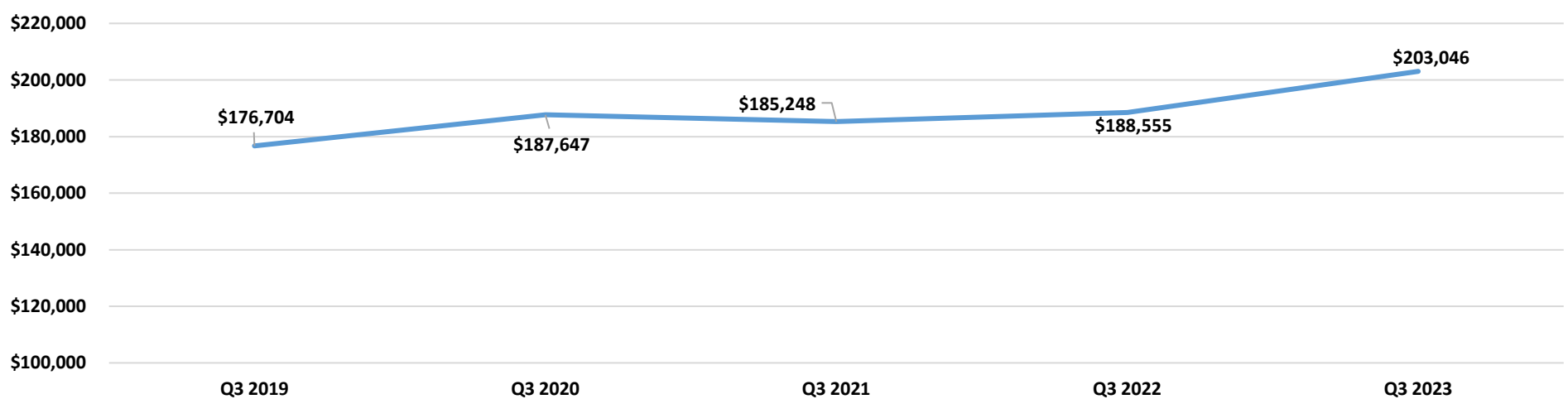
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses              | Q3 FY23           | Q3 FY23 Budget    | Actuals to Budget Variance | Q3 FY22           | FY23 to FY22 Variance |
|------------------------------------|-------------------|-------------------|----------------------------|-------------------|-----------------------|
| <b>Revenues</b>                    |                   |                   |                            |                   |                       |
| Patient Service Revenue            | \$ 203,046        | \$ 206,404        | \$ (3,358)                 | \$ 188,555        | \$ 14,491             |
| Investment Income                  | 320               | 194               | 126                        | 214               | 106                   |
| Other Revenue                      | 62,975            | 63,281            | (306)                      | 68,048            | (5,073)               |
| <b>Total Revenues</b>              | <b>\$ 266,341</b> | <b>\$ 269,879</b> | <b>\$ (3,538)</b>          | <b>\$ 256,817</b> | <b>\$ 9,524</b>       |
| <b>Expenses</b>                    |                   |                   |                            |                   |                       |
| Employee Compensation and Benefits | \$ 93,393         | \$ 97,696         | \$ (4,303)                 | \$ 93,423         | \$ (30)               |
| Supplies and Services              | 17,053            | 17,712            | \$ (659)                   | 10,958            | 6,095                 |
| Depreciation                       | 3,904             | 3,962             | \$ (58)                    | 4,326             | (422)                 |
| Other Expenses                     | 26,890            | 27,557            | \$ (667)                   | 25,505            | 1,385                 |
| Transfers to UF                    | 128,363           | 125,553           | \$ 2,810                   | 121,843           | 6,520                 |
| <b>Total Expenses</b>              | <b>\$ 269,603</b> | <b>\$ 272,480</b> | <b>\$ (2,877)</b>          | <b>\$ 256,055</b> | <b>\$ 13,548</b>      |
| <b>Net Income</b>                  | <b>\$ (3,262)</b> | <b>\$ (2,601)</b> | <b>\$ (661)</b>            | <b>\$ 762</b>     | <b>\$ (4,024)</b>     |

### Patient Service Revenue - Five Year Trend



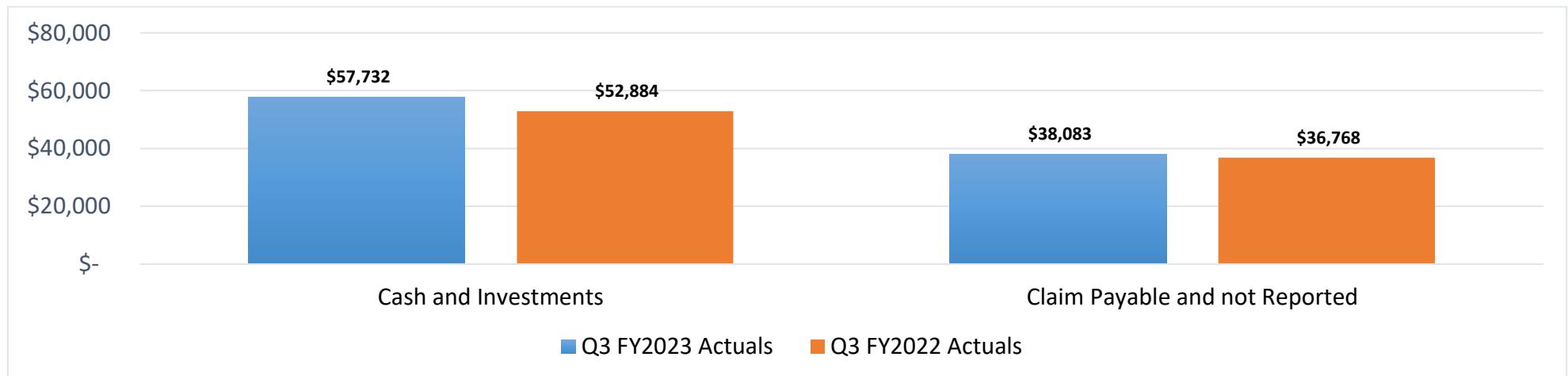


# GatorCare Health Management Corporation

## Quarterly Financial Report

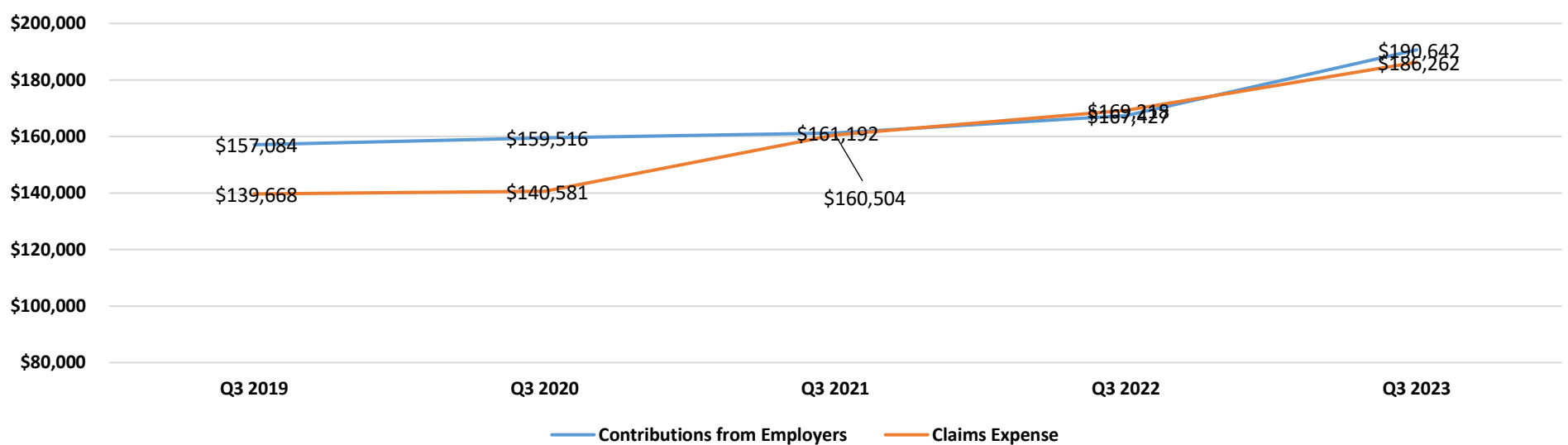
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses                      | Q3 FY23           | Q3 FY23 Budget    | Actuals to Budget Variance | Q3 FY22           | FY23 to FY22 Variance |
|--|-------------------|-------------------|----------------------------|-------------------|-----------------------|
| <b>Revenues</b>                            |                   |                   |                            |                   |                       |
| Contributions from Participating Employers | \$ 190,642        | \$ 189,458        | \$ 1,184                   | \$ 167,427        | \$ 23,215             |
| Investment Income                          | 392               | 225               | 167                        | 199               | 193                   |
| <b>Total Revenues</b>                      | <b>\$ 191,034</b> | <b>\$ 189,683</b> | <b>\$ 1,351</b>            | <b>\$ 167,626</b> | <b>\$ 23,408</b>      |
| <b>Expenses</b>                            |                   |                   |                            |                   |                       |
| Health and Pharmacy Claim Expenses         | \$ 186,262        | \$ 188,455        | \$ (2,193)                 | \$ 169,218        | \$ 17,044             |
| Administrative Expenses                    | 1,338             | 1,217             | 121                        | 1,329             | 9                     |
| <b>Total Expenses</b>                      | <b>\$ 187,600</b> | <b>\$ 189,672</b> | <b>\$ (2,072)</b>          | <b>\$ 170,547</b> | <b>\$ 17,053</b>      |
| <b>Net Income</b>                          | <b>\$ 3,434</b>   | <b>\$ 11</b>      | <b>\$ 3,423</b>            | <b>\$ (2,921)</b> | <b>\$ 6,355</b>       |

### Revenue and Expense - Five Year Trend

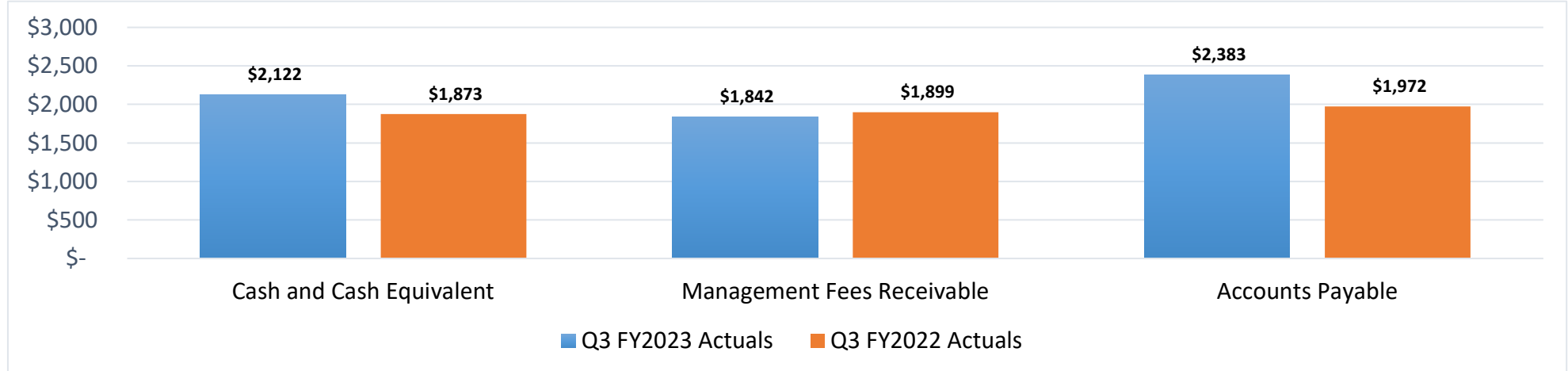


# University of Florida Investment Corporation

## Quarterly Financial Report

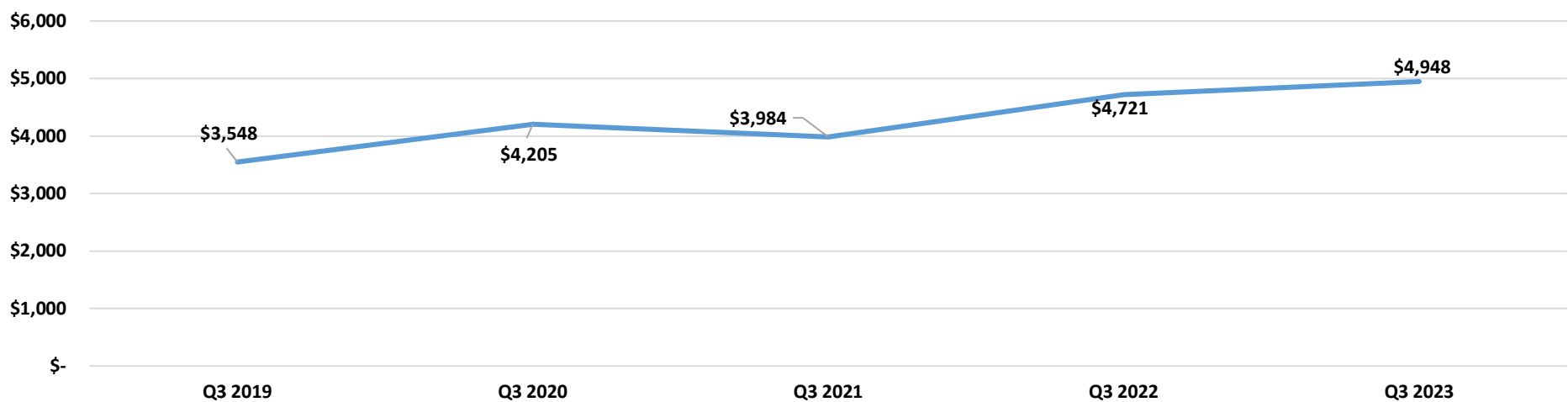
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses              | Q3 FY23         | Q3 FY23 Budget  | Actuals to Budget Variance | Q3 FY22         | FY23 to FY22 Variance |
|------------------------------------|-----------------|-----------------|----------------------------|-----------------|-----------------------|
| <b>Revenues</b>                    |                 |                 |                            |                 |                       |
| Management Fees                    | \$ 4,948        | \$ 4,900        | \$ 48                      | \$ 4,721        | \$ 227                |
| <b>Total Revenues</b>              | <b>\$ 4,948</b> | <b>\$ 4,900</b> | <b>\$ 48</b>               | <b>\$ 4,721</b> | <b>\$ 227</b>         |
| <b>Expenses</b>                    |                 |                 |                            |                 |                       |
| Employee Compensation and Benefits | \$ 4,256        | \$ 4,245        | \$ 11                      | \$ 4,010        | \$ 246                |
| General Administration             | 489             | 556             | (67)                       | 352             | 137                   |
| <b>Total Expenses</b>              | <b>\$ 4,745</b> | <b>\$ 4,801</b> | <b>\$ (56)</b>             | <b>\$ 4,362</b> | <b>\$ 383</b>         |
| <b>Net Income</b>                  | <b>\$ 203</b>   | <b>\$ 99</b>    | <b>\$ 104</b>              | <b>\$ 359</b>   | <b>\$ (156)</b>       |

### Five Year Revenue Trend

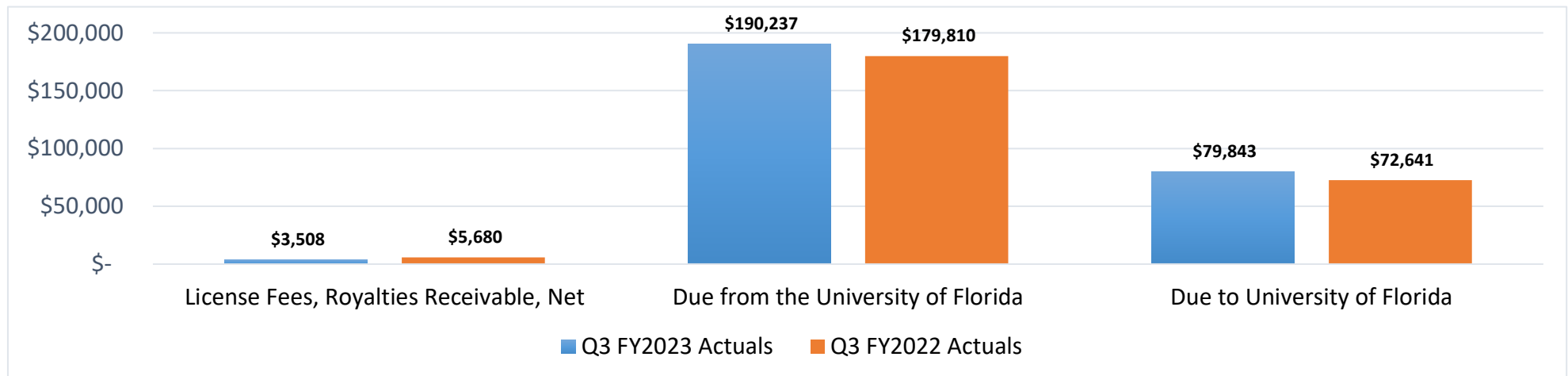


# University of Florida Research Foundation, Inc.

## Quarterly Financial Report

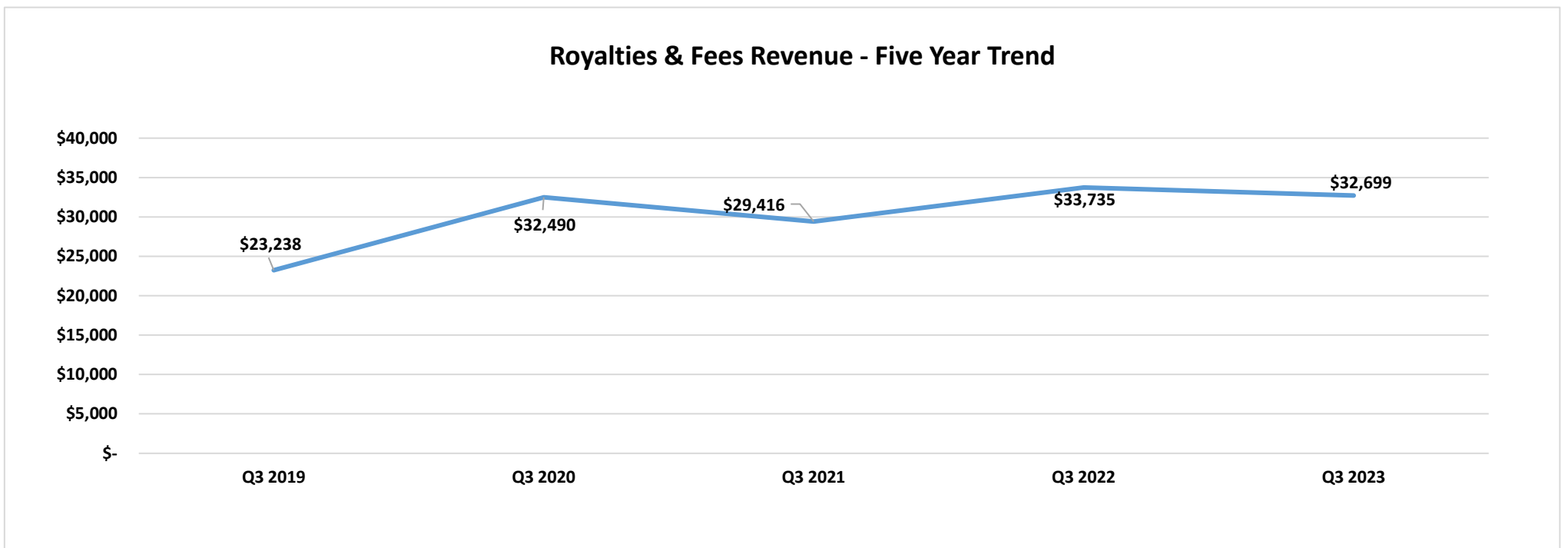
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



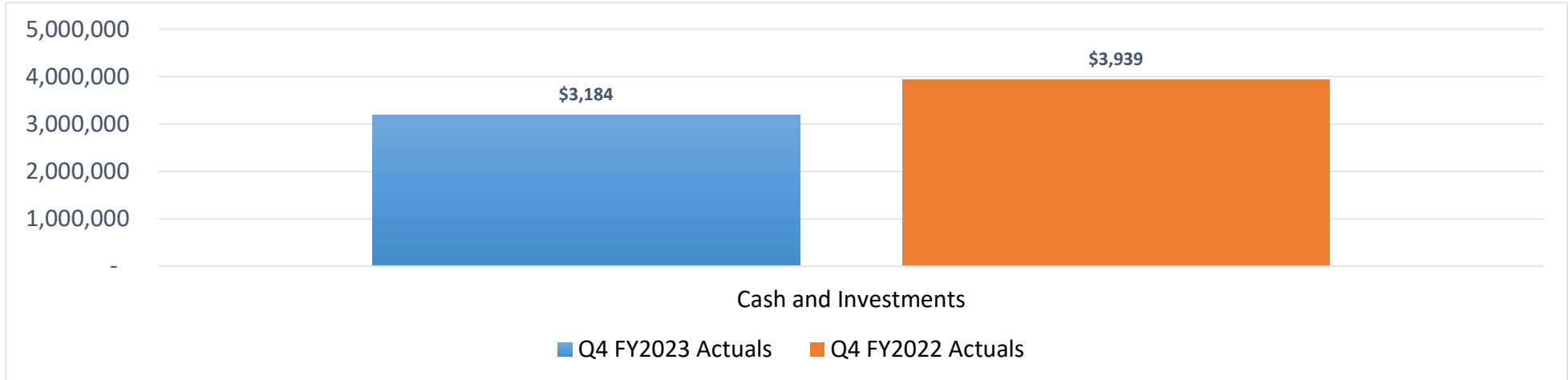
| Revenues and Expenses      | Q3 FY23          | Q3 FY23 Budget    | Actuals to Budget Variance | Q3 FY22          | FY23 to FY22 Variance |
|----------------------------|------------------|-------------------|----------------------------|------------------|-----------------------|
| <b>Revenues</b>            |                  |                   |                            |                  |                       |
| Royalties and License Fees | \$ 32,699        | \$ 26,978         | \$ 5,721                   | \$ 33,735        | \$ (1,036)            |
| Other Revenues             | 5,228            | 5,562             | (334)                      | 5,662            | (434)                 |
| <b>Total Revenues</b>      | <b>\$ 37,927</b> | <b>\$ 32,540</b>  | <b>\$ 5,387</b>            | <b>\$ 39,397</b> | <b>\$ (1,470)</b>     |
| <b>Expenses</b>            |                  |                   |                            |                  |                       |
| Transfers to UF            | \$ 28,703        | \$ 27,888         | \$ 815                     | \$ 26,930        | \$ 1,773              |
| Other Operating Expenses   | 9,445            | 10,287            | (842)                      | 9,406            | 39                    |
| <b>Total Expenses</b>      | <b>\$ 38,148</b> | <b>\$ 38,175</b>  | <b>\$ (27)</b>             | <b>\$ 36,336</b> | <b>\$ 1,812</b>       |
| <b>Net Income</b>          | <b>\$ (221)</b>  | <b>\$ (5,635)</b> | <b>\$ 5,414</b>            | <b>\$ 3,061</b>  | <b>\$ (3,282)</b>     |

### Royalties & Fees Revenue - Five Year Trend



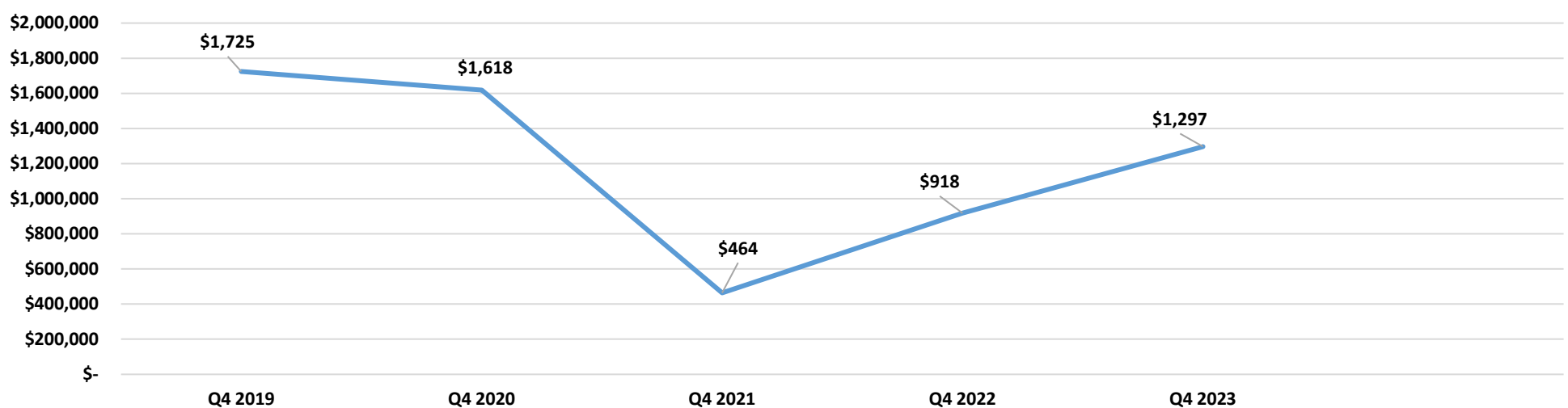
**Florida 4-H Club Foundation, Inc.**  
**Quarterly Financial Report**  
For the twelve months ending 3/31/2023 (amounts expressed in thousands)

**Assets and Liabilities**



| Revenues and Expenses          | Q4 FY23         | Q4 FY23 Budget  | Actuals to Budget Variance | Q4 FY22         | FY23 to FY22 Variance |
|--------------------------------|-----------------|-----------------|----------------------------|-----------------|-----------------------|
| <b>Revenues</b>                |                 |                 |                            |                 |                       |
| Contributions                  | \$ 225          | \$ 191          | \$ 34                      | \$ 264          | (38)                  |
| Investment Income              | 94              | 132             | -38                        | 140             | (46)                  |
| Registration Fees              | 713             | 1005            | (292)                      | 276             | 437                   |
| Other Revenue                  | 18              | 12              | 6                          | 15              | 3                     |
| Transfers From Component Units | 247             | 242             | 5                          | 224             | 23                    |
| <b>Total Revenues</b>          | <b>\$ 1,297</b> | <b>\$ 1,582</b> | <b>\$ (285)</b>            | <b>\$ 918</b>   | <b>\$ 379</b>         |
| <b>Expenses</b>                |                 |                 |                            |                 |                       |
| Program Expenses               | 862             | 805             | 57                         | 635             | 226                   |
| Management and General         | 39              | 42              | -4                         | 23              | 16                    |
| Transfers to the University    | 787             | 796             | -9                         | 489             | 299                   |
| <b>Total Expenses</b>          | <b>\$ 1,687</b> | <b>\$ 1,643</b> | <b>\$ 44</b>               | <b>\$ 1,147</b> | <b>\$ 541</b>         |
| <b>Net Income</b>              | <b>\$ (390)</b> | <b>\$ (61)</b>  | <b>\$ (329)</b>            | <b>\$ (229)</b> | <b>\$ (162)</b>       |

**Total Revenue - Five Year Trend**



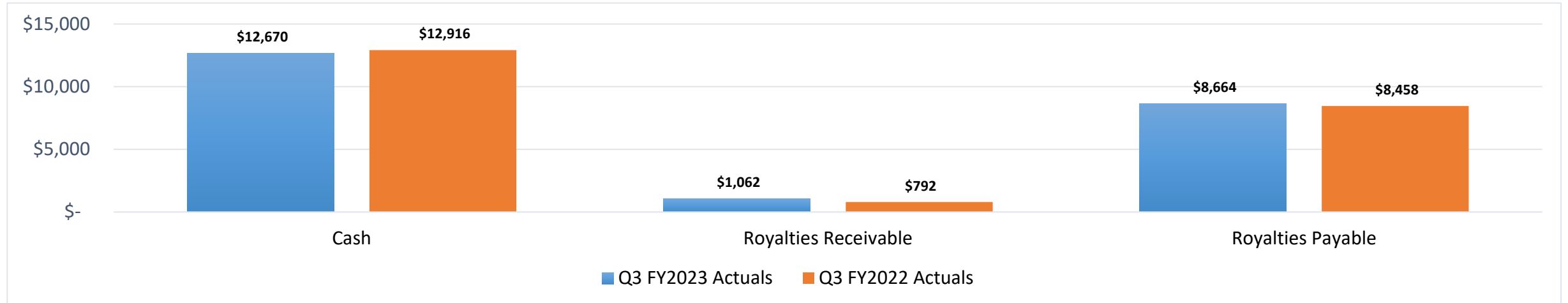
\* Fiscal Year-end is 3/31

## Florida Foundation Seed Producers, Inc.

### Quarterly Financial Report

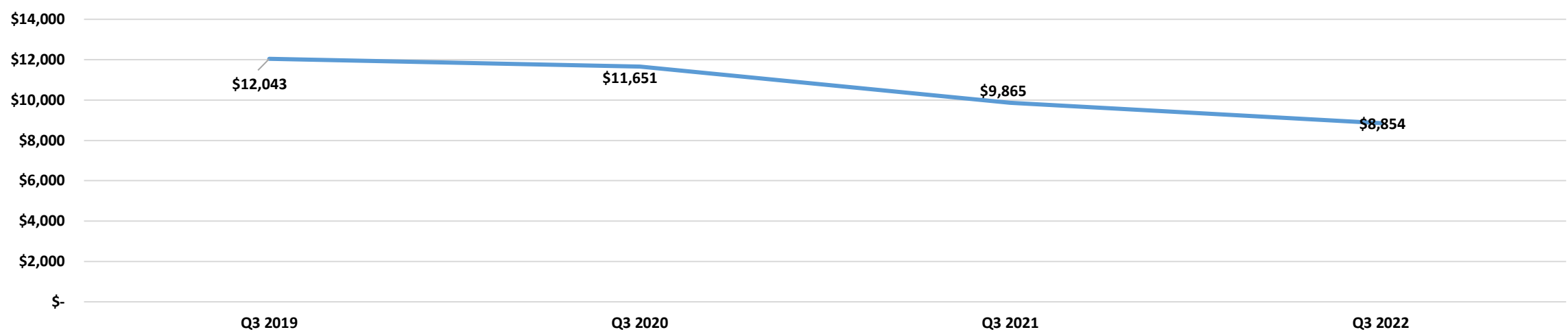
For the nine months ending 3/31/2023 (amounts expressed in thousands)

#### Assets and Liabilities



| Revenues and Expenses   | Q3 FY23           | Q3 FY23 Budget  | Actuals to Budget Variance | Q3 FY22           | FY23 to FY22 Variance |
|---|-------------------|-----------------|----------------------------|-------------------|-----------------------|
| <b>Revenues</b>   |                   |                 |                            |                   |                       |
| Sales of Seed   | \$ 164            | \$ 109          | \$ 55                      | \$ 123            | \$ 41                 |
| Royalties   | 8,542             | 9,000           | (458)                      | 8,565             | (23)                  |
| Other Revenues  | 148               | 70              | 78                         | 427               | (278)                 |
| <b>Total Revenues</b>   | <b>\$ 8,854</b>   | <b>\$ 9,179</b> | <b>\$ (325)</b>            | <b>\$ 9,115</b>   | <b>\$ (260)</b>       |
| <b>Expenses</b>   |                   |                 |                            |                   |                       |
| Employee Compensation and Benefits  | \$ 457            | \$ 468          | \$ (11)                    | \$ 427            | \$ 30                 |
| Cost of Seeds Sold and Payment of Personal Royalties to Faculty Inventors | 3,770             | 3,952           | (182)                      | 3,317             | 453                   |
| Transfers to UF   | 7,386             | 5,396           | 1,991                      | 7,131             | 255                   |
| Other Expenses  | 133               | 167             | (34)                       | 99                | 34                    |
| <b>Total Expenses</b>   | <b>\$ 11,747</b>  | <b>\$ 9,983</b> | <b>\$ 1,764</b>            | <b>\$ 10,975</b>  | <b>\$ 772</b>         |
| <b>Net Income</b>   | <b>\$ (2,893)</b> | <b>\$ (804)</b> | <b>\$ (2,089)</b>          | <b>\$ (1,860)</b> | <b>\$ (1,032)</b>     |

#### Total Revenue - Five Year Trend

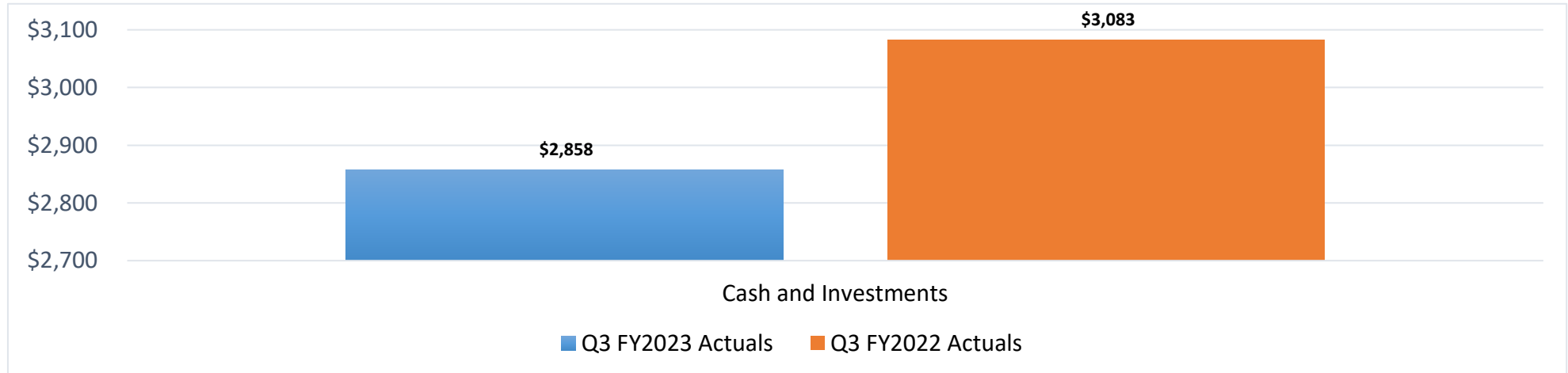


# Citrus Research and Development Foundation, Inc.

## Quarterly Financial Report

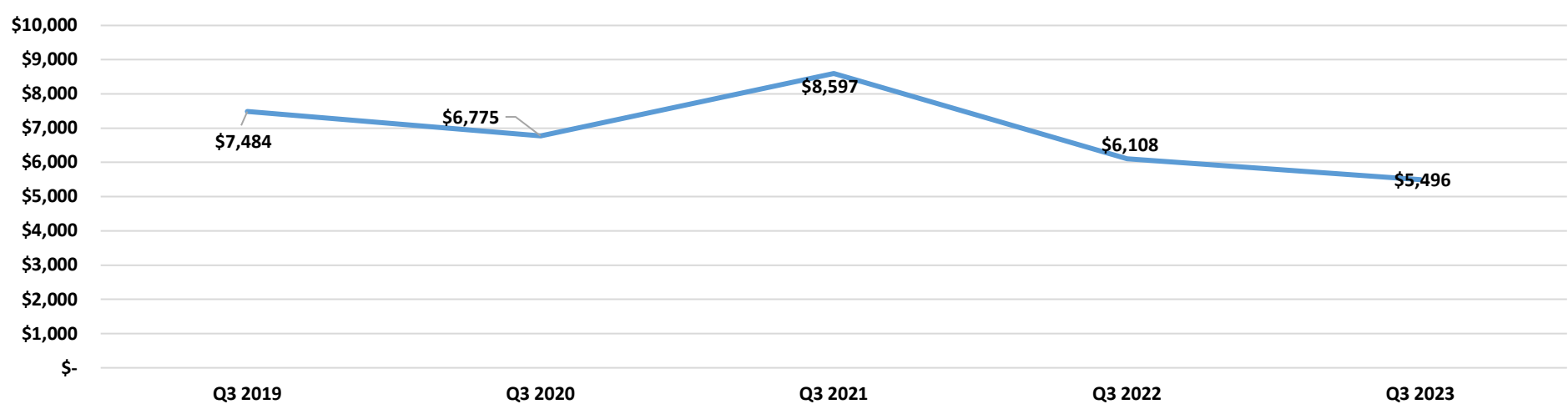
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses              | Q3 FY23         | Q3 FY23 Budget  | Actuals to Budget Variance | Q3 FY22           | FY23 to FY22 Variance |
|------------------------------------|-----------------|-----------------|----------------------------|-------------------|-----------------------|
| <b>Revenues</b>                    |                 |                 |                            |                   |                       |
| State Appropriations               | \$ 1,835        | \$ 3,896        | \$ (2,061)                 | \$ 3,498          | \$ (1,663)            |
| Research Contracts                 | \$ 3,616        | \$ 4,448        | \$ (832)                   | \$ 2,591          | \$ 1,025              |
| Other Revenues                     | 45              | 9               | 36                         | 15                | 30                    |
| <b>Total Revenues</b>              | <b>\$ 5,496</b> | <b>\$ 8,353</b> | <b>\$ (2,857)</b>          | <b>\$ 6,104</b>   | <b>\$ (608)</b>       |
| <b>Expenses</b>                    |                 |                 |                            |                   |                       |
| Research Projects Contracts        | \$ 5,128        | \$ 7,075        | \$ (1,947)                 | \$ 7,707          | \$ (2,579)            |
| Employee Compensation and Benefits | 331             | 332             | (1)                        | 347               | (16)                  |
| Other Expenses                     | 203             | 248             | (45)                       | 252               | (49)                  |
| <b>Total Expenses</b>              | <b>\$ 5,662</b> | <b>\$ 7,655</b> | <b>\$ (1,993)</b>          | <b>\$ 8,306</b>   | <b>\$ (2,644)</b>     |
| <b>Net Income</b>                  | <b>\$ (166)</b> | <b>\$ 698</b>   | <b>\$ (864)</b>            | <b>\$ (2,202)</b> | <b>\$ 2,036</b>       |

### Five-Year Revenue Trend

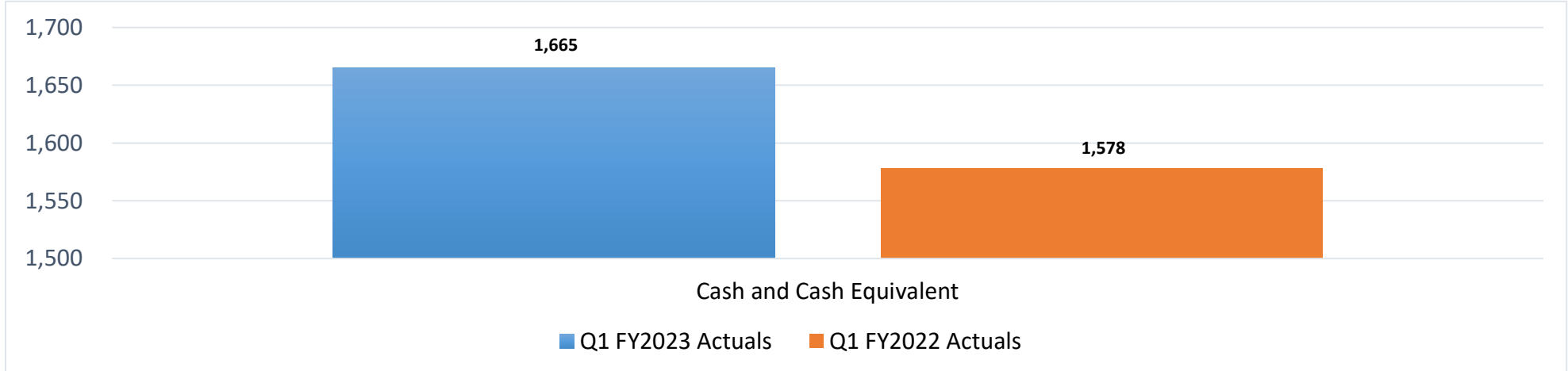


# University of Florida Leadership and Education Foundation, Inc.

## Quarterly Financial Report

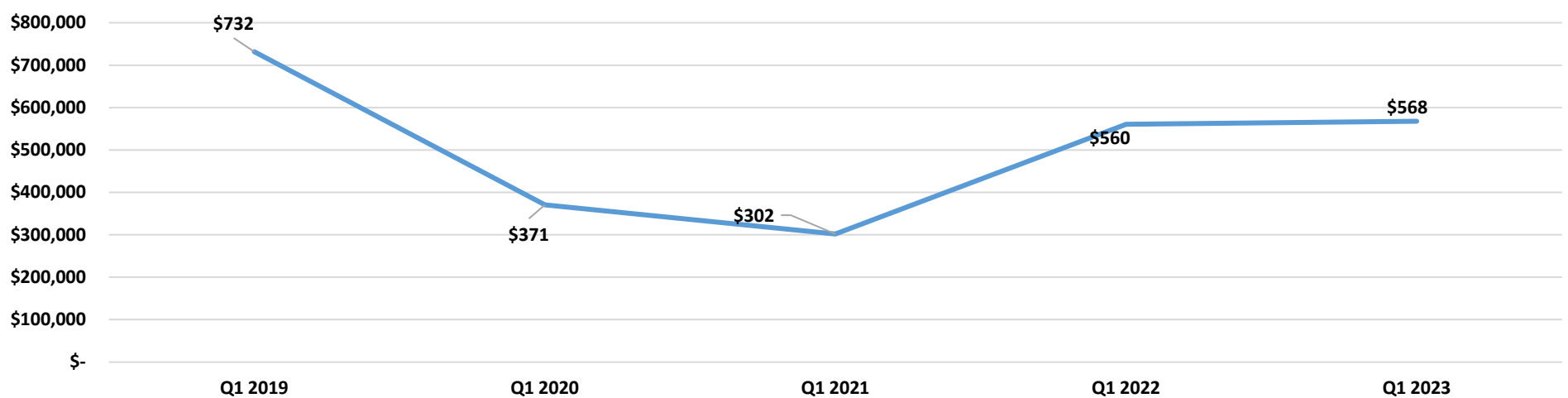
For the three months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses               | Q1 FY23      | Q1 FY23 Budget | Actuals to Budget Variance | Q1 FY22      | FY23 to FY22 Variance |
|-------------------------------------|--------------|----------------|----------------------------|--------------|-----------------------|
| <b>Revenues</b>                     |              |                |                            |              |                       |
| Conference Revenue                  | \$539        | \$413          | \$126                      | \$419        | \$120                 |
| Other Revenues                      | \$29         | \$21           | \$7                        | \$1          | \$28                  |
| Transfers In (From Component Units) | \$           | \$             | \$                         | \$140        | -\$140                |
| <b>Total Revenues</b>               | <b>\$568</b> | <b>\$434</b>   | <b>\$134</b>               | <b>\$560</b> | <b>\$8</b>            |
| <b>Expenses</b>                     |              |                |                            |              |                       |
| Conference Expenses                 | \$103        | \$76           | \$26                       | \$188        | -\$85                 |
| Operating Expenses                  | \$30         | \$42           | -\$13                      | \$35         | -\$5                  |
| Transfer to the UF (SPA Salaries)   | \$146        | \$146          | \$                         | \$133        | \$13                  |
| <b>Total Expenses</b>               | <b>\$278</b> | <b>\$265</b>   | <b>\$14</b>                | <b>\$356</b> | <b>-\$78</b>          |
| <b>Net Income</b>                   | <b>\$289</b> | <b>\$169</b>   | <b>\$120</b>               | <b>\$204</b> | <b>\$85</b>           |

### Five Year Total Revenue Trend

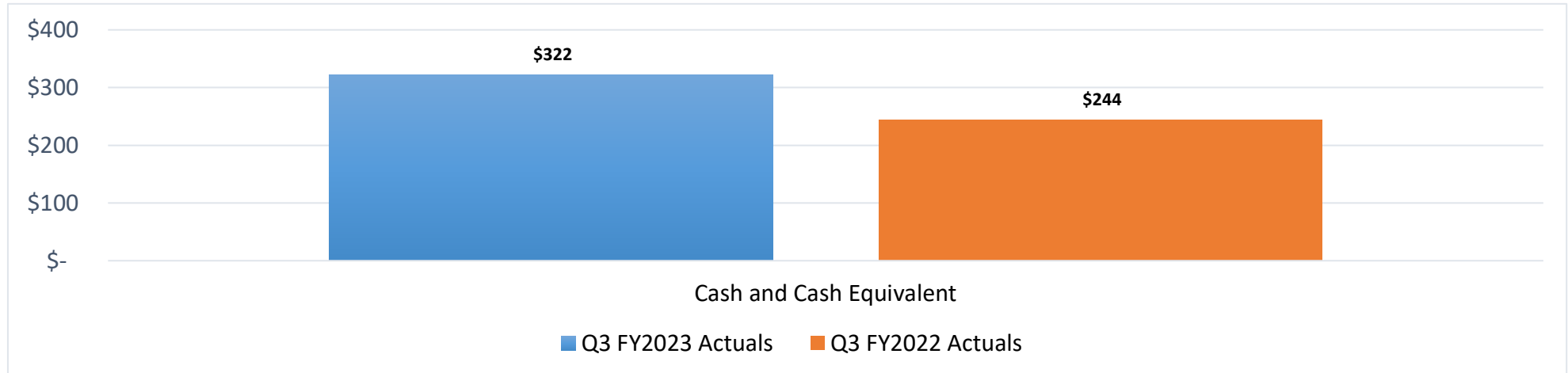


## UF Cattle Enhancement Board, Inc.

### Quarterly Financial Report

For the nine months ending 3/31/2023 *(amounts expressed in thousands)*

#### Assets and Liabilities



| Revenues and Expenses          | Q3 FY23       | Q3 FY23<br>Budget | Actuals to<br>Budget<br>Variance | Q3 FY22       | FY23 to FY22<br>Variance |
|--------------------------------|---------------|-------------------|----------------------------------|---------------|--------------------------|
| <b>Revenues</b>                |               |                   |                                  |               |                          |
| State Appropriation            | \$ 768        | \$ 250            | \$ 518                           | \$ 250        | \$ 518                   |
| <b>Total Revenues</b>          | <u>\$ 768</u> | <u>\$ 250</u>     | <u>\$ 518</u>                    | <u>\$ 250</u> | <u>\$ 518</u>            |
| <b>Expenses</b>                |               |                   |                                  |               |                          |
| Research Projects              | \$ 356        | \$ 230            | \$ 126                           | \$ 234        | \$ 122                   |
| Cattle Marketing and Promotion | 77            | -                 | 77                               | -             | 77                       |
| Administrative Expenses        | 27            | 20                | 7                                | 7             | 20                       |
| <b>Total Expenses</b>          | <u>\$ 460</u> | <u>\$ 250</u>     | <u>\$ 210</u>                    | <u>\$ 241</u> | <u>\$ 219</u>            |
| <b>Net Income</b>              | <u>\$ 308</u> | <u>\$ -</u>       | <u>\$ 308</u>                    | <u>\$ 9</u>   | <u>\$ 299</u>            |

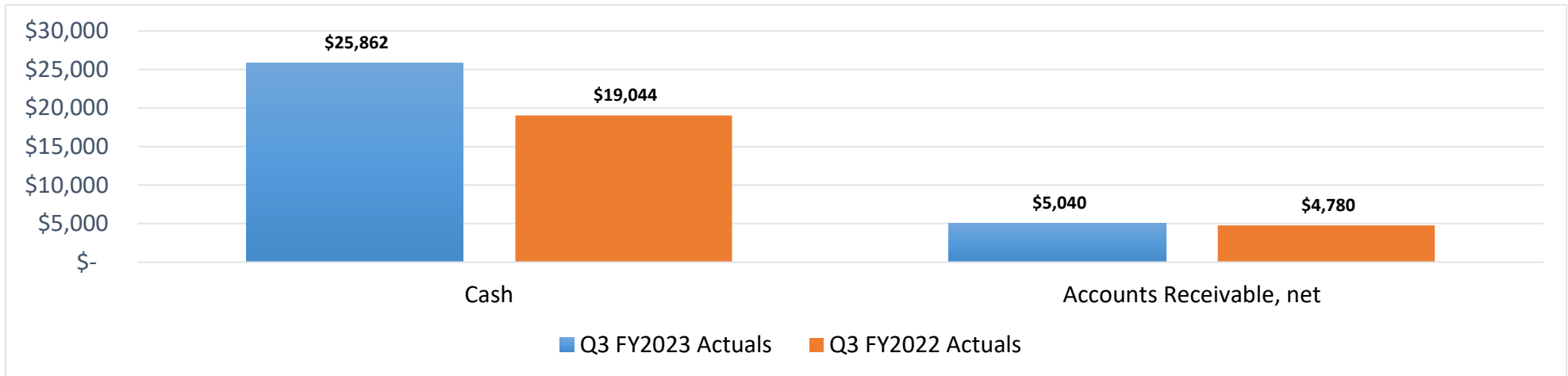


# Faculty Associates, Inc.

## Quarterly Financial Report

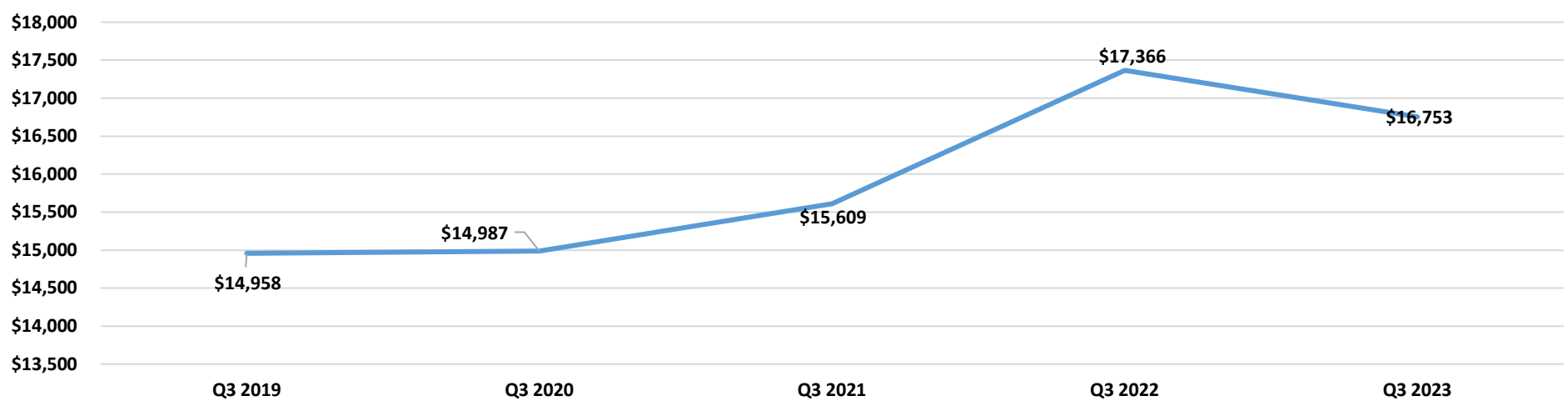
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses     | Q3 FY23          | Q3 FY23 Budget   | Actuals to Budget Variance | Q3 FY22          | FY23 to FY22 Variance |
|---------------------------|------------------|------------------|----------------------------|------------------|-----------------------|
| <b>Revenues</b>           |                  |                  |                            |                  |                       |
| Professional Fees         | \$ 16,753        | \$ 18,032        | \$ (1,279)                 | \$ 17,366        | \$ (613)              |
| Investment Income         | 439              | 60               | 379                        | 20               | 419                   |
| Medicaid Supplemental     | 4,403            | 4,306            | 97                         | 4,306            | 97                    |
| CARES Funds               | 2,571            | -                | 2,571                      | -                | 2,571                 |
| <b>Total Revenues</b>     | <b>\$ 24,166</b> | <b>\$ 22,398</b> | <b>\$ 1,768</b>            | <b>\$ 21,692</b> | <b>\$ 2,474</b>       |
| <b>Expenses</b>           |                  |                  |                            |                  |                       |
| Transfers to UF           | \$ 16,370        | \$ 16,125        | \$ 245                     | \$ 15,900        | \$ 470                |
| Credit Card Fees          | 460              | 513              | (53)                       | 463              | (3)                   |
| Medicaid Supplemental IGT | 1,383            | 1,383            | -                          | -                | 1,383                 |
| <b>Total Expenses</b>     | <b>\$ 18,213</b> | <b>\$ 18,021</b> | <b>\$ 192</b>              | <b>\$ 16,363</b> | <b>\$ 1,850</b>       |
| <b>Net Income</b>         | <b>\$ 5,953</b>  | <b>\$ 4,377</b>  | <b>\$ 1,576</b>            | <b>\$ 5,329</b>  | <b>\$ 624</b>         |

### Professional Fees - Five Year Trend

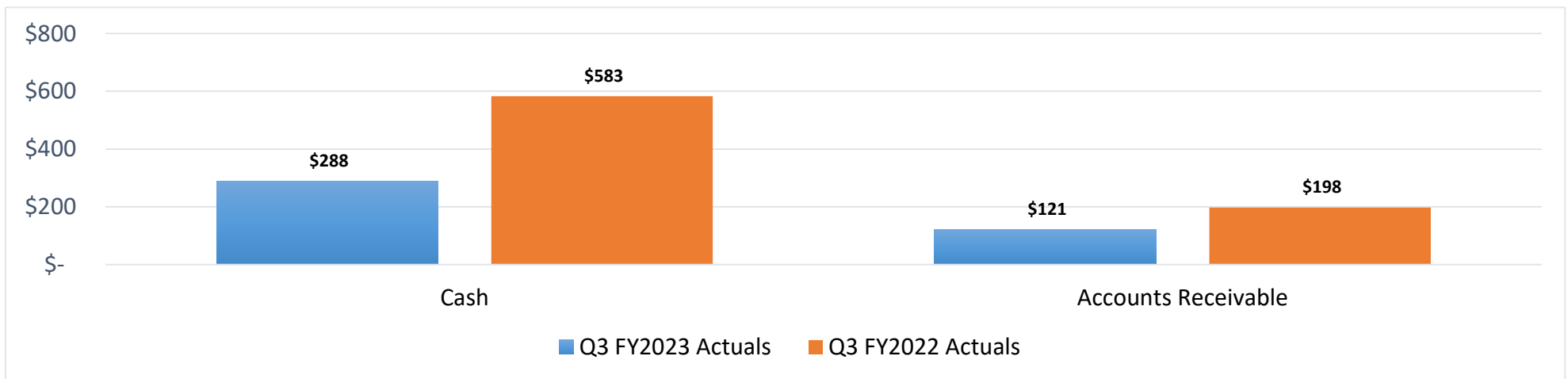


# University of Florida College of Pharmacy Faculty Practice Association, Inc.

## Quarterly Financial Report

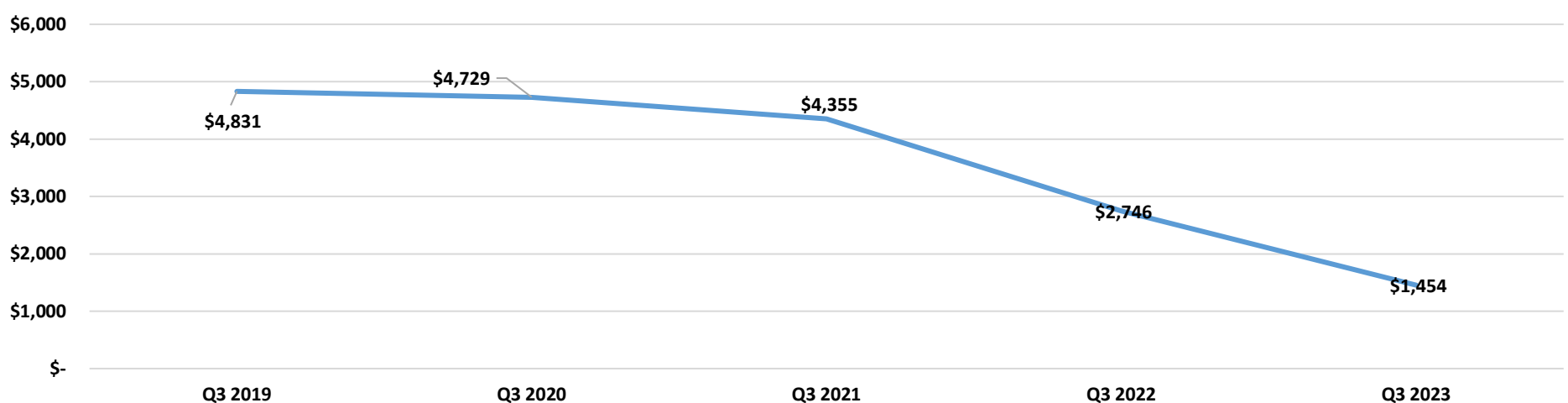
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses | Q3 FY23         | Q3 FY23 Budget  | Actuals to Budget Variance | Q3 FY22           | FY23 to FY22 Variance |
|-----------------------|-----------------|-----------------|----------------------------|-------------------|-----------------------|
| <b>Revenues</b>       |                 |                 |                            |                   |                       |
| Program Revenues      | \$ 1,454        | \$ 1,500        | \$ (46)                    | \$ 2,476          | \$ (1,022)            |
| <b>Total Revenues</b> | <u>\$ 1,454</u> | <u>\$ 1,500</u> | <u>\$ (46)</u>             | <u>\$ 2,476</u>   | <u>\$ (1,022)</u>     |
| <b>Expenses</b>       |                 |                 |                            |                   |                       |
| Transfers to UF       | \$ 1,389        | \$ 1,500        | \$ (111)                   | \$ 8,710          | \$ (7,321)            |
| <b>Total Expenses</b> | <u>\$ 1,389</u> | <u>\$ 1,500</u> | <u>\$ (111)</u>            | <u>\$ 8,710</u>   | <u>\$ (7,321)</u>     |
| <b>Net Income</b>     | <u>\$ 65</u>    | <u>\$ -</u>     | <u>\$ 65</u>               | <u>\$ (6,234)</u> | <u>\$ 6,299</u>       |

### Program Revenue - Five Year Trend

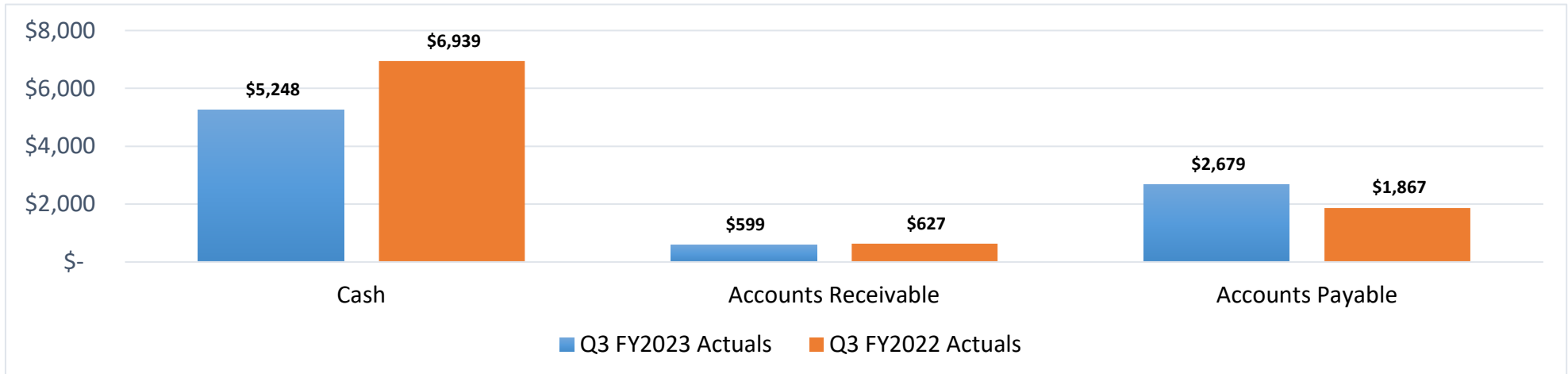


# Florida Veterinary Medicine Faculty Association, Inc.

## Quarterly Financial Report

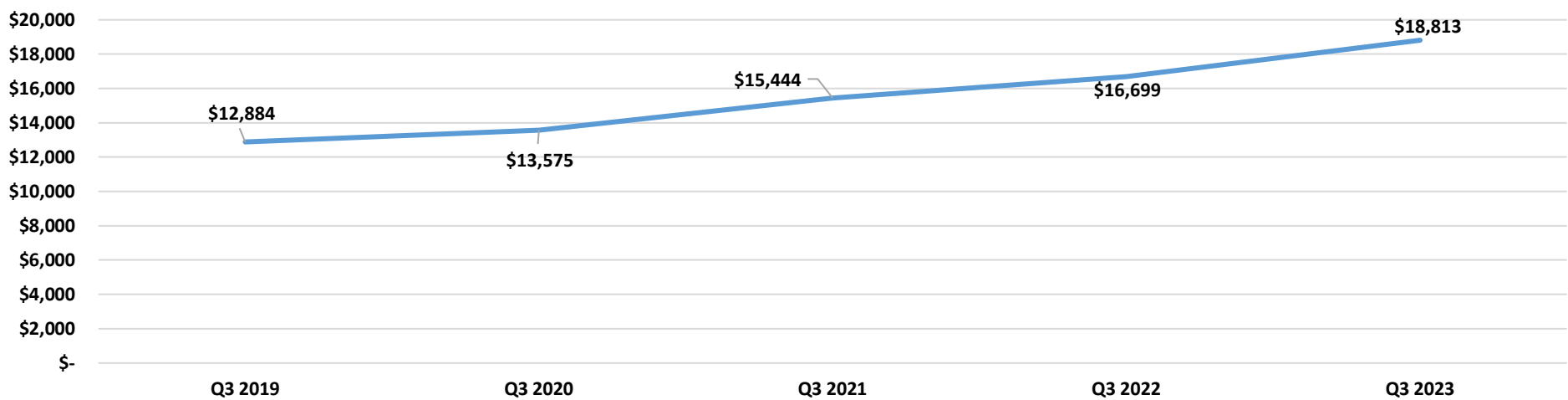
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses   | Q3 FY23           | Q3 FY23 Budget   | Actuals to Budget Variance | Q3 FY22          | FY23 to FY22 Variance |
|-------------------------|-------------------|------------------|----------------------------|------------------|-----------------------|
| <b>Revenues</b>         |                   |                  |                            |                  |                       |
| Patient Service Revenue | \$ 14,790         | \$ 13,891        | \$ 899                     | \$ 13,343        | \$ 1,447              |
| Other Revenue           | 4,023             | 3,518            | 505                        | 3,356            | 667                   |
| <b>Total Revenues</b>   | <b>\$ 18,813</b>  | <b>\$ 17,409</b> | <b>\$ 1,404</b>            | <b>\$ 16,699</b> | <b>\$ 2,114</b>       |
| <b>Expenses</b>         |                   |                  |                            |                  |                       |
| Transfers to UF         | \$ 20,372         | \$ 15,574        | \$ 4,798                   | \$ 13,054        | \$ 7,318              |
| Other Expenses          | 867               | 814              | 53                         | 777              | 90                    |
| <b>Total Expenses</b>   | <b>\$ 21,239</b>  | <b>\$ 16,388</b> | <b>\$ 4,851</b>            | <b>\$ 13,831</b> | <b>\$ 7,408</b>       |
| <b>Net Income</b>       | <b>\$ (2,426)</b> | <b>\$ 1,021</b>  | <b>\$ (3,447)</b>          | <b>\$ 2,868</b>  | <b>\$ (5,294)</b>     |

### Patient Service Revenue - Five Year Trend

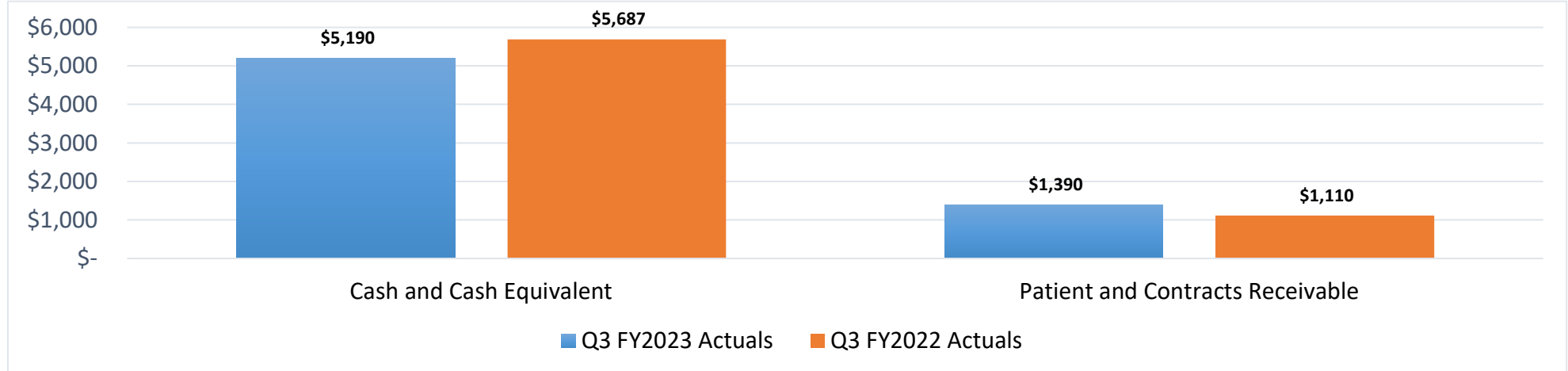


# Florida Health Professions Association, Inc.

## Quarterly Financial Report

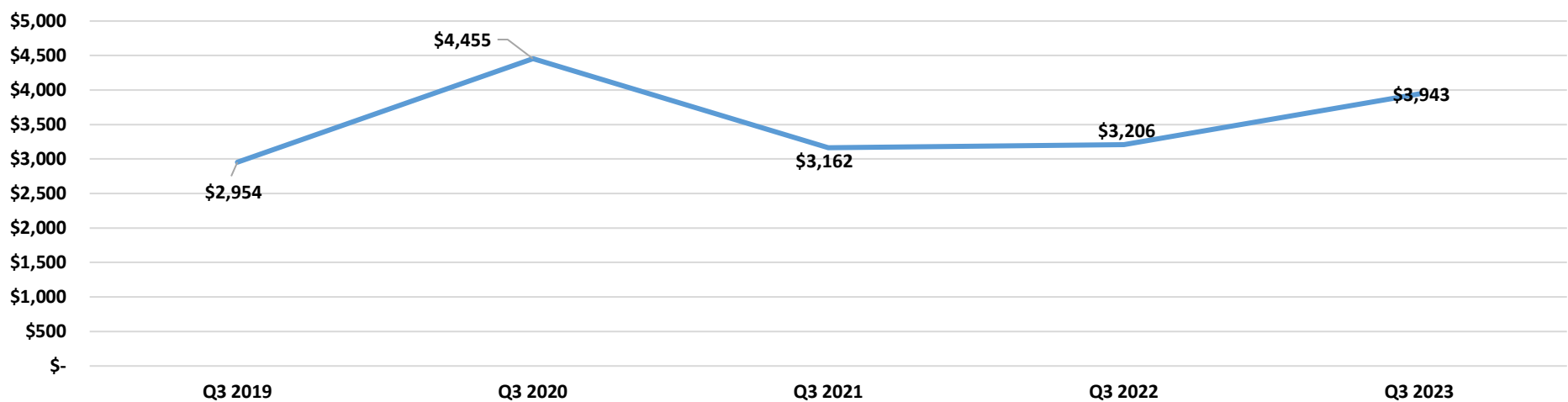
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses             | Q3 FY23         | Q3 FY23 Budget  | Actuals to Budget Variance | Q3 FY22         | FY23 to FY22 Variance |
|-----------------------------------|-----------------|-----------------|----------------------------|-----------------|-----------------------|
| <b>Revenues</b>                   |                 |                 |                            |                 |                       |
| Professional Fees                 | \$ 3,943        | \$ 3,374        | \$ 569                     | \$ 3,206        | \$ 737                |
| <b>Total Revenues</b>             | <b>\$ 3,943</b> | <b>\$ 3,374</b> | <b>\$ 569</b>              | <b>\$ 3,206</b> | <b>\$ 737</b>         |
| <b>Expenses</b>                   |                 |                 |                            |                 |                       |
| Transfers to the University       | \$ 3,994        | \$ 3,686        | \$ 308                     | \$ 3,501        | \$ 493                |
| Professional and Credit Card Fees | 519             | 28              | 491                        | 24              | 495                   |
| <b>Total Expenses</b>             | <b>\$ 4,513</b> | <b>\$ 3,714</b> | <b>\$ 799</b>              | <b>\$ 3,525</b> | <b>\$ 988</b>         |
| <b>Net Income</b>                 | <b>\$ (570)</b> | <b>\$ (340)</b> | <b>\$ (230)</b>            | <b>\$ (319)</b> | <b>\$ (251)</b>       |

### Professional Fees - Five Year Trend

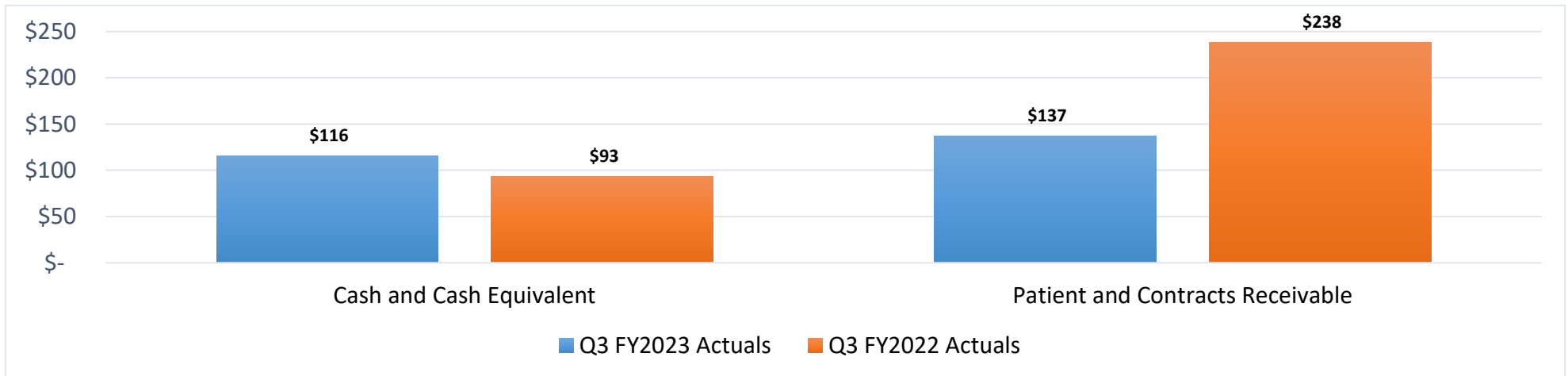


# University of Florida College of Nursing Faculty Practice Association, Inc.

## Quarterly Financial Report

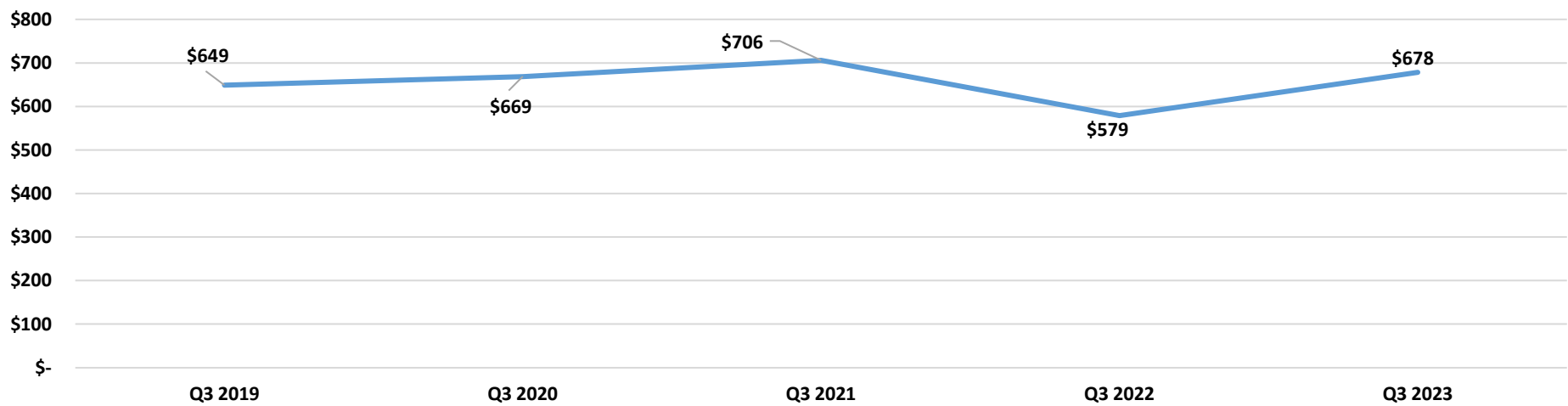
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses             | Q3 FY23         | Q3 FY23 Budget  | Actuals to Budget Variance | Q3 FY22        | FY23 to FY22 Variance |
|-----------------------------------|-----------------|-----------------|----------------------------|----------------|-----------------------|
| <b>Revenues</b>                   |                 |                 |                            |                |                       |
| Professional Fees                 | \$ 678          | \$ 660          | \$ 18                      | \$ 579         | \$ 99                 |
| Contracts and Grants              | -               | -               | -                          | -              | -                     |
| Other Revenue                     | -               | -               | -                          | -              | -                     |
| <b>Total Revenues</b>             | <b>\$ 678</b>   | <b>\$ 660</b>   | <b>\$ 18</b>               | <b>\$ 579</b>  | <b>\$ 99</b>          |
| <b>Expenses</b>                   |                 |                 |                            |                |                       |
| Transfers to the University       | \$ 800          | \$ 800          | \$ -                       | \$ 650         | \$ 150                |
| Professional and Credit Card Fees | 21              | 24              | (3)                        | 23             | (2)                   |
| <b>Total Expenses</b>             | <b>\$ 821</b>   | <b>\$ 824</b>   | <b>\$ (3)</b>              | <b>\$ 673</b>  | <b>\$ 148</b>         |
| <b>Net Income</b>                 | <b>\$ (143)</b> | <b>\$ (164)</b> | <b>\$ 21</b>               | <b>\$ (94)</b> | <b>\$ (49)</b>        |

### Professional Fees - Five Year Trend

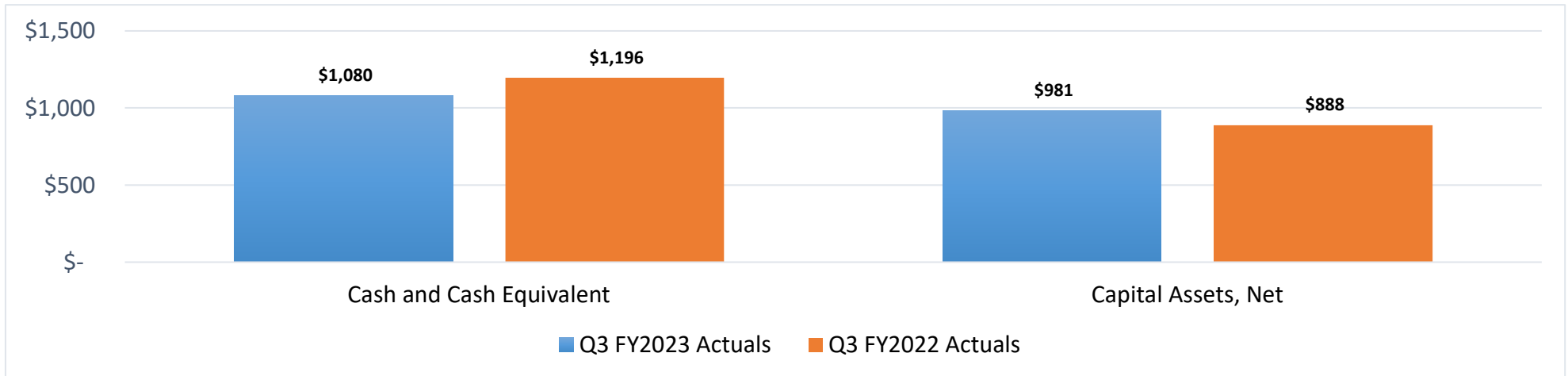


# Faculty Clinic, Inc.

## Quarterly Financial Report

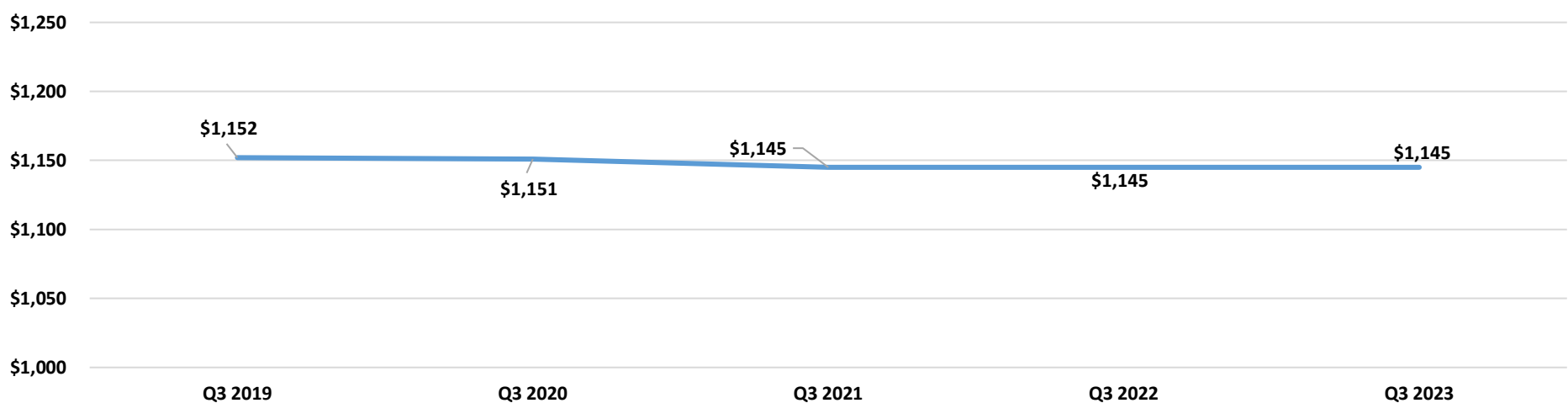
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses   | Q3 FY23         | Q3 FY23 Budget  | Actuals to Budget Variance | Q3 FY22         | FY23 to FY22 Variance |
|-------------------------|-----------------|-----------------|----------------------------|-----------------|-----------------------|
| <b>Revenues</b>         |                 |                 |                            |                 |                       |
| Rental Income           | \$ 897          | \$ 897          | \$ -                       | \$ 897          | \$ -                  |
| Other Revenue           | 248             | 249             | (1)                        | 248             | -                     |
| <b>Total Revenues</b>   | <b>\$ 1,145</b> | <b>\$ 1,146</b> | <b>\$ (1)</b>              | <b>\$ 1,145</b> | <b>\$ -</b>           |
| <b>Expenses</b>         |                 |                 |                            |                 |                       |
| Contract Labor          | \$ 203          | \$ 254          | \$ (51)                    | \$ 219          | \$ (16)               |
| Repairs and Maintenance | 338             | 290             | \$ 48                      | 243             | 95                    |
| Depreciation            | 102             | 121             | \$ (19)                    | 103             | (1)                   |
| Utilities               | 279             | 229             | \$ 50                      | 201             | 78                    |
| Other Expenses          | 150             | 150             | \$ -                       | 142             | 8                     |
| <b>Total Expenses</b>   | <b>\$ 1,072</b> | <b>\$ 1,044</b> | <b>\$ 28</b>               | <b>\$ 908</b>   | <b>\$ 164</b>         |
| <b>Net Income</b>       | <b>\$ 73</b>    | <b>\$ 102</b>   | <b>\$ (29)</b>             | <b>\$ 237</b>   | <b>\$ (164)</b>       |

### Total Revenue - Five Year Trend

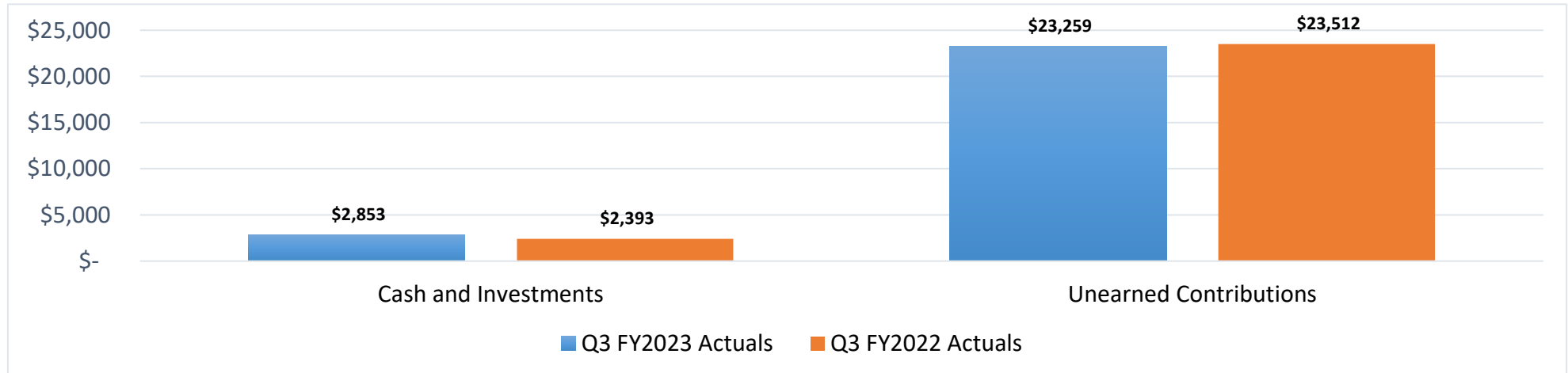


# Gator Boosters, Inc.

## Quarterly Financial Report

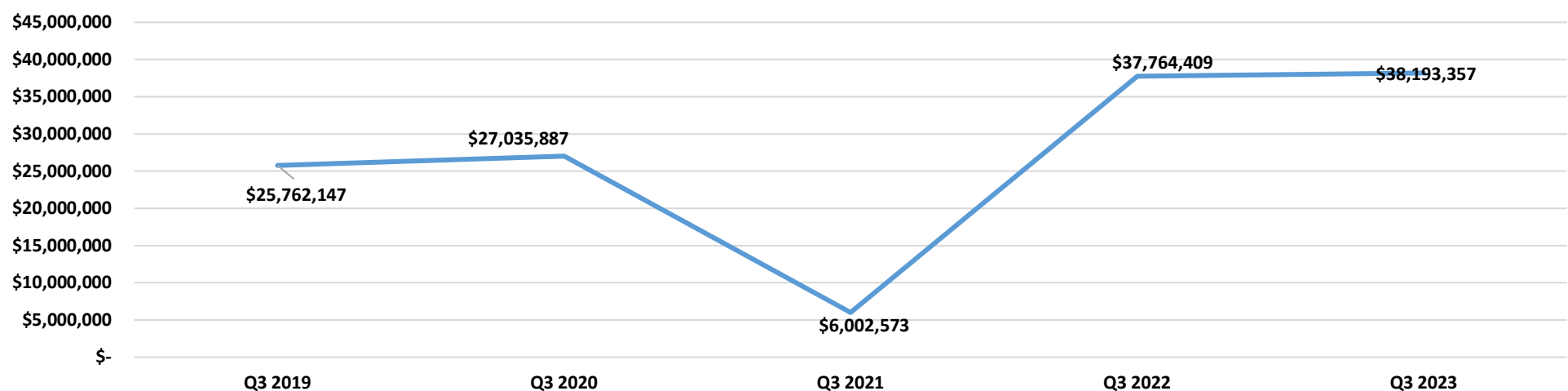
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses              | Q3 FY23          | Q3 FY23 Budget    | Actuals to Budget Variance | Q3 FY22           | FY23 to FY22 Variance |
|------------------------------------|------------------|-------------------|----------------------------|-------------------|-----------------------|
| <b>Revenues</b>                    |                  |                   |                            |                   |                       |
| Contributions - Football           | \$ 34,239        | \$ 34,008         | \$ 231                     | \$ 33,798         | \$ 441                |
| Contributions - Men's Basketball   | 2,835            | 2,850             | (15)                       | 2,838             | (3)                   |
| Contributions - Baseball           | 1,119            | 1,132             | (13)                       | 1,129             | (9)                   |
| Contributions - Major Giving       | 8,519            | 8,530             | (11)                       | 17,311            | (8,793)               |
| Endowment Related                  | -                | -                 | -                          | -                 | -                     |
| Other Revenues                     | 2,524            | 244               | 2,280                      | 1,246             | 1,278                 |
| <b>Total Revenues</b>              | <b>\$ 49,236</b> | <b>\$ 46,764</b>  | <b>\$ 2,472</b>            | <b>\$ 56,322</b>  | <b>\$ (7,086)</b>     |
| <b>Expenses</b>                    |                  |                   |                            |                   |                       |
| Employee Compensation and Benefits | \$ 1,328         | \$ 1,556          | \$ (228)                   | \$ 1,146          | \$ 182                |
| Transfers to UAA                   | 46,674           | 44,146            | \$ 2,528                   | 53,635            | (6,961)               |
| General & Administrative           | 1,910            | 2,540             | \$ (630)                   | 2,615             | (705)                 |
| <b>Total Expenses</b>              | <b>\$ 49,912</b> | <b>\$ 48,242</b>  | <b>\$ 1,670</b>            | <b>\$ 57,396</b>  | <b>\$ (7,484)</b>     |
| <b>Net Income</b>                  | <b>\$ (676)</b>  | <b>\$ (1,479)</b> | <b>\$ 802</b>              | <b>\$ (1,075)</b> | <b>\$ 398</b>         |

### Total Sports Annual Giving Contributions - Five Year Trend

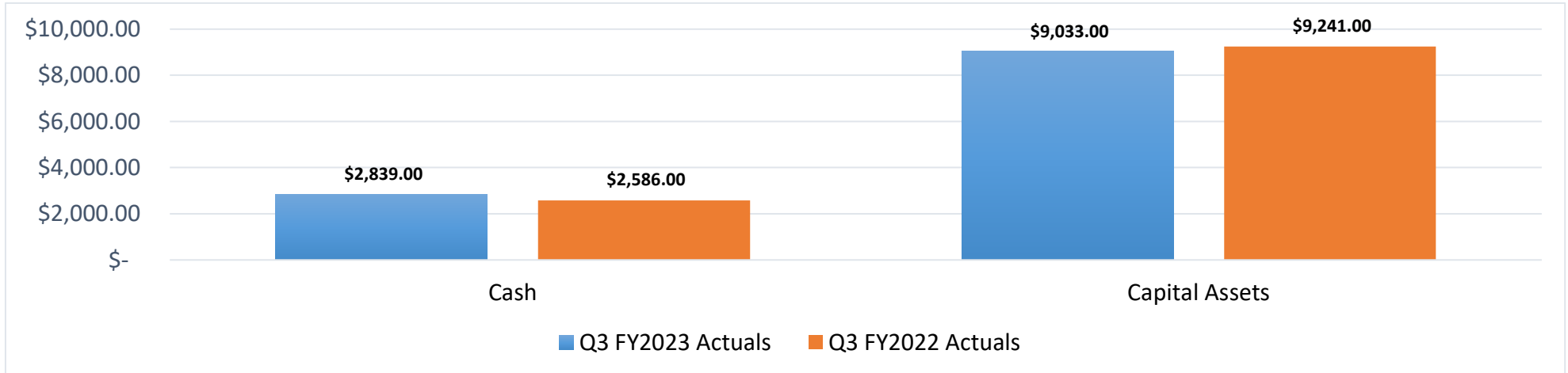


# University of Florida Development Corporation

## Quarterly Financial Report

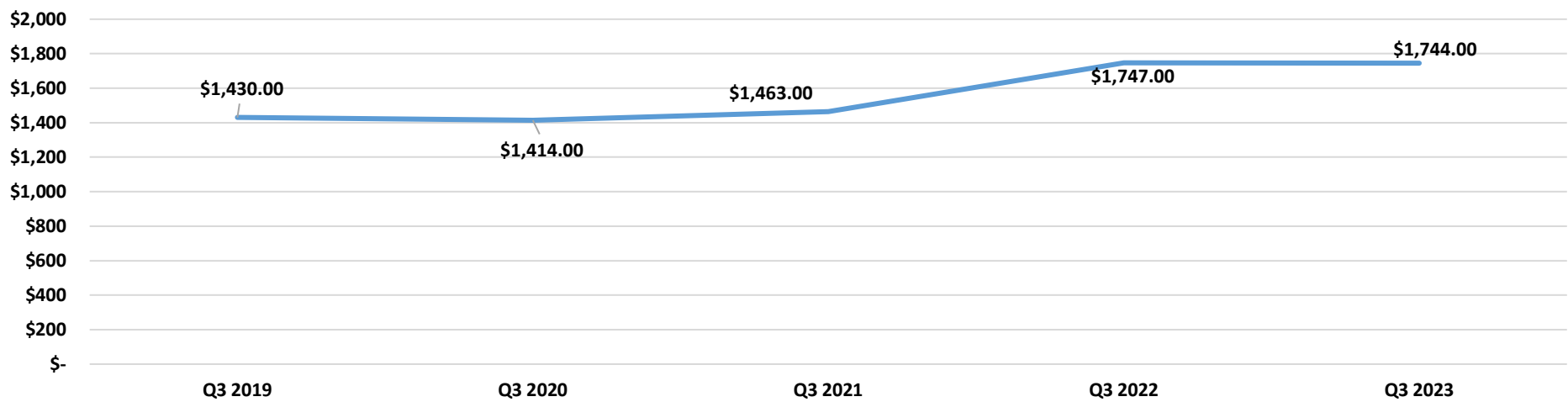
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses | Q3 FY23         | Q3 FY23 Budget  | Actuals to Budget Variance | Q3 FY22         | FY23 to FY22 Variance |
|-----------------------|-----------------|-----------------|----------------------------|-----------------|-----------------------|
| <b>Revenues</b>       |                 |                 |                            |                 |                       |
| Rent                  | \$ 1,744        | \$ 1,657        | \$ 87                      | \$ 1,747        | \$ (3)                |
| <b>Total Revenues</b> | <u>\$ 1,744</u> | <u>\$ 1,657</u> | <u>\$ 87</u>               | <u>\$ 1,747</u> | <u>\$ (3)</u>         |
| <b>Expenses</b>       |                 |                 |                            |                 |                       |
| Services and Supplies | \$ 375          | \$ 348          | \$ 27                      | \$ 210          | \$ 165                |
| Property Taxes        | 234             | 234             | \$ -                       | 316             | (82)                  |
| Depreciation          | 552             | 552             | \$ -                       | 549             | 3                     |
| Other Expenses        | 578             | 633             | \$ (55)                    | 441             | 137                   |
| <b>Total Expenses</b> | <u>\$ 1,739</u> | <u>\$ 1,767</u> | <u>\$ (28)</u>             | <u>\$ 1,516</u> | <u>\$ 223</u>         |
| <b>Net Income</b>     | <u>\$ 5</u>     | <u>\$ (110)</u> | <u>\$ 115</u>              | <u>\$ 231</u>   | <u>\$ (226)</u>       |

### Rent Revenue - Five Year Trend



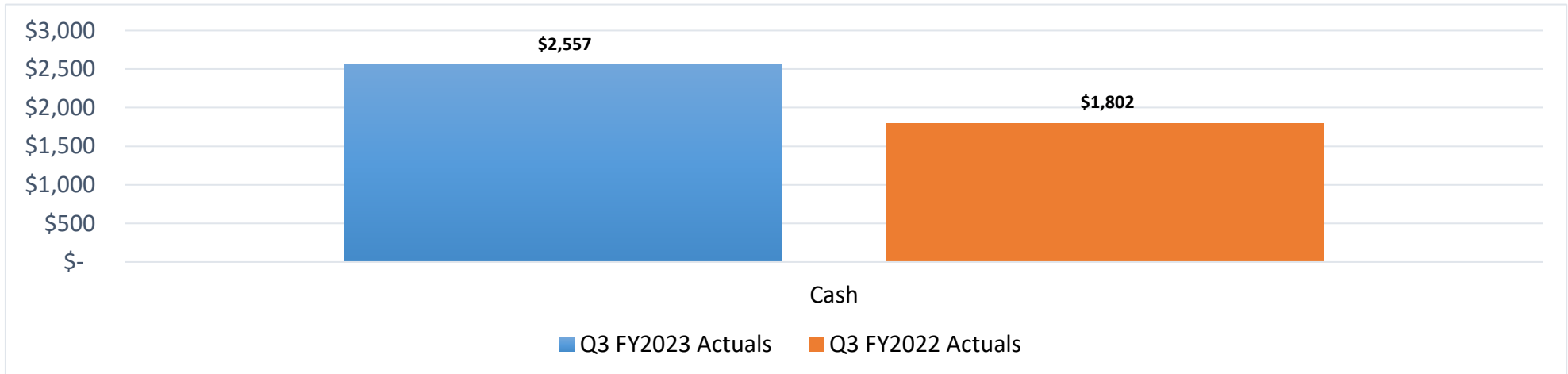


# University of Florida Historic St. Augustine, Inc.

## Quarterly Financial Report

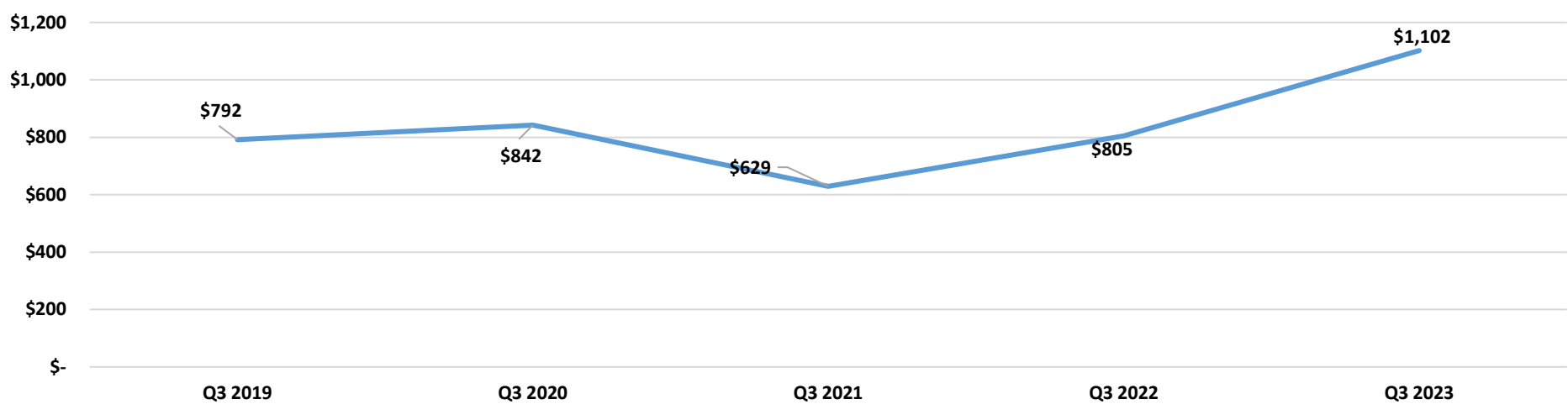
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses              | Q3 FY23         | Q3 FY23 Budget | Actuals to Budget Variance | Q3 FY22       | FY23 to FY22 Variance |
|------------------------------------|-----------------|----------------|----------------------------|---------------|-----------------------|
| <b>Revenues</b>                    |                 |                |                            |               |                       |
| Rent                               | \$ 573          | \$ 533         | \$ 40                      | \$ 555        | \$ 18                 |
| Other Revenues                     | 529             | 103            | 426                        | 250           | 279                   |
| <b>Total Revenues</b>              | <b>\$ 1,102</b> | <b>\$ 636</b>  | <b>\$ 466</b>              | <b>\$ 805</b> | <b>\$ 297</b>         |
| <b>Expenses</b>                    |                 |                |                            |               |                       |
| Building Preservation              | \$ 24           | \$ 138         | \$ (114)                   | \$ 297        | \$ (273)              |
| General and Administrative Expense | 442             | 549            | (107)                      | 321           | 121                   |
| <b>Total Expenses</b>              | <b>\$ 466</b>   | <b>\$ 687</b>  | <b>\$ (221)</b>            | <b>\$ 618</b> | <b>\$ (152)</b>       |
| <b>Net Income</b>                  | <b>\$ 636</b>   | <b>\$ (51)</b> | <b>\$ 687</b>              | <b>\$ 187</b> | <b>\$ 449</b>         |

### Revenue - Five Year Trend

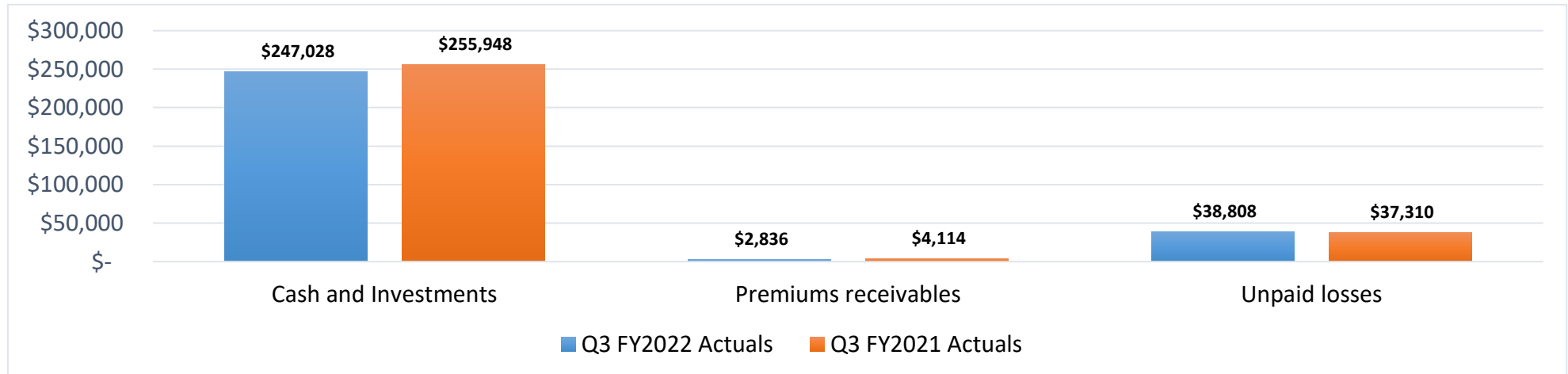


# University of Florida Self-Insurance Program & HealthCare Education Insurance Company

## Quarterly Financial Report

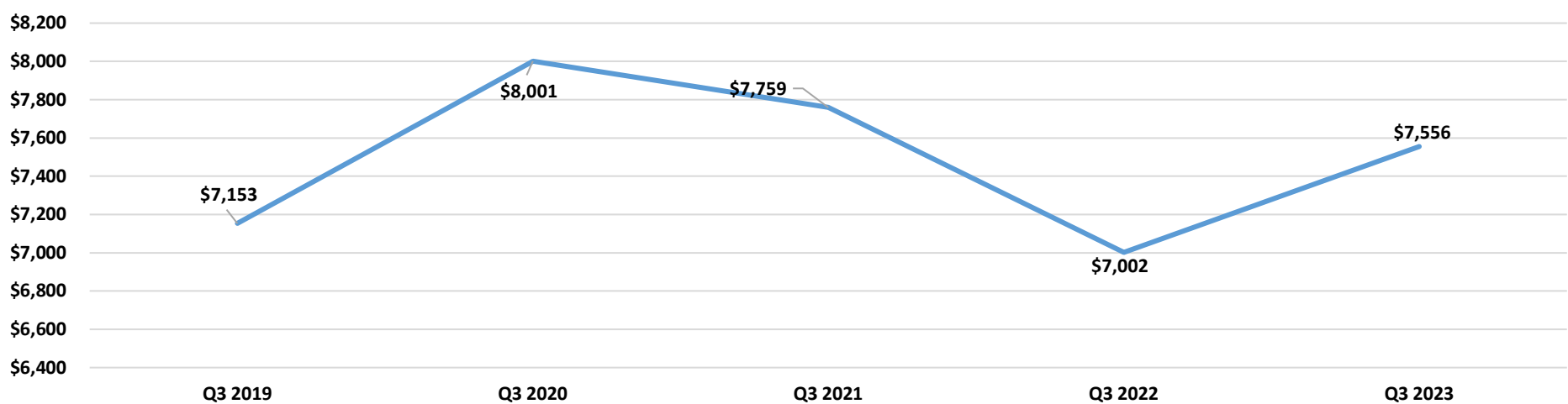
For the nine months ending 3/31/2023 (amounts expressed in thousands)

### Assets and Liabilities



| Revenues and Expenses               | Q3 FY23          | Q3 FY23 Budget   | Actuals to Budget Variance | Q3 FY22           | FY23 to FY22 Variance |
|-------------------------------------|------------------|------------------|----------------------------|-------------------|-----------------------|
| <b>Revenues</b>                     |                  |                  |                            |                   |                       |
| Earned Premiums                     | \$ 7,556         | \$ 7,564         | \$ (8)                     | \$ 7,002          | \$ 554                |
| Investment Income                   | 6,210            | 8,715            | (2,505)                    | (8,080)           | 14,290                |
| Other Revenues                      | 1,152            | 1,145            | 7                          | 1,111             | 41                    |
| <b>Total Revenues</b>               | <b>\$ 14,918</b> | <b>\$ 17,424</b> | <b>\$ (2,506)</b>          | <b>\$ 33</b>      | <b>\$ 14,885</b>      |
| <b>Expenses</b>                     |                  |                  |                            |                   |                       |
| Losses and Loss Adjustment Expenses | \$ 2,684         | \$ 7,972         | \$ (5,288)                 | \$ 395            | \$ 2,289              |
| General and administrative expenses | 911              | 1,180            | (269)                      | 739               | 172                   |
| Transfers to the University         | 3,486            | 3,570            | (84)                       | 3,177             | 309                   |
| <b>Total Expenses</b>               | <b>\$ 7,081</b>  | <b>\$ 12,722</b> | <b>\$ (5,641)</b>          | <b>\$ 4,311</b>   | <b>\$ 2,770</b>       |
| <b>Net Income</b>                   | <b>\$ 7,837</b>  | <b>\$ 4,702</b>  | <b>\$ 3,135</b>            | <b>\$ (4,278)</b> | <b>\$ 12,115</b>      |

### Earned Premiums Revenue - Five Year Trend





# **UF ENTERPRISE FINANCIAL REPORT Q3 FY2023**

**For more information about this  
report, contact:**

**Office of the Senior Vice President and  
Chief Financial Officer and Office of the  
Controller**

**Phone: (352) 392-1321  
[controller-office@ad.ufl.edu](mailto:controller-office@ad.ufl.edu)**



UF

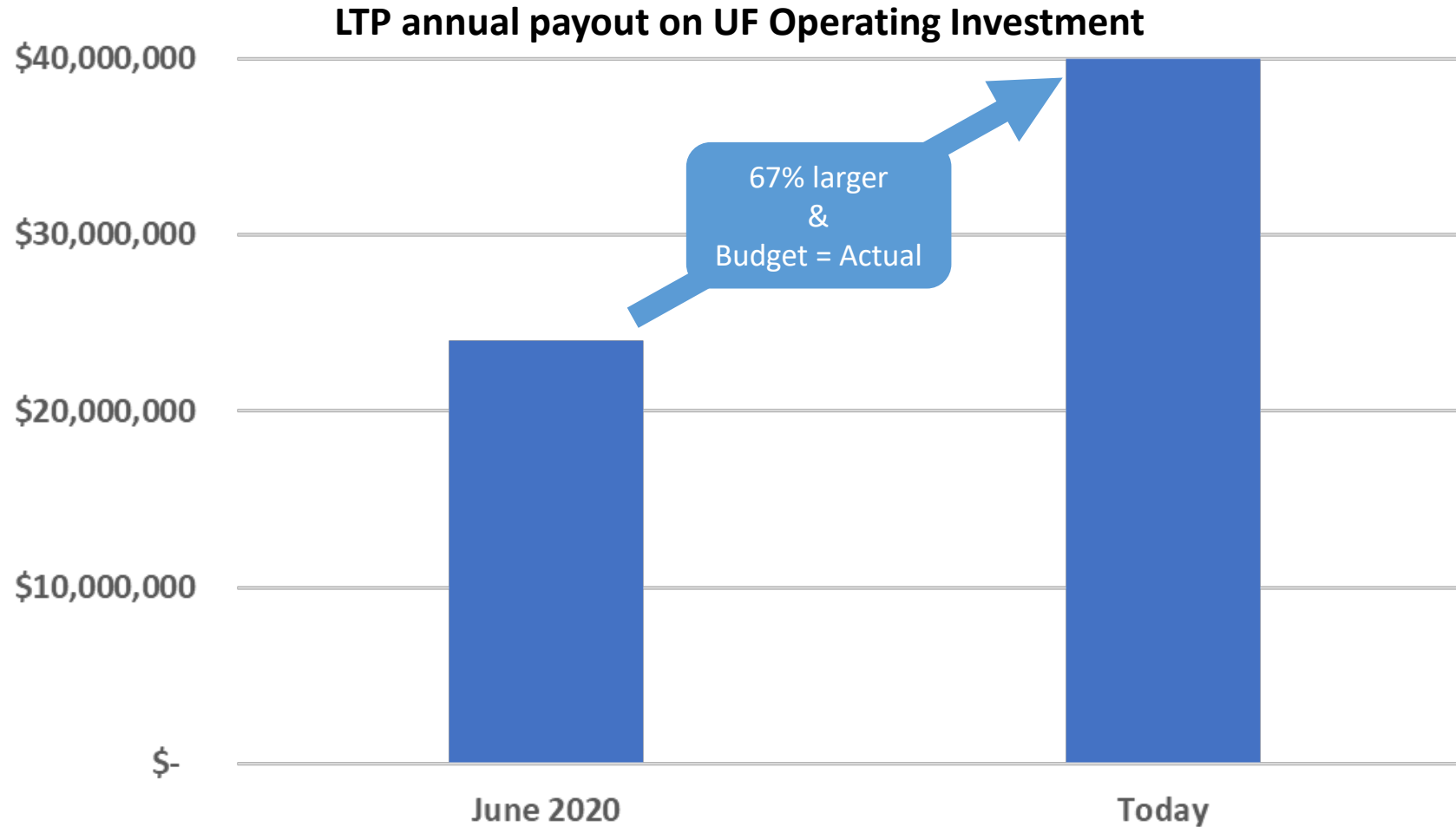
# University of Florida Investment Corporation

Finance, Strategic Planning & Performance Metrics Committee  
University of Florida Board of Trustees  
June 2023

# UF Operating Portfolio Update

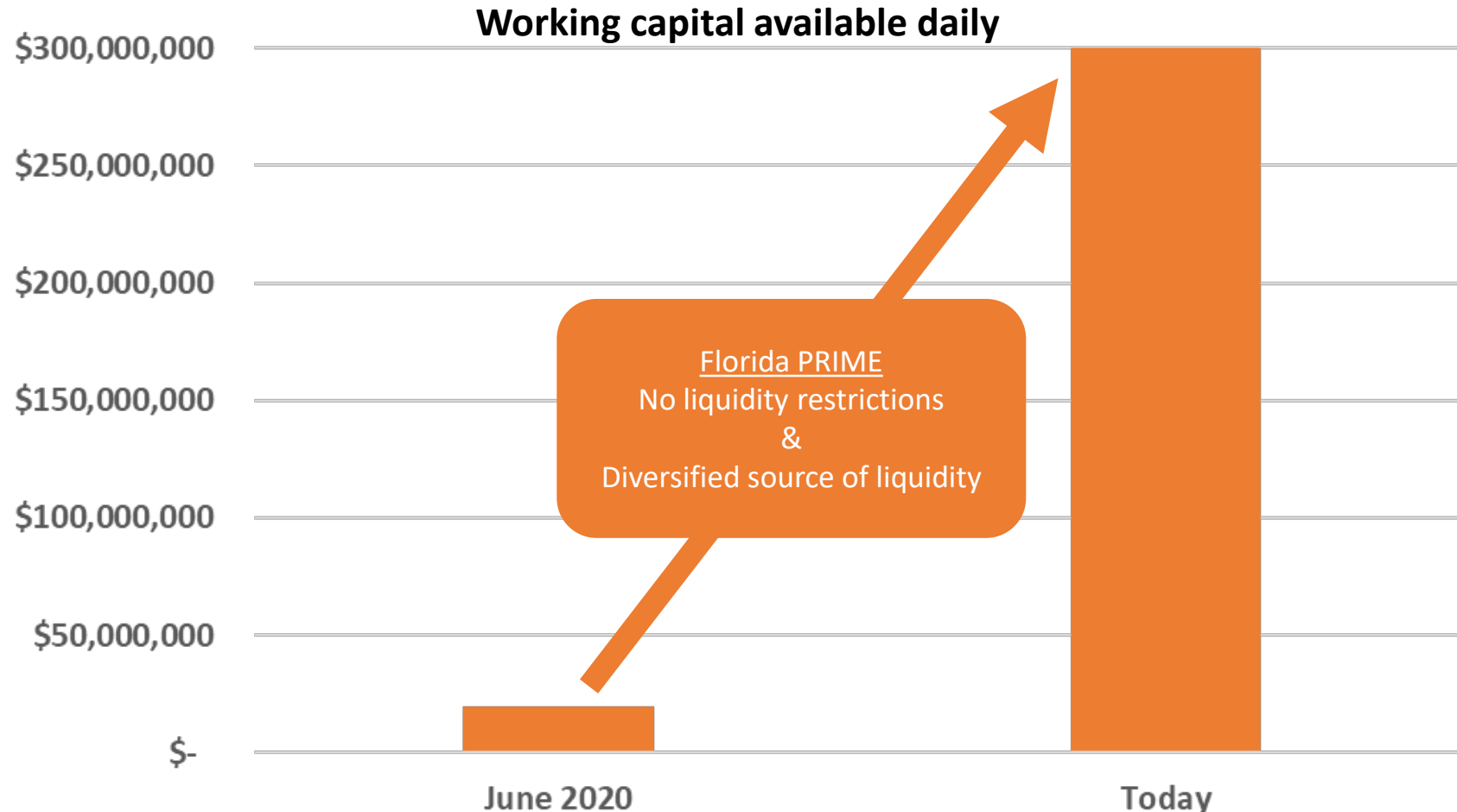
# Strategy Enhancements Payout

## Increased return & improved stability



# Strategy Enhancements Working Capital Liquidity

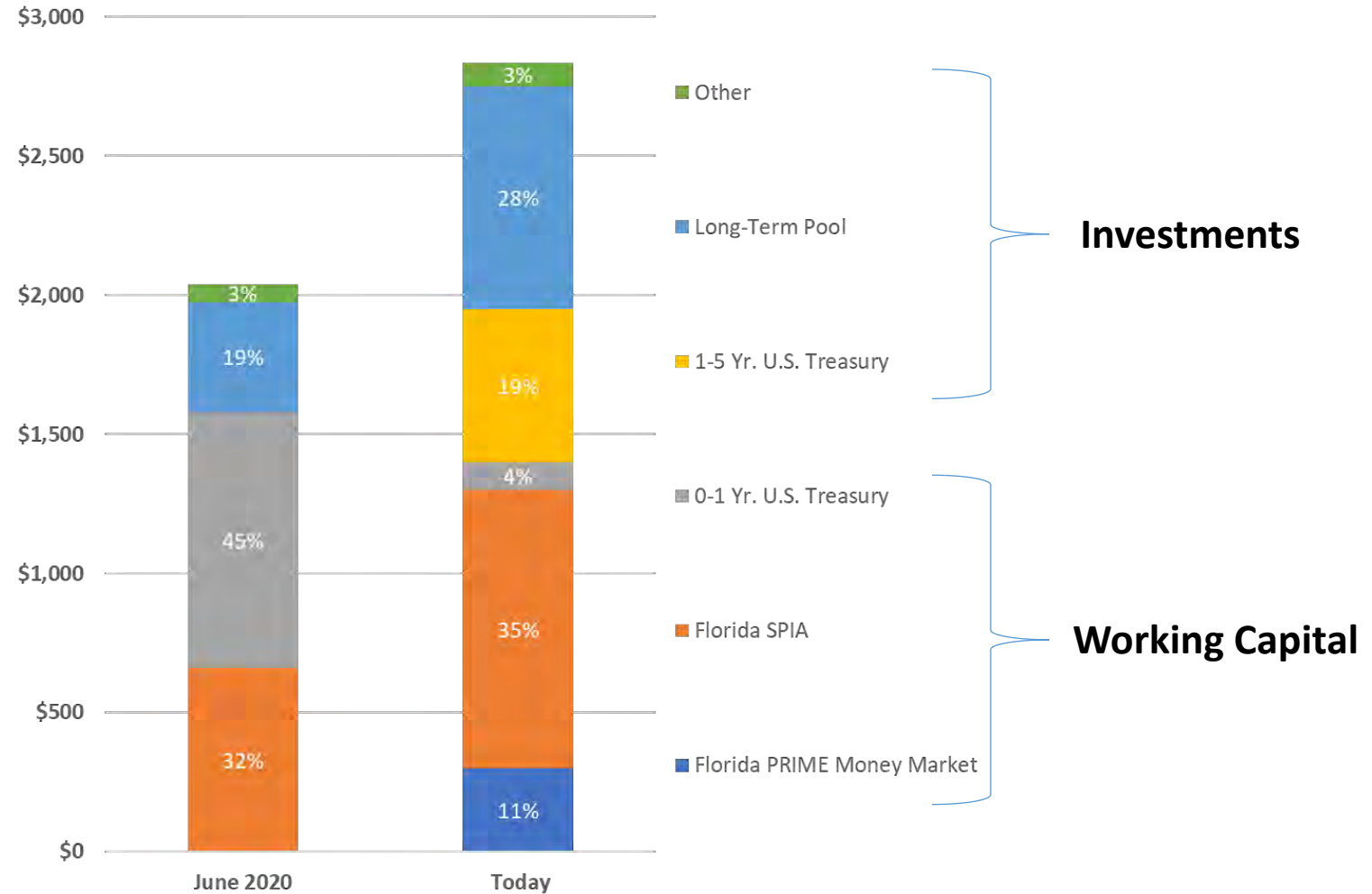
## Improved liquidity & diversified holdings



**SPIA liquidity:** Redemptions permitted up to \$20 million daily, up to \$75 million on 5 day notice, over \$75 million dollars requires 20 days notice; however, as UF is not a 'state agency' redemptions greater than 60% of prior three month's average balance requires 180 day notice; Redemption limits reset monthly.

# Strategy Enhancements Investment Strategy

**Barbell strategy better positioned to generate returns for UF**





## Strategy Enhancements Summary

---

### Improved Liquidity & Diversification

- Added Florida PRIME Money Market
- Further increasing U.S. Treasury allocation

### Provided Financial Stability

- New Payout Policy removes intra-year volatility
- Longer-term focus enables increased LTP allocation

### Increased Returns

- FY 2024 annual payout to UF targeted at \$40+ million
- Targeting further opportunities to drive future returns

**Asset Allocation**  
**May 1 2023 *estimated***

|                            |                            | Estimated<br>May 1<br>Allocation | Expected<br>Transfers | Targets        |         |
|----------------------------|----------------------------|----------------------------------|-----------------------|----------------|---------|
| <b>Working<br/>Capital</b> | Florida PRIME Money Market | 300                              |                       | 300            | } 1,300 |
|                            | Florida SPIA               | 1,000                            | -500                  | 500            |         |
|                            | 0-1 Yr. U.S. Treasury      | 100                              | 400                   | 500            |         |
| <b>Investments</b>         | 1-5 Yr. U.S. Treasury      | 550                              | -25                   | 525            | } 1,535 |
|                            | Long-Term Pool             | 800                              | 125                   | 925            |         |
|                            | Other                      | 85                               |                       | 85             |         |
| <b>Total</b>               |                            | <b>\$2,835</b>                   |                       | <b>\$2,835</b> |         |

**Significant progress since December 2022 review**

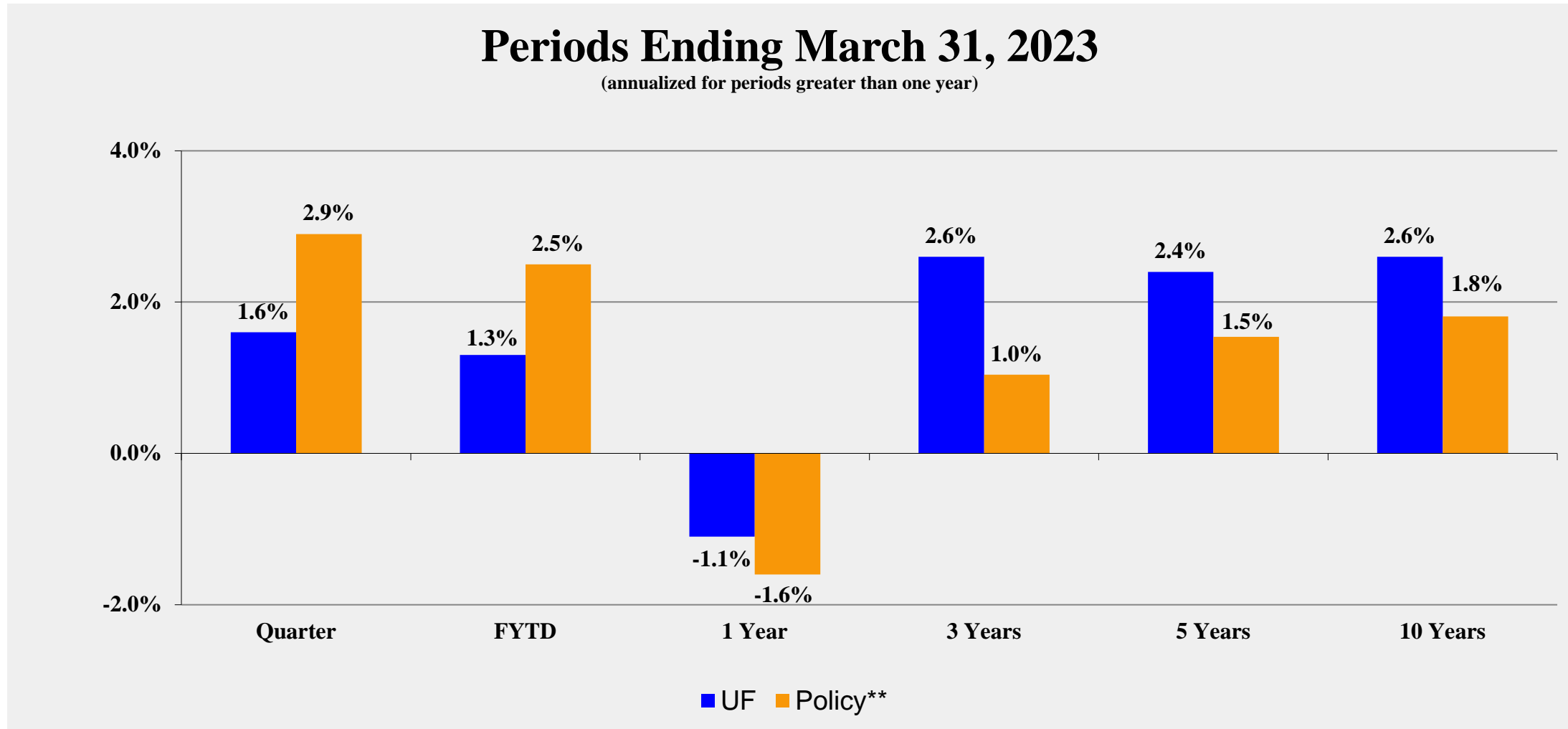
**Working Capital Yield**  
**May 1 2023 *estimated***

|                                  |                            | <b>Current Yield</b> |
|----------------------------------|----------------------------|----------------------|
| <b>Working Capital</b>           | Florida Prime Money Market | 5.1%                 |
|                                  | Florida SPIA               | 1.7%                 |
|                                  | 0-1 Yr. U.S. Treasury      | 5.0%                 |
| Current Working Capital          |                            | 2.7%                 |
| <i>Working Capital @ Targets</i> |                            | <i>3.5%</i>          |

\* SPIA payout is latest available (3/31/23)

**Current Yield of 2.7% vs. ~1.6% previously**

**FY 2023 Preliminary  
Investment Performance\***

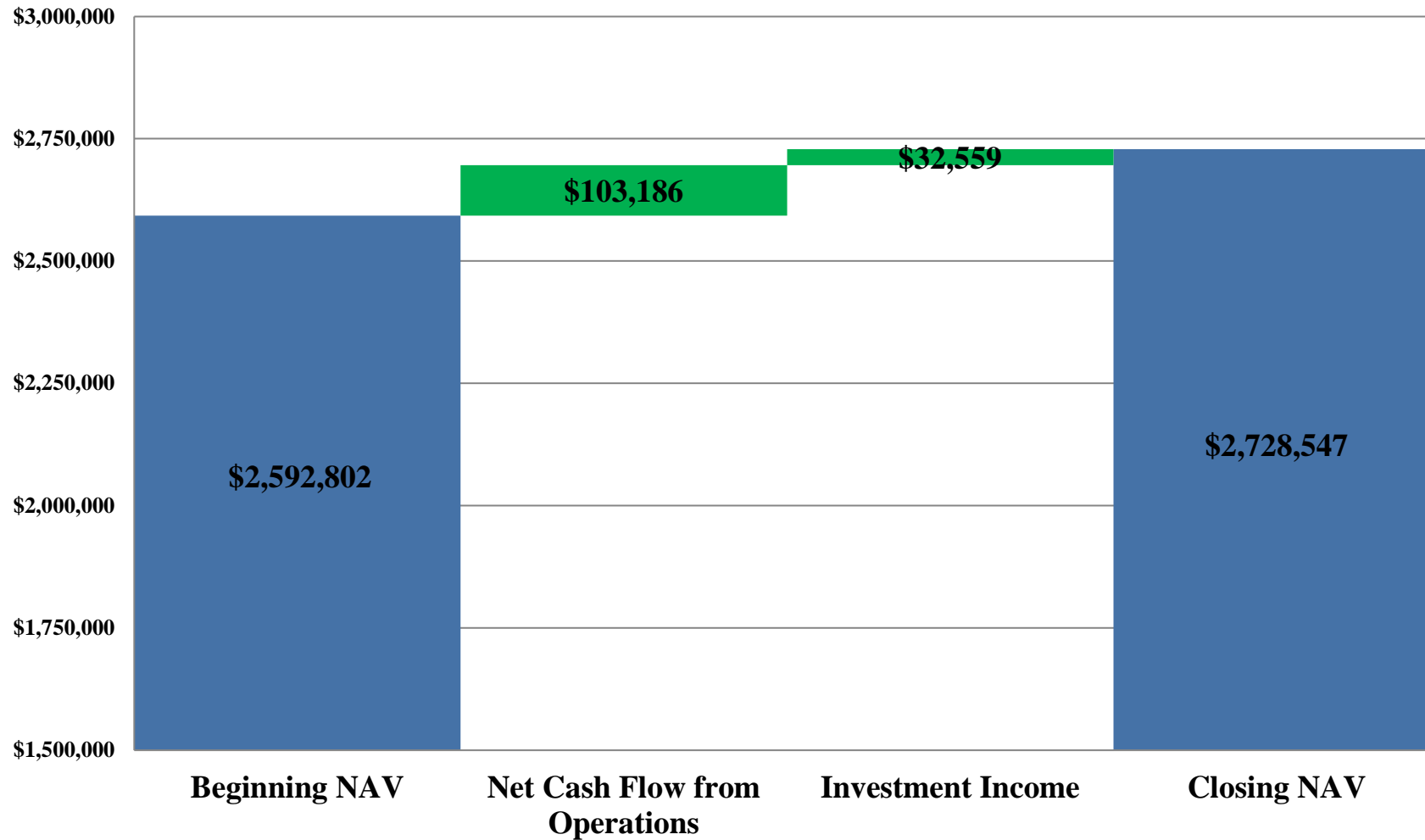


\* Preliminary performance. Includes 67% of NAV reported for 3/31/2023.

\*\* Policy Benchmark: restated June 30, 2020. Blended using actual allocations. Operating cash benchmarked to 1 Month T-Bill, Core cash benchmarked to Short Treasury Index, Strategic cash benchmarked to 1-3 Year Treasury Index. Growth allocation benchmarked to LTP Investable Alternative Benchmark. Internal Loans and other portfolios are benchmarked to total pool return.

**FY 2023  
Financial Recap\***

**Fiscal Year-to-Date 3/31/2022**  
(\$000's)



\* Note: The Recap is based on accounting values.

## UF Investment Policy Statement

---

- Updated UF Investment Policy Statement (IPS). Prior version dated June 2021
- Updated language to align with recent changes to Florida Statutes
- Effective July 1, 2023

# UFF Endowment Portfolio Update

# Asset Allocation

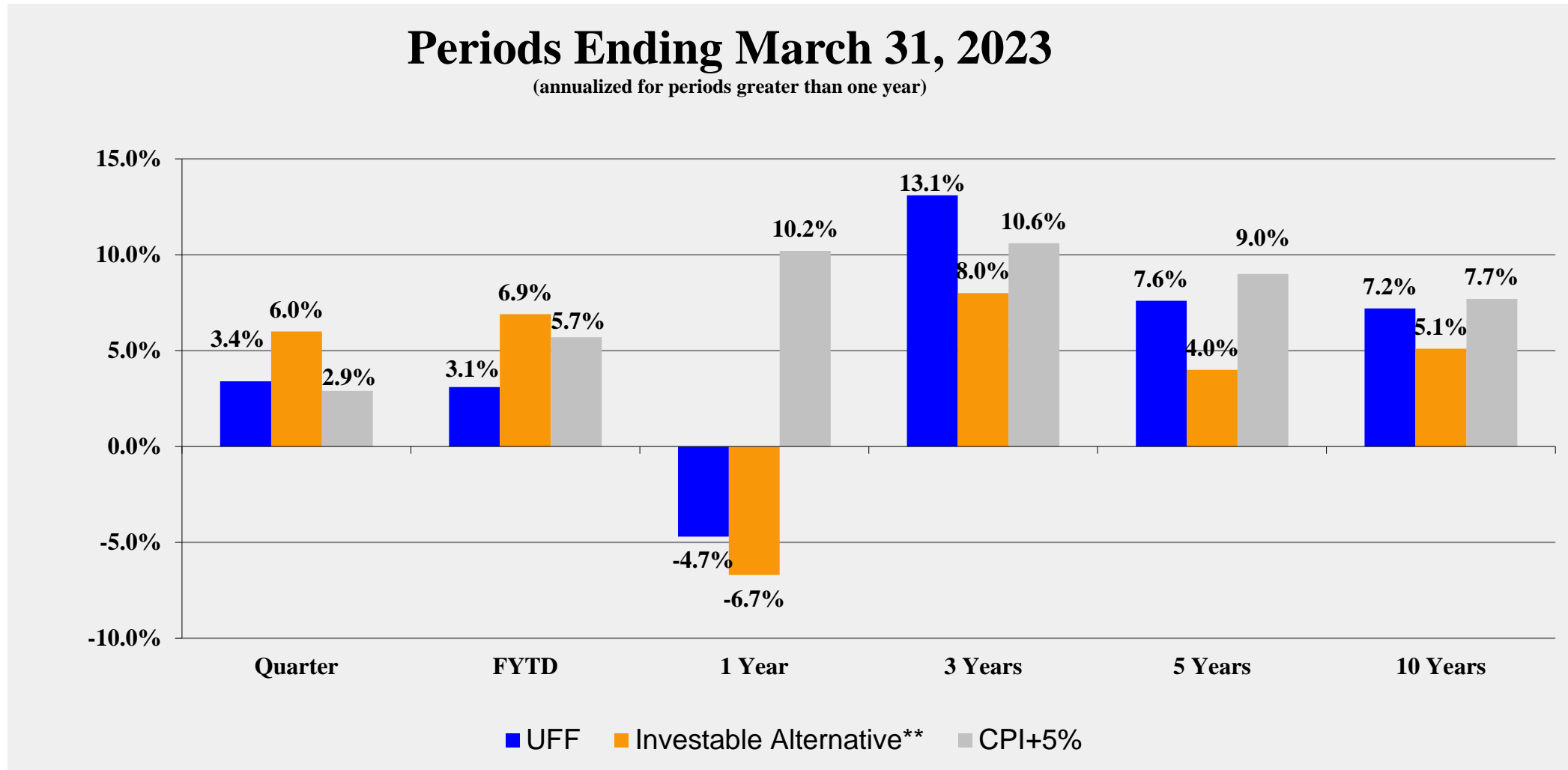
April 30, 2023 *estimated*

| Sub Portfolios                 |                               | Estimated Current Allocation | Broad Allocation Actual | Broad Allocation Targets | Sub Portfolio Ranges | Sub Portfolio Variances* |
|--------------------------------|-------------------------------|------------------------------|-------------------------|--------------------------|----------------------|--------------------------|
| <b>Growth Allocation</b>       | Public Equity                 | 39.6%                        | } <b>80.8%</b>          | <b>85.0%</b>             | 40-45%               | -2.9%                    |
|                                | Private Growth                | 32.4%                        |                         |                          | 35-40%               | -5.1%                    |
|                                | Mkt. Directional HFs          | 8.8%                         |                         |                          | 5-10%                | 1.3%                     |
| <b>Diversifying Allocation</b> | Diversifying HFs              | 10.5%                        | <b>10.5%</b>            | <b>7.5%</b>              | 5-10%                | 3.0%                     |
| <b>Liquidity Allocation</b>    | Fixed Income                  | 3.6%                         | } <b>8.7%</b>           | <b>7.5%</b>              | 6.5%                 | -2.9%                    |
|                                | Cash & U.S. Treasuries (<1yr) | 5.1%                         |                         |                          | 1.0%                 | 5.1%                     |
| <b>Totals</b>                  |                               | 100.0%                       | 100.0%                  | 100.0%                   |                      |                          |

\* Variance measured to mid-point of expected range



**FY 2023 Preliminary  
Investment Performance\***

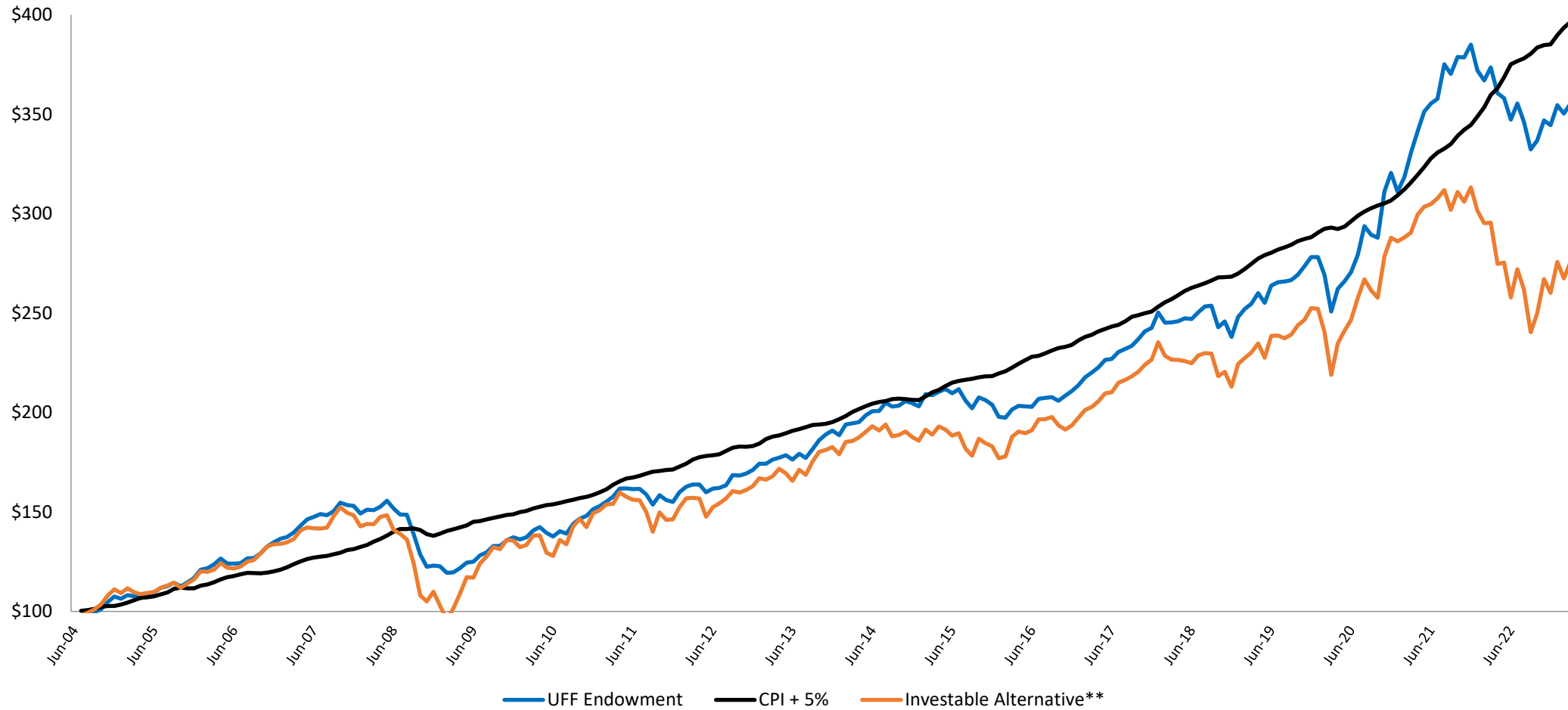


\* Preliminary performance. Includes 65% of NAV reported for 12/31/2022.

\*\* Investable Alternative Benchmark: 7/1/04-6/30/22 - 60% MSCI ACWI / 40% Barclays Global Aggregate; As of 7/1/22 - 70% MSCI ACWI / 30% Barclays Global Aggregate.

# Long-Term Performance

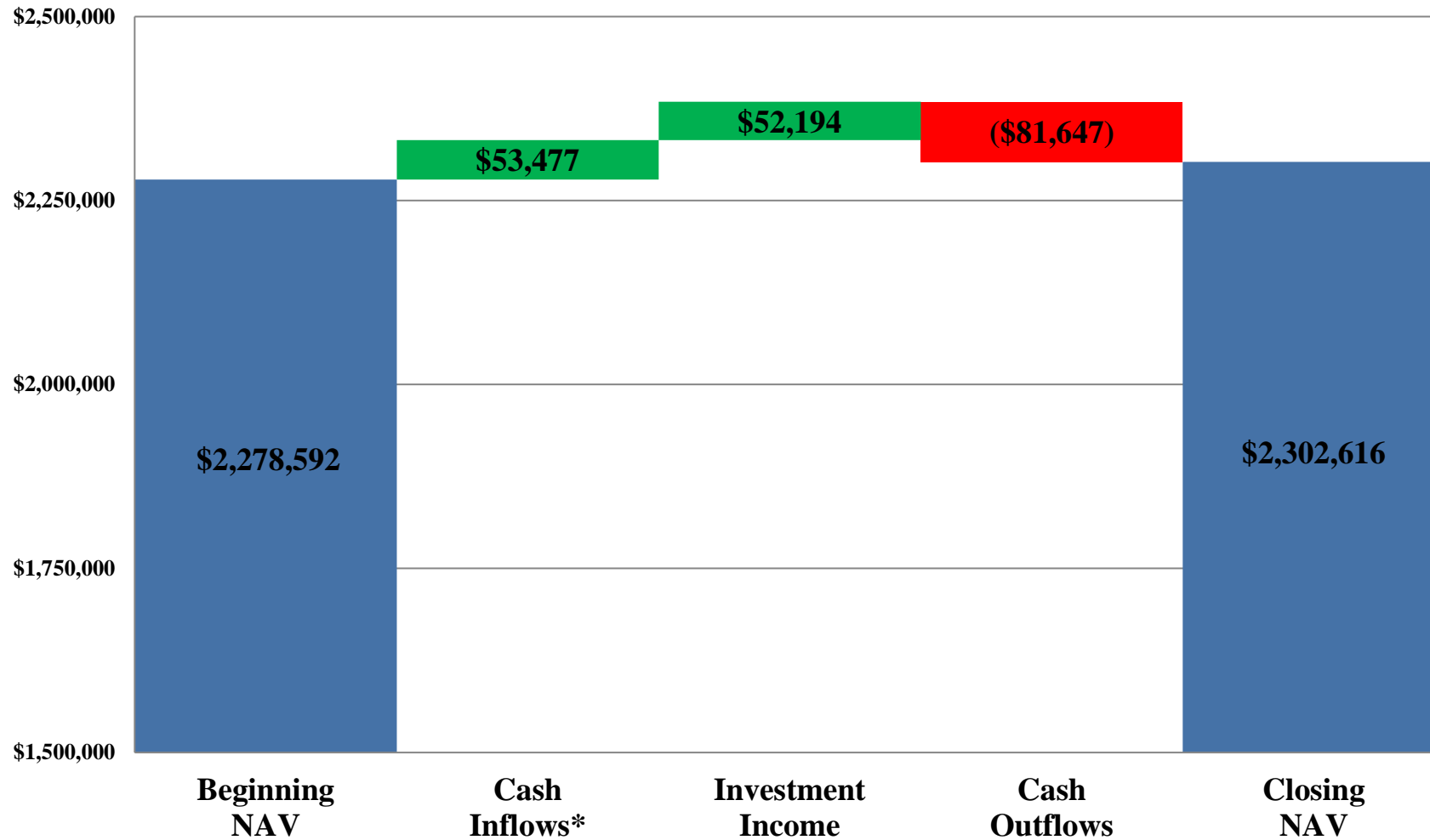
## UFICO Inception to March 31, 2023



\*\* Investable Alternative Benchmark: 7/1/04-6/30/22 - 60% MSCI ACWI / 40% Barclays Global Aggregate; As of 7/1/22 - 70% MSCI ACWI / 30% Barclays Global Aggregate.  
 Note: Based on endowment accounting returns.

**FY 2023  
Financial Recap**

**Fiscal Year-to-Date 3/31/2022**  
(\$000's)



\* Note: The timing of cash inflows does not always correspond with the timing of endowment gifts. The Recap is based on accounting values.

**UF** | UNIVERSITY *of* FLORIDA  
INVESTMENT CORPORATION



COMMITTEE ON FACILITIES AND CAPITAL INVESTMENTS  
MEETING AGENDA

Thursday, June 8, 2023

1:10 p.m.

President's Room 215B, Emerson Alumni Hall  
University of Florida, Gainesville, FL

**Committee Members:**

David L. Brandon (Chair), Christopher T. Corr, Morteza “Mori” Hosseini, Daniel T. O’Keefe, Fred S. Ridley, Patrick O. Zalupski, Anita G. Zucker

- 1.0 Call to Order and Welcome .....David L. Brandon, Chair
- 2.0 Verification of Quorum ..... Vice President Liaison
- 3.0 Review and Approval of Minutes .....David L. Brandon, Chair  
  - [March 16, 2023](#)
  - [May 10, 2023](#)
- 4.0 Action Items.....David L. Brandon, Chair
  - [FCI1](#) Construction Projects Budget Amendments ..... Curtis Reynolds, Vice President for Business Affairs
  - [FCI2](#) Parking Fee Restructure for FY24 ..... Curtis Reynolds
  - [FCI3](#) Center for Applied Artificial Intelligence.....Scott Angle, Senior Vice President for Agriculture and Natural Resources
  - [FCI4](#) Fixed Capital Outlay Legislative Budget Request for FY25 ..... Curtis Reynolds
  - [FCI5](#) Facilities Spending Plan..... Curtis Reynolds
  - [FCI6](#) Energy Agreement ..... Colt Little, Associate Vice President for Enterprise Projects and Senior Counsel
- 5.0 Discussion Items .....David L. Brandon, Chair
  - 5.1 Housing Update.....Carrie Bush, Chief of Staff for Chief Operating Office
  - 5.2 Campus Construction Update ..... Curtis Reynolds
  - 5.3 Campus Safety Update.....Linda Stump-Kurnick, Chief of UF Police Department
- 6.0 New Business.....David L. Brandon, Chair
- 7.0 Adjourn.....David L. Brandon, Chair



## COMMITTEE ON FACILITIES AND CAPITAL INVESTMENTS

### Meeting Minutes

March 16, 2023

President's Room 215B, Emerson Alumni Hall

University of Florida, Gainesville, FL

Time Convened: 9:24 a.m.

Time Adjourned: 10:47 a.m.

#### Committee and Board members present:

David L. Brandon (Committee Chair), Richard P. Cole, Christopher T. Corr, Morteza "Mori" Hosseini (Board Chair), Lauren D. Lemasters, Daniel T. O'Keefe, Rahul Patel, Amanda J. Phalin, Marsha D. Powers, , Patrick O. Zalupski and Anita G. Zucker.

#### Others present:

Ben Sasse, President; Joseph Glover, Provost and Senior Vice President for Academic Affairs; J. Scott Angle, Vice President for Agriculture and Natural Resources; Chris Cowen, Senior Vice President and Chief Financial Officer; Elias Eldayrie, Vice President and Chief Information Officer; Amy Hass, Vice President and General Counsel; Mark Kaplan, Vice President for Government and Community Relations and University Secretary; Jim Kelly, Interim Chief Executive Officer for UF Health Shands; Charlie Lane, Senior Vice President and Chief Operating Officer; Maria Gutierrez Martin, Interim Vice President for Advancement; Marsha McGriff, Chief Diversity Officer and Senior Advisor to the President; David Nelson, Senior Vice President for Health Affairs and President of UF Health; David Norton, Vice President for Research; Steve Orlando, Interim Vice President for Strategic Communications and Marketing; Mary Parker, Vice President for Enrollment Management and Associate Provost; Curtis Reynolds, Vice President for Business Affairs; Scott Stricklin, Director of Athletics; Heather White, Vice President for Student Life; members of the University of Florida community, and the public.

#### 1.0 Call to Order and Welcome

Committee Chair David L. Brandon welcomed everyone in attendance and called the meeting to order at 9:24 a.m.

#### 2.0 Verification of Quorum

Vice President Curtis Reynolds verified a quorum with all members present except Trustee Ridley who was unable to attend the meeting.

#### 3.0 Review and Approval of Minutes

Committee Chair Brandon asked for a motion to approve the minutes of the December 8, 2022 FCI Committee meeting and February 14, 2023 Committee Pre-meeting, which was made by Trustee Corr, and a second, which was made by Trustee O'Keefe. Committee Chair Brandon

asked for further discussion, and then asked for all in favor of the motion and any opposed and the motion was approved unanimously.

#### **4.0 Action Items**

Committee Chair Brandon asked Maria Gutierrez Martin, Interim Vice President for Advancement to present the naming action items beginning with action item FCI1 as follows:

##### **FCI1 Naming: The David A. Cofrin, M.D. and Mary Ann Harn Cofrin Terrace**

Maria Gutierrez Martin, Interim Vice President for Advancement gave a brief overview of the proposed naming and bio of the donor. Miss Martin stated the proposed naming met all requirements and was in alignment with the UF Namings & Memorials Policy. Miss Martin noted that the naming would commence upon receipt of 20% and the realized estate monies have been received. Miss Martin stated that internal due diligence had been completed and the naming had been reviewed by the Foundation Namings & Memorials Advisory Council, approved by the Chief Advancement Officer of UF Health, the Senior Vice President of UF Health, the UFF Executive Vice President and the UF President.

Committee Chair Brandon asked for a motion to approve Action Item FCI1 which was made by Trustee Zucker, and a second, which was made by Trustee O'Keefe for recommendation to the Board for its approval as a Non-Consent Agenda action as required by Board of Governors regulations for facility, road and landscape naming. Committee Chair Brandon asked for further discussion, and then asked for all in favor of the motion and any opposed, and the motion was approved.

##### **FCI2 Naming: Bud Shorstein Center for Jewish Studies**

Maria Gutierrez Martin, Interim Vice President for Advancement gave a brief overview of the proposed naming and bio of the donor. Miss Martin stated the proposed naming met all requirements and was in alignment with the UF Namings & Memorials Policy. Miss Martin noted that the naming would commence upon receipt of 20% and the realized estate monies have been received. Miss Martin stated that internal due diligence had been completed and the naming had been reviewed by the Foundation Namings & Memorials Advisory Council, approved by the Chief Advancement Officer of UF Health, the Senior Vice President of UF Health, the UFF Executive Vice President and the former UF President.

Committee Chair Brandon asked for a motion to approve Action Item FCI2 which was made by Trustee Zucker, and a second, which was made by Trustee Hosseini for recommendation to the Board for its approval as a Non-Consent Agenda action as required by Board of Governors regulations for facility, road and landscape naming. Committee Chair Brandon asked for further discussion, and then asked for all in favor of the motion and any opposed, and the motion was approved.

##### **FCI3 Construction Projects Budget Amendments**

Committee Chair Brandon asked Vice President Reynolds to present FCI3 as follows:

Vice President Reynolds indicated there were three project budget changes for this action item.

- UF-200–Public Safety Building (Police Department) & Centrex Building Renovation for \$587,853; reflecting unrestricted funds for alternate fabrication of HAVC fans due to supplier shortages.
- UF-606-Whitney Laboratory for Marine Bioscience for \$8,000,000; reflecting potential state appropriations as directed by of Board Chair Hosseini during the Facilities and Capital Investments premeeting on February 14, 2023.
- UF-653-Architecture Building Renovation/Remodeling and DCP Collaboratory Addition for \$1,263,000; reflecting donor funds.

Committee Chair Brandon asked if there were questions. Board Chair Hosseini questioned the increase for the University Public Safety Building. Vice President Reynolds stated the increase was needed due to supplier delay for the air handlers. Vice President Reynolds noted staff worked with engineers to fabricate the motors for the air handlers to keep the project moving forward. Board Chair Hosseini asked if the university will receive credit from the general contractor and the supplier. Vice President Reynolds indicated we would seek credits. Board Chair Hosseini also noted that the additional \$8 million for Whitney Laboratory was subject to UF receiving the funds from the State.

Committee Chair Brandon asked for a motion to approve Action Item FCI3 which was made by Trustee Hosseini, and a second, which was made by Trustee O’Keefe for recommendation to the Board for its approval on the Consent. Committee Chair Brandon asked for further discussion, and then asked for all in favor of the motion and any opposed, and the motion was approved unanimously.

## **5.0 Discussion Items**

### **5.1 Campus Construction Update**

Vice President Reynolds introduced the Campus Construction Update with a video presentation highlighting the following projects: Student Health Center, Public Safety Building, Honors Village, Malachowsky Hall for Data Science & Information Technology and Baby Gator. Vice President Reynolds gave updates on the Student Health Center project, Inner Road project, minor capital projects and maintenance related projects. Vice President Reynolds noted that UF had received encumbrance authority for the \$148 million appropriation for deferred maintenance.

Committee Chair Brandon gave a brief report indicating the number of UF graduates working on projects on campus:

- Graduates from BCN/DCP: 156
- Graduates from other colleges, engineering, etc.: 300
- Total UF graduates working on UF projects: 456

Committee Chair Brandon asked if there were any questions. Trustee Phalin asked if there was update on the water damage in the library. Vice President Reynolds stated the university had filed the appropriate insurance claim and his staff was working with the Chief Financial Officer’s staff on making the repairs. Vice President also noted Libraries Dean Judith Russell was aware of the process and staff managed to minimize the water damage to collections.



Board Chair Hosseini thanked Committee Chair Brandon, Senior Vice President Lane and Vice President Reynolds for their efforts during the last year. Board Chair Hosseini requested that Committee Chair Brandon work with Vice President Reynolds and his staff to address any pending construction audit findings and appropriate support to Planning, Design and Construction. He added they should work with Chief Audit Executive Dhanesh Raniga to respond to any of the questions as well as checking with SVP Cowen on questions related to funding. Committee Chair Brandon agreed and said they will provide an update at the June meeting. Vice President Reynolds concluded the construction report and Committee Chair Brandon ask for a motion to accept the Construction Report as presented, which was made by Trustee Hosseini, and seconded by Trustee Zucker.

## **5.2 Campus District Energy Efficiency Contracts**

Committee Chair Brandon gave a brief overview of an Energy Service Contract (ESCO), the process and how cost savings were taking care of deferred maintenance in various campus buildings. Vice President Reynolds introduced Mark Helms, Assistant Vice President, Facilities Services who give an update on the Campus District Energy Efficiency Contracts. Assistant Vice President Helms highlighted the Holland Law Project, the Health Science District (which includes the Dental Tower) feasibility study and Cancer Genetics District feasibility study.

Board Chair Hosseini asked if it was possible to repair all issues within the Dental Building related to asbestos. Mr. Helms outlined the current focus of the ESCO project for the Dental Building and confirmed any asbestos related materials identified would be inclusive to the project. Board Chair Hosseini asked if staff could report back with the total cost for removal of all asbestos related materials from the Dental Building. Vice President Reynolds noted that staff would survey the building to report finding and potential cost estimates on or before the June BOT meeting. Committee Chair Brandon also noted that the ESCO would address a number of deferred issues within the Dental Building. Board Chair Hosseini asked staff to work as quickly as they could to get a cost estimate for removal of all asbestos materials in the Dental Building as we are keeping the building and it needs to be repaired.

A discussion ensued regarding the ESCO model's Return on Investment. Board Chair Hosseini asked AVP Helms the ROI. AVP Helms responded there is approximately \$60 million in savings across these four projects. Board Chair Hosseini asked Senior Vice President Chris Cowen, Chief Financial Officer to show the return on investment to Board of Governors' (BOG) staff. SVP Cowen noted that Treasurer Alan West was working with BOG staff and that the experience has been positive. Board Chair Hosseini asked SVP Cowen if the ESCO project was a good investment for the university. SVP Cowen stated the ESCO project was a good investment for the university. Board Chair Hosseini asked for a complete list of university deferred maintenance projects as they are seeking funding from the State ~~that shows~~ and if money is received, we should show where it is used. Vice President Reynolds indicated he would ~~put this~~ provide a deferred maintenance list.

## **5.3 Parking Fee Restructure for FY 2023-24 and 2024-25**

Vice President Reynolds introduced Eddie Daniels, Assistant Vice President for Business Services to give an overview of the parking fee restructure. Mr. Daniels explained the parking fee

restructure was needed due to revenue shortfalls exceeding \$1 million. Mr. Daniels anticipates the downward trend in revenues will continue and impact Transportation and Parking Services (TAPS) ability to meet bond requirements. A discussion ensued regarding the reasonings why parking revenues had decreased. Mr. Daniels noted that the parking fee restructure request will be brought to the Board in June. . He noted he would work with university leadership and provide information to the Board, students, faculty, and staff prior to the restructure action item request. Committee Chair Brandon noted there were other operational cost impacting TAPS expenses not funded. Trustee Lemasters asked if there were fewer student parking permits. Scott Fox, Director of Transportation and Parking Services stated that student parking permits had rebounded better than faculty and staff. Committee Chair Brandon added they were also looking at an RTS route that is currently being offered at no cost.

#### **5.4 Campus Safety Update**

Dr. Charlie Lane, Senior Vice President and Chief Operating Officer gave a PowerPoint presentation outlining campus security progress. Senior Vice President Lane highlighted funding for cameras, access control and lighting upgrades. Senior Vice President Lane noted in-progress security enhancements that included mechanical locks for classrooms, Phase 3 installation of license plate readers and continued improvements to LED lighting and camera/access control. SVP Lane noted that other security measures included active threat trainings, license plate readers installed in UPD vehicles, establishment of a mental health co-responder program and the addition of a Behavioral Consultant Team coordinator position. SVP Lane noted that physical security construction standards had been established for UF construction and renovations to enable consistent expectations for building security.

Senior Vice President Lane presented data related to pedestrian and traffic safety highlighting four main thoroughways that surround the university. SVP Lane noted City/FDOT/UF accomplishments, UF license plate reader coverage, City/FDOT/UF projects underway, and university avenue improvements. Senior Vice President Charlie Lane then explained the benefits of complete streets highlighting increased mobility and safety. SVP Lane gave an overview of longer-term priorities which included City of Gainesville and Florida Department of Transportation (FDOT) collaboration and the creation of an 86-acre auto-free zone and enhanced infrastructure on campus. SVP Lane thanked Police Chief Linda Stump-Kurnick and the University Police Department for their efforts and support. Trustee Phalin added Chief Stump-Kurnick would be speaking to the Faculty Senate later in the month and recording of her update would be available. Trustee Corr added that parent stakeholders are watching this closely. He has personally heard from Maggie Paxton's family. Stakeholders have shared with him they appreciate the progress being made. Trustee Corr then questioned if anyone is thinking about bigger picture ideas for university avenue in addition to the safety measures implemented. SVP Lane said they continue to work on strategies for safety. They feel some new things implemented, like flashing lights crosswalks, will make a significant difference.

Board Chair Hosseini noted that staff had come along way regarding campus security. Board Chair Hosseini asked staff for the completion date for the Public Safety Building and the move in date. Vice President Reynolds stated the building would be completed by early June 2023. Board Chair Hosseini asked for them to move in as quickly as possible. He also requested a report from Police

Chief Linda Stump-Kurnick on the number of incidents year by year for the last five years be presented at the June meeting.

Trustee O’Keefe thanked Board Chair Hosseini, Senior Vice President Lane, and Vice President Reynolds for their continue efforts and support regarding campus safety/security. Trustee Cole asked for an update of the LED lights, how much longer until the whole campus is updated. Committee Chair Brandon said that information will be presented at the June meeting.

**6.0 New Business**

Committee Chair Brandon reminded the board of the Facilities and Capital Investments Committee’s charge to evaluate efficiencies of consolidation between Business Affairs and Housing and anticipate a findings report at the June BOT meeting. Committee Chair Brandon thanked Vice President Heather White, Vice President Reynolds and Senior Vice President Lane for being on the team.

**7.0 Adjourn**

There being no further discussion, Committee Chair Brandon adjourned the meeting at 10:47 a.m.

DRAFT



## COMMITTEE ON FACILITIES AND CAPITAL INVESTMENTS

### Pre-Meeting Minutes

#### Virtual Meeting

May 10, 2023

Time Convened: 10:08 a.m.

Time Adjourned: 11:21 a.m.

#### **Committee and Board members present:**

David L. Brandon (Committee Chair), Richard P. Cole, Olivia E. Green, James W. Heavener, Morteza “Mori” Hosseini (Board Chair), Daniel T. O’Keefe, Rahul Patel (Board Vice Chair), Amanda J. Phalin, Marsha D. Powers, Fred S. Ridley, Patrick O. Zalupski, and Anita G. Zucker.

#### **Others present:**

Ben Sasse, President; Chris Cowen, Senior Vice President and Chief Financial Officer; Melissa Curry, Interim Vice President for Human Resources; Elias Eldayrie, Vice President and Chief Information Officer; Joe Glover, Provost; Amy Hass, Vice President and General Counsel; Mark Kaplan, Vice President for Government and Community Relations and University Secretary; Maria Gutierrez Martin, Interim Vice President for Advancement; Steve Orlando, Interim Vice President for Strategic Communications and Marketing; Mary Parker, Vice President for Enrollment Management and Associate Provost; Curtis Reynolds, Vice President for Business Affairs; Heather White, Vice President for Student Life; Carrie Bush, Chief of Staff Office of the Chief Operating Officer; Eddie Daniels, Assistant Vice President for Business Services; Colt Little, Associate Vice President for Enterprise Projects and Senior Counsel; Linda Stump-Kurnick, Chief of University Police; members of the University of Florida community, and the public.

#### **1.0 Call to Order and Welcome**

Committee Chair David L. Brandon welcomed everyone in attendance and called the meeting to order at 10:08 a.m.

#### **2.0 Roll Call**

Vice President Curtis Reynolds conducted a roll call of all Committee and Board members present except Trustee Christopher Corr who had an unavoidable conflict.

#### **3.0 Review Draft Agenda for June Meeting**

##### **3.1 Review Draft Minutes**

Committee Chair Brandon noted the draft minutes from the March 16, 2023 FCI Committee Meeting were available for review prior to the vote at the June Meeting.

## **3.2 Review Action Items**

### **FCI1 Construction Budget Amendments**

Vice President Reynolds provided an overview of the budget amendment for project UF-632 The Data Science and Technology Building. The ratified budget amount for consideration is \$152, 996, 319. Committee Chair Brandon commented there may need to be a new process in place for change orders. Chair Hosseini indicated his frustration that the University cannot continuously come back to change the approved budget. He directed Committee Chair Brandon's committee to coordinate with the Governance, Government Relations, and Internal Affairs to review the process. Committee Chair Brandon asked if the provost should get involved in the process as he oversees the college budgets. Provost Glover said he has zero oversight of projects, and his office is not a part of the process currently. He indicated he would be happy to become part of the process if it would be beneficial. VP Reynolds noted the costs are related to equipment and other items purchased at the department level. Trustee Phalin noted perhaps the Dean of the College of Business Saby Mitra may be able to assist with creating a process.

### **FCI2 Parking Fee Restructure for FY24 and FY25**

Vice President Reynolds reviewed a proposed parking permit fee restructure for fiscal year 2023-2024. There has been no revenue increase for students to support Transportation and Parking operations in eight years, despite rising annual operating expenses. VP Reynolds noted the restructuring is related to student permits at this time. Faculty and staff permit pricing will be reevaluated in FY 2024-2025. The current action requests an increase to the base price for student permits from \$160 to \$180 and to implement a 3-tiered pricing structure for FY 2023-2024. This new 3-tiered structure will provide students with more options. Included in the 3-tiers is Red 3 (Tier 3) which allows students a permit for \$60 in Garage 9 rooftop only for those who use their vehicles less frequently. Committee Chair Brandon noted Garage 9 is located off Archer Road and is safe, well-lit, and pedestrian friendly. Chief Linda Stump-Kurnick confirmed it is pedestrian friendly but will check to ensure the appropriate blue lighting on that path is sufficient. Assistant Vice President for Business Services Eddie Daniels will ensure a safe transportation solution for the students in the remote parking area.

### **FCI3 Fixed Capital Outlay Legislative Budget Request for FY25**

Vice President Reynolds gave an overview of the Fixed Capital Outlay Legislative Budget Request for FY24-25. The request includes five-year Capital Improvement Plan PECO Eligible Project Requests, CITF Projects, and Non-State Supplemental Funding. He noted the UF Student Experience Center, New Disability Resource Center, the Hamilton Center, and Dental Science Building, among other projects. VP Reynolds noted they are working on the support documentation and will populate the appropriate documents and share them with the committee before the June meeting. Board Chair Hosseini asked VP Reynolds and Vice President for Government and Community Relations Mark Kaplan to work together on the information immediately. VPs Reynolds and Kaplan agreed. Board Chair Hosseini stated information should be shared with him and the president to review first and then they will provide recommendations to the Board for approval before the information is sent to the Board of Governors.

#### **FCI4 Facilities Spending Plan**

Before reviewing the action item, Committee Chair Brandon thanked the Board Chair for his diligence advocating for the University with legislature. VP Reynolds shared the list of projects, PECO and CITF, the legislature appropriated for the 2023 legislative session. Board Chair Hosseini asked VP Reynolds to do a total write-up for the president on all projects specifically the Dental Science Building. The write-up should include the total cost to fix the building, replace the building, and any other relevant details. The Board Chair and president will review the information. The president will provide his recommendation regarding the building to the Board. Committee Chair Brandon added this was an unprecedented year of funding for the University, noting we all must execute on a high level with the funds provided. Board Chair Hosseini added we do a good job but can always do better. We want to create a culture of excellence and with the help of the president, we will get there. He noted a big difference in action within the last five to six years getting things done. He added Chief Stump-Kurnick is presenting to the Board in June. The Board wants to make sure UF police have every resource they need to keep all safe.

#### **FCI5 Energy Agreement**

Associate Vice President for Enterprise Projects and Senior Counsel Colt Little provided an overview of the action item related to the University and Duke Energy Florida's proposal to extend the term of the existing agreement for the provision of steam versus a new facility. This medium-term horizon is the most beneficial to the University. The University pursued a public-private partnership (P3) as a means of securing an alternative source of campus steam and conducted a competitive solicitation process seeking proposals from qualified developers. Due to several factors, the option of a public-private partnership became considerably more expensive than anticipated. Board Chair Hosseini added the consultant was unable to deliver on the initial numbers proposed. AVP Little added with construction costs, the university utility rate would have increased 100%.

The agreement extension will be for 15 years with one, and possibly two, University options to extend by an additional 7 years each. Duke will install, own, operate and maintain new back-up boilers. UF will continue to be a retail customer, but at a transmission-level tariff rate, which is a significant discount off the prior rate, and steam at a price fixed by the existing formula, including the existing annual \$1M discount. Duke is also providing \$100,000 to update the existing site footprint. AVP Little added this is not a long-term solution but financially in the best interest of the University. They are working on the term sheet now and hope to have completed to bring to the Board in June. If not, they will ask the president for delegation authority to execute the term sheet when complete. Committee Chair Brandon thanked AVP Little for all his work on this agreement.

### **3.3 Discussion Items**

#### **Housing Update**

Committee Chair Brandon reminded the committee this update is provided in response to the Board Chair's request to look at efficiencies that can be made in the housing space. He introduced the Chief Operating Officer's Office Chief of Staff Carrie Bush, who has been assisting in coordinating between Business Affairs and Student Life, to provide an update. Dr. Bush shared there are seven work streams related to this request. A presentation will be provided at the June

meeting. She noted this has been a collaborative effort across 9 different divisions. Board Chair Hosseini asked if the presentation would include the financial savings for each of the recommendations. Dr. Bush confirmed it will, but noted some areas have no immediate cost savings. Board Chair Hosseini noted Vice Presidents Reynolds and White both need to agree on the recommendations. The Board will expect to hear from both in June. If there are items they do not agree on, the information will be presented to the president to make decisions. The president should then come to the Board in the next business meeting with his recommendations for the trustees. Board Chair Hosseini asked if both Vice Presidents agreed, and they confirmed they did.

### **Campus Construction Update**

Vice President Reynolds shared he would be providing his regular campus construction update in June. He noted several projects will be coming off the list. He shared that the board chair and president toured several facilities earlier in the week. Committee Chair Brandon invited all trustees to tour facilities when they are on campus. Board Chair Hosseini added his appreciation to Committee Chair Brandon for all his hard work and dedication to the committee noting his recommendation for the Honors Village to complete two buildings and move in as many students as possible by August 5 was the right decision. With so many delays on the contractor's side, this was the best option. Board Chair Hosseini also added the Board dinner will be held at the Data Science and Information Technology Building in June.

### **Campus Safety Update**

Committee Chair Brandon noted Chief Linda Stump-Kurnick will be providing a campus safety update at the June meeting. VP Reynolds noted this request came to the committee at the last meeting. Chief Stump-Kurnick will primarily focus on a crime statistics data update that includes comparable information with other entities such as GPD and ASO, peers in the SUS, and other top institutions. Board Chair Hosseini also requested UNC, UVA, and Michigan be included in the comparison.

## **4.0 New Business**

There was no new business to come before the committee. Committee Chair Brandon asked President Sasse if he had any comments. Dr. Sasse expressed his thanks to the Committee Chair for his hard work and he agreed with Board Chair Hosseini there is more to do.

Board Chair Hosseini expressed his thanks to Committee Chair Brandon and the UF team. He added last year was the worst for the supply chain in the industry he has seen. It is important we still hold contractors accountable. We need to have buildings finished timely. He noted there is an issue to resolve with moving into facilities immediately after construction ends. Colleges and building users should have furniture and equipment ready to move into a facility the day after it is complete. He doesn't want to see last-minute requests for the construction budgets to come to the Board for approval because the University does not have any extra funds. Committee Chair Brandon agreed and noted he does think this needs to be discussed further and a policy change should be considered. Board Chair Hosseini added a point of clarification that all new building requires 2% to be set aside for maintenance before the project can begin. Board Chair

Hosseini added we need to become more efficient and fiscally responsible. President Sasse agreed.

### **5.0 Adjourn**

There being no further discussion, Committee Chair Brandon adjourned the meeting at 11:21 a.m.

DRAFT





**COMMITTEE ON FACILITIES AND CAPITAL INVESTMENTS  
ACTION ITEM FCI1  
June 8, 2023**

**SUBJECT:** Construction Projects Budget Amendments

**BACKGROUND INFORMATION**

The Construction Projects Report has been developed to provide the Trustees with a quarterly update of university wide construction activity, highlight specific or high-profile projects, and present requests for changes to approved project budget thresholds.

**PROPOSED COMMITTEE ACTION**

The Committee on Facilities and Capital Investments is being asked to approve the current Construction Projects Report, along with request for budget amendment to the respective projects as noted below:

| Project # | Project Title                                    | Current Approved Budget | Amendment Request | Source of Funds   | Ratified Budget |
|-----------|--|-------------------------|-------------------|---|-----------------|
| UF-632    | Data Science and Information Technology Building | \$150,504,692           | \$2,601,627       | UF Research, Facilities Services, Utility Funds, Business Services, Unrestricted Funds and Departmental | \$153,106,319   |

**ADDITIONAL COMMITTEE CONSIDERATIONS**

None.

Supporting Documentation Included: Construction Projects Report

Submitted by: Curtis A. Reynolds, Vice President Business Affairs

**Approved by the University of Florida Board of Trustees, June 8, 2023**

\_\_\_\_\_  
Morteza "Mori" Hosseini, Chair

\_\_\_\_\_  
Ben Sasse, President and Corporate Secretary

**University of Florida Board of Trustees**

**Major Capital Construction Projects - Update**

Meeting Date: June 08, 2023

Report Date: May 26, 2023

| Project Phase             | Project Number | Project Title  | Program Planning Budget | Ratified Budget | Requested Budget Amendment | Requested Budget Amendment Funding Source | Net Changes To Date | Requires BOG/FCO Amendment (Y) | Final Project Cost | Planned Completion                                | Status/Comments:   |
|---------------------------|----------------|--|-------------------------|-----------------|----------------------------|---|---------------------|--------------------------------|--------------------|---|--|
| Construction              | UF-623B        | Thermal Utilities Infrastructure (Package 01)                              | \$ 50,000,000           | \$ 56,359,048   | \$ -                       |   | \$ 6,359,048        |                                | \$ 56,359,048      | June-2023   | Construction 99% Complete.   |
| Construction              | UF-632         | Data Science and Information Technology Building                           | \$ 135,000,000          | \$ 150,504,692  | \$ 2,601,627               |   | \$ 15,504,692       | N                              | \$ 153,106,319     | July/August 2023                                  | Construction 95% Complete.   |
| Construction              | UF-644         | Inner Road Resurfacing & Landscape Improvements                            | \$ 7,058,000            | \$ 7,058,000    | \$ -                       |   | \$ -                |                                | \$ 7,058,000       | August-2024                                       | Construction has started.  |
| Construction              | UF-644A        | Inner Road Thermal Infrastructure Improvements                             | \$ 14,085,000           | \$ 14,085,000   | \$ -                       |   | \$ -                |                                | \$ 14,085,000      | December-2024                                     | Construction has started.  |
| Construction              | UF-644B-2      | Steam and Electrical- Hub to Newell (Phase 2)                              | \$ 15,070,000           | \$ 15,070,000   | \$ -                       |   | \$ -                |                                | \$ 15,070,000      | December-2024                                     | Construction has started.  |
| Construction              | UF-654         | Honors College Residential Facilities                                      | \$ 220,000,000          | \$ 220,000,000  | \$ -                       |   | \$ -                |                                | \$ 220,000,000     | August 5, 2023 and November 1, 2023 and July 2024 | Construction 80% Complete.<br>Bldgs 1 & 3 Completion: August 5, 2023 - Occupancy Fall 2023<br>Bldgs 2 & 4 Completion: December 2023 - Occupancy 2024<br>Bldg 5 completion: July 2024 - Occupancy Fall 2024 |
| Construction              | UF-668         | Racquet Club Dining Renovation   | \$ 7,000,000            | \$ 7,000,000    | \$ -                       |   | \$ -                |                                | \$ 7,000,000       | June-2023   | Construction 95% Complete. Project budget through Chartwells.  |
| Construction              | UF-679         | Ronald McDonald House Renovation & Expansion                               | \$ 8,000,000            | \$ -            | \$ -                       |   | \$ -                |                                | \$ 8,000,000       | TBD   | Phase I Renovation under construction. Phase II renovation to start after fundraising completion.  |
| <b>Construction Total</b> | (8 Projects)   |  | \$ 456,213,000          | \$ 470,076,740  | \$ 2,601,627               |   | \$ 21,863,740       |                                | \$ 480,678,367     |   |  |
| Project Phase             | Project Number | Project Title  | Program Planning Budget | Ratified Budget | Requested Budget Amendment | Requested Budget Amendment Funding Source | Net Changes To Date | Requires BOG/FCO Amendment (Y) | Final Project Cost | Planned Completion                                | Status/Comments:   |
| Design                    | UF-396         | Thompson Center for Earth Systems (Addition to Powell Hall FLMNH)          | \$ 30,000,000           | \$ -            | \$ -                       |   | \$ -                |                                | \$ 30,000,000      | October-2024                                      | ASD Phase.   |
| Design                    | UF-606         | Whitney Laboratory for Marine Bioscience                                   | \$ 28,500,000           | \$ 39,200,000   | \$ -                       |   | \$ 10,700,000       |                                | \$ 39,200,000      | October-2024                                      | CD Phase progressing. Project ERP construction begins June 2023.   |
| Design                    | UF-653         | Architecture Building Renovation/Remodeling and DCP Collaboratory Addition | \$ 45,000,000           | \$ 46,263,600   | \$ -                       |   | \$ 1,263,600        |                                | \$ 46,263,600      | April-2025  | Construction Documents Phase in progress.  |
| Design                    | UF-671         | Ham Museum American Art Wing   | \$ 20,000,000           | \$ -            | \$ -                       |   | \$ -                |                                | \$ 20,000,000      | TBD   | On hold. Donor fundraising underway.   |
| Design                    | UF-675         | New Disability Resource Center   | \$ 12,450,000           | \$ -            | \$ -                       |   | \$ -                |                                | \$ 12,450,000      | March-2025  | Architect selected. New Site selected. CM Contract execution in progress. Cx Selection in progress.  |
| Design                    | UF-685         | Holland Law ESCO Heating Hot Water Conversion                              | \$ 39,000,000           | \$ -            | \$ -                       |   | \$ -                |                                | \$ 39,000,000      | TBD   | Construction to begin June 2023.   |
| Design                    | UF-687         | Broward Dining Facility  | \$ 20,000,000           | \$ -            | \$ -                       |   | \$ -                |                                | \$ 20,000,000      | August-2024                                       | D/B selected. Design progressing. Cx selection in progress.  |
| Design                    | UF-693         | Communicore Ground and third level Renovation                              | \$ 10,000,000           | \$ -            | \$ -                       |   | \$ -                |                                | \$ 10,000,000      | TBD   | Facilities Program Completed. D/B Selection in May/June 2023 upon release of bond funds..  |
| Design                    | UF-694         | ARB renovation for COM   | \$ 10,000,000           | \$ -            | \$ -                       |   | \$ -                |                                | \$ 10,000,000      | TBD   | Facilities Program Completed. D/B Selection in May/June 2023 upon release of bond funds..  |
| Design                    | UF-695         | Black Hall & Material Engineering Renovation                               | \$ 7,500,000            | \$ -            | \$ -                       |   | \$ -                |                                | \$ 7,500,000       | TBD   | Facilities Program Completed. D/B Selection in May/June 2023 upon release of bond funds..  |
| Design                    | UF-698         | Center for Applied Artificial Intelligence - Balm                          | \$ 25,000,000           | \$ -            | \$ -                       |   | \$ -                |                                | \$ 25,000,000      | TBD   | Facilities Program signed. A/E and CM selection in progress. Cx to follow.   |
| Design                    | UF-1112        | Basic Science Third Floor Renovation                                       | \$ 10,600,000           | \$ -            | \$ -                       |   | \$ -                |                                | \$ 10,600,000      | TBD   | Facilities Program Completed. D/B Selection in May/June 2023 upon release of bond funds..  |
| <b>Design Total</b>       | (12 Projects)  |  | \$ 258,050,000          | \$ 85,463,600   | \$ -                       |   | \$ 11,963,600       |                                | \$ 270,013,600     |   |  |
| Project Phase             | Project Number | Project Title  | Program Planning Budget | Ratified Budget | Requested Budget Amendment | Requested Budget Amendment Funding Source | Net Changes To Date | Requires BOG/FCO Amendment (Y) | Final Project Cost | Planned Completion                                | Status/Comments:   |
| Planning                  | UAA-62         | Ben Hill Griffin Stadium Facility Upgrades                                 | \$ 300,000,000          | \$ -            | \$ -                       |   | \$ -                |                                | \$ 300,000,000     | TBD   | Program and budget confirmation is underway.   |

|                       |                      |  |                         |                       |                     |                      |                         |     |  |
|-----------------------|----------------------|--|-------------------------|-----------------------|---------------------|----------------------|-------------------------|-----|--|
| Planning              | UF-318               | Dental Science Building  | \$ 235,000,000          | \$ -                  | \$ -                | \$ -                 | \$ 235,000,000          | TBD | Facility Program Development   |
| Planning              | UF-623               | Central Energy Plant and Utility Infrastructure                    | TBD                     | \$ -                  | \$ -                | \$ -                 | TBD                     | TBD | Facility Program Development   |
| Planning              | UF-626               | Academic & Research Collaboration Center                           | \$ 22,000,000           | \$ -                  | \$ -                | \$ -                 | \$ 22,000,000           | TBD | Project placed on hold.  |
| Planning              | UF-652               | Biomedical & Life Sciences Research Building & Various Renovations | \$ 250,000,000          | \$ -                  | \$ -                | \$ -                 | \$ 250,000,000          | TBD | AE selection in Progress. CM selection in Progress. CxA selection to start shortly.                      |
| Planning              | UF-658               | Phillips Center Feasibility Study and Renovation                   | \$ 15,000,000           | \$ -                  | \$ -                | \$ -                 | \$ 15,000,000           | TBD | Feasibility study complete. Fundraising underway.  |
| Planning              | UF-672               | New Music Building   | \$ 50,000,000           | \$ -                  | \$ -                | \$ -                 | \$ 50,000,000           | TBD | Project placed on hold.  |
| Planning              | UF-673               | Early Childhood Collaborative                                      | \$ 25,000,000           | \$ -                  | \$ -                | \$ -                 | \$ 25,000,000           | TBD | Project placed on hold.  |
| Planning              | UF-677               | PK Yonge Gymnasium   | \$ 15,000,000           | \$ -                  | \$ -                | \$ -                 | \$ 15,000,000           | TBD | Project placed on hold.  |
| Planning              | UF-681               | Flavet Outdoor Recreation  | \$ 6,900,000            | \$ -                  | \$ -                | \$ -                 | \$ 6,900,000            | TBD | Facility Program completed. A/E selection in June 2023 followed by the CM Selection.                     |
| Planning              | UF-682               | Parking Garage 15  | \$ 18,000,000           | \$ -                  | \$ -                | \$ -                 | \$ 18,000,000           | TBD | Traffic study, GeoTech Exploration and Site Survey report completed. Program completed, but on hold.     |
| Planning              | UF-688               | Gator Corner Refresh   | \$ 12,000,000           | \$ -                  | \$ -                | \$ -                 | \$ 12,000,000           | TBD | Facility Program Development. D/B selection to begin June/July 2023. Funding through Chartwells.         |
| Planning              | UF-689               | Hamilton Center  | \$ 47,000,000           | \$ -                  | \$ -                | \$ -                 | \$ 47,000,000           | TBD | Facility Program Development   |
| Planning              | UF-690               | New Welcome Center (Student Experience Center)                     | \$ 17,000,000           | \$ -                  | \$ -                | \$ -                 | \$ 17,000,000           | TBD | Facility Program Development. Conceptual traffic study in progress.                                      |
| Planning              | UF-691               | Health Science Center IGA ESCO (Dental Tower)                      | \$ 34,000,000           | \$ -                  | \$ -                | \$ -                 | \$ 34,000,000           | TBD | Siemens developing Investment Grade Audit, Design basis, Design Development and 100% engineering design. |
| Planning              | UF-692               | Chemical Engineering Renovation & Remodeling                       | \$ 30,000,000           | \$ -                  | \$ -                | \$ -                 | \$ 30,000,000           | TBD | Facility Program Development   |
| Planning              | UF-TBD               | IFAS Microbiology Teaching Lab Addition                            | \$ 5,500,000            | \$ -                  | \$ -                | \$ -                 | \$ 5,500,000            | TBD | Facility Program Development   |
| Planning              | UF-TBD               | Health & Financial Tech Graduate Education Center                  | \$ 250,000,000          | \$ -                  | \$ -                | \$ -                 | \$ 250,000,000          | TBD | Facility Program Development   |
| Planning              | UF-TBD               | West Palm Beach Global Center for Technology & Innovation          | \$ 400,000,000          | \$ -                  | \$ -                | \$ -                 | \$ 400,000,000          | TBD | Parcel study/report in progress  |
| <b>Planning Total</b> | <b>(19 Projects)</b> |  | <b>\$ 1,732,400,000</b> | <b>\$ -</b>           | <b>\$ -</b>         | <b>\$ -</b>          | <b>\$ 1,732,400,000</b> |     |  |
| <b>Grand Total</b>    | <b>(39 Projects)</b> |  | <b>\$ 2,446,663,000</b> | <b>\$ 555,540,340</b> | <b>\$ 2,601,627</b> | <b>\$ 33,827,340</b> | <b>\$ 2,483,091,967</b> |     |  |

Chronology below sorted by Amendment Approval Date:

| <b>Chronology of Project Budget Amendments</b> |        |   |                                |                                  |                                   |  |                                      |                               |                                       |  |
|--|--------|---|--------------------------------|----------------------------------|-----------------------------------|--|--------------------------------------|-------------------------------|---------------------------------------|--|
|  |        |   | <b>Amendment Approval Date</b> | <b>Prior BOT Approved Budget</b> | <b>Requested Budget Amendment</b> | <b>Requested Budget Amendment Funding Source</b>   | <b>BOT Approved Budget Amendment</b> | <b>Revised Project Budget</b> | <b>Requires BOG/FCO Amendment (Y)</b> | <b>Comments</b>  |
| Construction                                   | UF-632 | Data Science and Information Technology Building                                    | June 8, 2023                   | \$ 150,504,692                   | \$ 2,601,627                      | UF Research, Facilities Services Utility Funds, Business Services, Unrestricted Funds and Departmental | \$ -                                 | \$ 153,106,319                | N                                     | Additional \$2,000,000 from UF Research for additional FF&E and sitework support. \$75,338.48 from Facilities Services Utility Funds for sitework support. \$50,000.00 from Business Services for design services of the Cafe. \$119,190 from Unrestricted Funds for additional FF&E and AV. \$357,098.67 from the College of Engineering for additional AV package. |
| Construction                                   | UF-200 | University Public Safety Building (Police Department) & Centrex Building Renovation | March 16, 2023                 | \$ 29,000,765                    | \$ 587,853                        | Unrestricted   | \$ 587,853                           | \$ 29,588,618                 | N                                     | Additional \$587,853 is to utilize alternate Q-Pac Fan in lieu of the Carrier system which is still not in production in effort to complete this project in May 2023.  |
| Construction                                   | UF-606 | Whitney Laboratory for Marine Bioscience  | March 16, 2023                 | \$ 31,200,000                    | \$ 8,000,000                      | State Appropriation  | \$ 8,000,000                         | \$ 39,200,000                 | Y                                     | Additional \$8,000,000 is the adjustment to account for construction cost escalation to meet the program for the Whitney Lab. The additional funding has been requested as a CIP State Appropriation.  |
| Design   | UF-653 | Architecture Building Renovation/Remodeling and DCP Collaboratory Addition          | March 16, 2023                 | \$ 45,000,000                    | \$ 1,263,600                      | Donor  | \$ 1,263,600                         | \$ 46,263,600                 | N                                     | Additional \$1,263,600 is the adjustment to account for construction cost escalation to meet the program for the Architecture Building and DCP Collaboratory Addition. The additional funding has been provided from Donor gifts.  |
| Construction                                   | UF-632 | Data Science and Information Technology Building                                    | December 8, 2022               | \$ 150,000,000                   | \$ 504,692                        | Donor, Business Services & Accrued Interest on account   | \$ 504,692                           | \$ 150,504,692                | N                                     | Additional \$460,000 donated by Chris Malachowsky for Solar panel system to achieve LEED Platinum certification, \$25,000 received from UF Business Services to repay for design services of Cafe and \$19,691.66 added from accrued interest on account principle.  |

|              |         |   |                  |                |              |  |              |                |   |   |
|--------------|---------|---|------------------|----------------|--------------|--|--------------|----------------|---|---|
| Construction | UF-200  | University Public Safety Building (Police Department) & Centrex Building Renovation | June 16, 2022    | \$ 28,250,765  | \$ 750,000   | Unrestricted                                       | \$ 750,000   | \$ 29,000,765  | N | Additional \$750,000 from Unrestricted Funds to account for budget shortfall due to the cost escalation for technology, telecommunications and security systems.  |
| Construction | UF-638  | Student Health Care Center Phase 2 (Infirmary)                                      | June 16, 2022    | \$ 26,000,000  | \$ 62,284    | Auxiliary  | \$ 62,284    | \$ 26,062,284  | N | Additional \$62,284 was provided by the department for User group requested changes to the scope of the project including additional floor boxes, changes to planter wall, adding interior sliding windows, etc.  |
| Construction | UF-606  | Whitney Laboratory for Marine Bioscience  | June 16, 2022    | \$ 28,500,000  | \$ 2,700,000 | Donor  | \$ 2,700,000 | \$ 31,200,000  | N | The additional \$2,700,000 is to account for adjustments in the net to gross square footage and construction cost escalation to meet the original program for the Whitney Lab. This additional funding provided by private donor  |
| Construction | UF-623B | Thermal Utilities Infrastructure (Museum Rd)  | April 21, 2022   | \$ 53,429,048  | \$ 2,930,000 | Facilities Services Auxiliary Funds, Carry Forward | \$ 2,930,000 | \$ 56,359,048  | N | Facilities Services is providing \$2,900,000 for the added scope of domestic water pipe replacement, additional Construction Administration services and change orders from the contractor and additional unforeseen conditions after 50% construction. Business Affairs is adding \$30,000 in Carry Forward funding for on-campus digital signage to help with traffic and pedestrian flow related to active construction.   |
| Construction | UF-200  | University Public Safety Building (Police Department) & Centrex Building Renovation | December 2, 2021 | \$ 26,000,000  | \$ 2,250,765 | Auxiliary, Unrestricted                            | \$ 2,250,765 | \$ 28,250,765  | N | The project incurred market pricing increases on all major building materials including, but not limited to steel and concrete (Due to the "hardened" nature of the facility, including the bulk of the building's robust structure and skin), metal studs, plumbing and fire protection piping, mechanical units and ductwork, and electrical conduit. Further, increased fuel prices increased virtually all materials costs starting from mining of the raw materials, to production of products, to final delivery to jobsite. The User Group recognized the increased financial demands upon the project and infused additional funding to insure its viability. |
| Construction | UF-623B | Thermal Utilities Infrastructure (Museum Rd)  | December 2, 2021 | \$ 51,394,812  | \$ 2,034,236 | Facilities Services Auxiliary                      | \$ 2,034,236 | \$ 53,429,048  | N | Legacy underground utilities maps insufficiently captured the entirety of existing underground conditions, and considerable abandoned and/or undocumented utilities have required removal or relocation for installation of new piping, manholes, and other systems. Also, several major isolation valves required replacement due to inability to withstand system-wide pressure intensities. The project also incurred some material price increases during this interval.  |
| Construction | UF-623B | Thermal Utilities Infrastructure (Museum Rd)  | June 10, 2021    | \$ 50,000,000  | \$ 1,394,812 | Facilities Services Auxiliary Funds                | \$ 1,394,812 | \$ 51,394,812  | N | The original planning/programming budget for the project is \$50,000,000. The project was "Hard Bid", and requires budget increase of \$1,394,812 to accommodate bid results. Additional funding has been provided by Facilities Services from Auxiliary sources.   |
| Construction | UF-632  | Data Science and Information Technology Building                                    | March 18, 2021   | \$ 150,000,000 | \$ -         | Carry Forward                                      | \$ -         | \$ 150,000,000 | Y | This amendment does not increase the project budget total, but revises funding commitments by the College of Engineering to include \$2,210,927 in Carry Forward Funding. This "flavor of funding" use of Carry Forward funds is permissible under BOG Regulation 14.003(2)c.i. BOG Facilities staff has indicated this amendment should be reported during the annual FCO Budget Update/Submission.  |

University of Florida Board of Trustees  
 Minor Capital Construction Projects (\$2M - \$4M in Construction Costs)

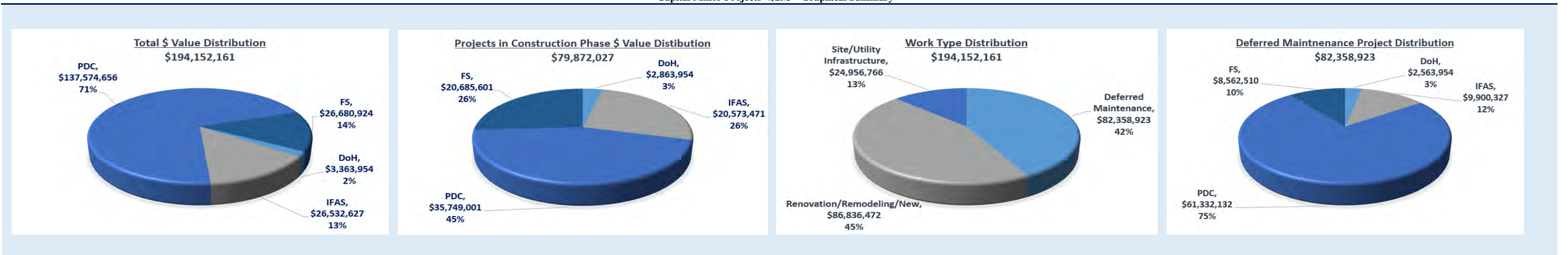
(Summary Below for Projects <\$2M)

Meeting Date: June 08, 2023

Report Date: May 26, 2023

| Project Phase             | Project Number | Project Title  | Program Planning Budget | Ratified Budget      | Requested Budget Amendment | Requested Budget/ Amendment Funding Source | Net Changes To Date | Requires BOG/FCO Amendment (Y) | Final Project Cost   | Planned Completion | Status/Comments:                         |
|---------------------------|----------------|--|-------------------------|----------------------|----------------------------|--|---------------------|--------------------------------|----------------------|--------------------|--|
| Construction              | MP06867        | Baby Gator Addition  | \$ 4,530,491            | \$ 4,830,491         | \$ -                       |  | \$ 300,000          |                                | \$ 4,830,491         | August-2023        | Construction 35% Complete                |
| Construction              | MP04667        | Powell Hall (FLMNH), 0130-EXHIBITION NW                          | \$ 3,642,125            | \$ 3,667,125         | \$ -                       |  | \$ 25,000           |                                | \$ 3,667,125         | February-2024      | Construction Started                     |
| Construction              | UT00469        | McCarty East Chilled Water Extension                             | \$ 3,500,000            | \$ 3,500,000         | \$ -                       |  | \$ -                |                                | \$ 3,500,000         | August-2023        | Construction 70% Complete                |
| Construction              | MP05424        | Weimer Hall - Infrastructure & Structural Upgrades               | \$ 3,390,200            | \$ 3,390,200         | \$ -                       |  | \$ -                |                                | \$ 3,390,200         | June-2023          | Construction 85% Complete                |
| Construction              | MP06934        | LMP Shared Use Path at Physics                                   | \$ 3,200,000            | \$ 3,200,000         | \$ -                       |  | \$ -                |                                | \$ 3,200,000         | September-2023     | Construction Started                     |
| Construction              | UF-266D        | Chemical Engineering Student Center corrections                  | \$ 2,952,529            | \$ 2,952,529         | \$ -                       |  | \$ -                |                                | \$ 2,952,529         | February-2024      | Design complete. In construction by May. |
| Construction              | MP06916        | Orthopaedics Institute Renovation                                | \$ 2,893,656            | \$ 2,893,656         | \$ -                       |  | \$ -                |                                | \$ 2,893,656         | July-2024          | Design Completed                         |
| Construction              | UT00348        | Water Reclamation Facility Filtration System Replacement         | \$ 2,800,000            | \$ 2,851,500         | \$ -                       |  | \$ 51,500           |                                | \$ 2,851,500         | July-2023          | Construction 80% Complete                |
| Construction              | IF21021        | Horticultural Sciences New Addition                              | \$ 2,150,000            | \$ 2,284,301         | \$ -                       |  | \$ 134,301          |                                | \$ 2,284,301         | September-2023     | Construction 50% Complete                |
| Construction              | MP05287        | Chem Bldg - AHU's 21 and 22 Replacement                          | \$ 4,000,000            | \$ -                 | \$ -                       |  | \$ -                |                                | \$ 4,000,000         | March-2024         | Design Completed                         |
| Construction              | MP06827        | Veterinary Academic Building V1-200 Anatomy Lab Addition         | \$ 2,363,552            | \$ -                 | \$ -                       |  | \$ -                |                                | \$ 2,363,552         | June-2023          | Construction Progressing                 |
| Construction              | MP07458        | Baby Gator Parking Project                                       | \$ 1,222,100            | \$ -                 | \$ -                       |  | \$ -                |                                | \$ 1,222,100         | July-2023          | Construction Started                     |
| <b>Construction Total</b> |                | (12 Projects)  | \$ 36,644,653           | \$ 29,569,802        | \$ -                       |  | \$ 510,801          |                                | \$ 37,155,454        |                    |  |
| Project Phase             | Project Number | Project Title  | Program Planning Budget | Ratified Budget      | Requested Budget Amendment | Requested Budget/ Amendment Funding Source | Net Changes To Date | Requires BOG/FCO Amendment (Y) | Final Project Cost   | Planned Completion | Status/Comments:                         |
| Design                    | MP07456        | Chemical Engineering 1- 3rd Floor HVAC Replacement AHUs 16,18-20 | \$ 4,000,000            | \$ -                 | \$ -                       |  | \$ -                |                                | \$ 4,000,000         | September-2024     | Design Progressing                       |
| Design                    | MP04827        | Chemical Engineering Building Repair                             | \$ 3,900,000            | \$ -                 | \$ -                       |  | \$ -                |                                | \$ 3,900,000         | December-2023      | Design Progressing                       |
| Design                    | MP07232        | Engineering Building Renovation                                  | \$ 2,732,843            | \$ -                 | \$ -                       |  | \$ -                |                                | \$ 2,732,843         | July-2024          | Design Progressing                       |
| Design                    | MP06892        | Baby Gator Diamond Village                                       | \$ 2,665,390            | \$ -                 | \$ -                       |  | \$ -                |                                | \$ 2,665,390         | February-2024      | Design Progressing                       |
| Design                    | MP07893        | Stetson Medical Sciences 4 AHU's and FCU Replacement             | \$ 2,014,500            | \$ -                 | \$ -                       |  | \$ -                |                                | \$ 2,014,500         | March-2024         | Design Progressing                       |
| Design                    | MP07381        | Nuclear Field Building Renovation                                | \$ 2,002,046            | \$ -                 | \$ -                       |  | \$ -                |                                | \$ 2,002,046         | October-2023       | Advanced Schematic                       |
| <b>Design Total</b>       |                | (6 Projects)   | \$ 17,314,779           | \$ -                 | \$ -                       |  | \$ -                |                                | \$ 17,314,779        |                    |  |
| Project Phase             | Project Number | Project Title  | Program Planning Budget | Ratified Budget      | Requested Budget Amendment | Requested Budget/ Amendment Funding Source | Net Changes To Date | Requires BOG/FCO Amendment (Y) | Final Project Cost   | Planned Completion | Status/Comments:                         |
| Planning                  | PL00016        | UF Wayfinding  | \$ 3,476,539            | \$ -                 | \$ -                       |  | \$ -                |                                | \$ 3,476,539         | August-2024        | Project in Planning                      |
| Planning                  | MP06749        | Gator Band Bldg - Phase 2 Band Practice Field Facility           | \$ 3,267,913            | \$ -                 | \$ -                       |  | \$ -                |                                | \$ 3,267,913         | TBD                | On hold. Donor fundraising underway.     |
| <b>Planning Total</b>     |                | (2 Projects)   | \$ 6,744,452            | \$ -                 | \$ -                       |  | \$ -                |                                | \$ 6,744,452         |                    |  |
| <b>Grand Total</b>        |                | <b>(20 Projects)</b>   | <b>\$ 60,703,884</b>    | <b>\$ 29,569,802</b> | <b>\$ -</b>                |  | <b>\$ 510,801</b>   |                                | <b>\$ 61,214,685</b> |                    |  |

Capital Minor Projects <\$2M "Graphical Summary"



University of Florida Board of Trustees

2022-2023 General Appropriations Act, Section 197, Deferred Building Maintenance Program

Major Projects >\$4 in Construction Costs, Minor Capital Construction Projects \$2M - \$4M in Construction Costs and Summary Below for Projects <\$2M

Meeting Date: June 08, 2023

Report Date: May 26, 2023

| Major Projects                          |                |  |                         |                 |                            |  |                     |                                |                       |                    |  |
|---|----------------|--|-------------------------|-----------------|----------------------------|--|---------------------|--------------------------------|-----------------------|--------------------|--|
| Project Phase                           | Project Number | Project Title  | Program Planning Budget | Ratified Budget | Requested Budget Amendment | Requested Budget/ Amendment Funding Source | Net Changes To Date | Requires BOG/FCO Amendment (Y) | Final Project Cost    | Planned Completion | Status/Comments:                                 |
| <b>Construction Total</b>               |                | (0 Projects)   | \$ -                    | \$ -            | \$ -                       |  | \$ -                |                                | \$ -                  |                    |  |
| Design                                  | UF-665         | O'Connell Center Replace Pool and Mechanical Equipment                 | \$ 4,000,000            | \$ -            | \$ -                       |  | \$ -                |                                | \$ 4,000,000          |                    | Design on hold.                                  |
| <b>Design Total</b>                     |                | (1 Project)  | \$ 4,000,000            | \$ -            | \$ -                       |  | \$ -                |                                | \$ 4,000,000          |                    |  |
| Planning                                | UF-683         | Dental Science Building- Envelope Repairs                              | \$ 9,953,960            | \$ -            | \$ -                       |  | \$ -                |                                | \$ 9,953,960          |                    | Programming in progress.                         |
| Planning                                | UF-684         | O'Connell Center Replace Roof and Recoat Flumes (Phase 1 & 2)          | \$ 6,714,800            | \$ -            | \$ -                       |  | \$ -                |                                | \$ 6,714,800          |                    | Programming complete. A/E selection in progress. |
| Planning                                | UF-TBD         | Dental Sciences- HVAC  | \$ 5,000,000            | \$ -            | \$ -                       |  | \$ -                |                                | \$ 5,000,000          |                    | Programming in progress.                         |
| Planning                                | UF-TBD         | Florida Gym Pool Replace (Phase 1 & 2)                                 | \$ 5,595,700            | \$ -            | \$ -                       |  | \$ -                |                                | \$ 5,595,700          |                    | Programming in progress.                         |
| <b>Planning Total</b>                   |                | (4 Projects)   | \$ 27,264,460           | \$ -            | \$ -                       |  | \$ -                |                                | \$ 27,264,460         |                    |  |
| <b>Total Majors</b>                     |                | <b>(5 Projects)</b>  | <b>\$ 31,264,460</b>    | <b>\$ -</b>     | <b>\$ -</b>                |  | <b>\$ -</b>         |                                | <b>\$ 31,264,460</b>  |                    |  |
| Capital Minor Projects                  |                |  |                         |                 |                            |  |                     |                                |                       |                    |  |
| <b>Construction Total</b>               |                | (0 Projects)   | \$ -                    | \$ -            | \$ -                       |  | \$ -                |                                | \$ -                  |                    |  |
| Design                                  | MP07456        | Chemical Engineering- Replace AHU-16, 18, 19, 20                       | \$ 2,797,900            | \$ -            | \$ -                       |  | \$ -                |                                | \$ 2,797,900          | September-2024     | Project in Planning- 50% CDs                     |
| Design                                  | IF23142        | Animal Sciences- HVAC Duct & BAS Replacement                           | \$ 2,350,000            | \$ -            | \$ -                       |  | \$ -                |                                | \$ 2,350,000          | May-2024           | Design Progressing.                              |
| Design                                  | MP07893        | Stetson Medical Sciences AHU Replacement- 4 Units and FCU's            | \$ 2,014,500            | \$ -            | \$ -                       |  | \$ -                |                                | \$ 2,014,500          | March-2024         | Design Progressing.                              |
| <b>Design Total</b>                     |                | (3 Projects)   | \$ 7,162,400            | \$ -            | \$ -                       |  | \$ -                |                                | \$ 7,162,400          |                    |  |
| Planning                                | MP08468        | Communicore- Electrical Distribution Throughout                        | \$ 4,271,300            | \$ -            | \$ -                       |  | \$ -                |                                | \$ 4,271,300          | October-2023       | Project in Planning.                             |
| Planning                                | MP08294        | Norman Hall- Tile Roof Sections/Roof Replacement                       | \$ 3,917,000            | \$ -            | \$ -                       |  | \$ -                |                                | \$ 3,917,000          | October-2023       | Project in Planning.                             |
| Planning                                | MP-TBD         | Anderson Hall Restore Historic Roof, Underlayment is gone- Major Leaks | \$ 2,797,900            | \$ -            | \$ -                       |  | \$ -                |                                | \$ 2,797,900          | TBD                | Project in Planning.                             |
| Planning                                | MP08366        | Engineering Building HVAC Controls System Wet                          | \$ 2,797,900            | \$ -            | \$ -                       |  | \$ -                |                                | \$ 2,797,900          | December-2024      | Project in Planning.                             |
| Planning                                | MP-TBD         | Dental Science Building- Electrical                                    | \$ 2,500,000            | \$ -            | \$ -                       |  | \$ -                |                                | \$ 2,500,000          | TBD                | Project in Planning.                             |
| Planning                                | MP-TBD         | Dental Science Building- Mechanical                                    | \$ 2,500,000            | \$ -            | \$ -                       |  | \$ -                |                                | \$ 2,500,000          | TBD                | Project in Planning.                             |
| Planning                                | MP08296        | Grinter Hall- HVAC Controls, system and Distribution Networks          | \$ 2,238,300            | \$ -            | \$ -                       |  | \$ -                |                                | \$ 2,238,300          | TBD                | Project in Planning.                             |
| <b>Planning Total</b>                   |                | (7 Projects)   | \$ 21,022,400           | \$ -            | \$ -                       |  | \$ -                |                                | \$ 21,022,400         |                    |  |
| <b>Total Majors (&gt;\$4m)</b>          |                | <b>(5 Projects)</b>  | <b>\$ 31,264,460</b>    | <b>\$ -</b>     | <b>\$ -</b>                |  | <b>\$ -</b>         |                                | <b>\$ 31,264,460</b>  |                    |  |
| <b>Total Capital Minors (\$2m-\$4m)</b> |                | <b>(10 Projects)</b>   | <b>\$ 28,184,800</b>    | <b>\$ -</b>     | <b>\$ -</b>                |  | <b>\$ -</b>         |                                | <b>\$ 28,184,800</b>  |                    |  |
| <b>Total Minors (&lt;\$2m)</b>          |                | <b>(161 Projects)</b>  | <b>\$ 88,743,800</b>    | <b>\$ -</b>     | <b>\$ -</b>                |  | <b>\$ -</b>         |                                | <b>\$ 88,743,800</b>  |                    |  |
| <b>Grand Total</b>                      |                | <b>(176 Projects)</b>  | <b>\$ 148,193,060</b>   | <b>\$ -</b>     | <b>\$ -</b>                |  | <b>\$ -</b>         |                                | <b>\$ 148,193,060</b> |                    |  |

Funding Distribution by Division "Graphical Summary"





**COMMITTEE ON FACILITIES AND CAPITAL INVESTMENTS**

**ACTION ITEM FCI2**

**June 8, 2023**

**SUBJECT:** Parking Fee Restructure for FY24

---

**BACKGROUND INFORMATION**

Transportation and Parking Services (TAPS) is responsible for managing and operating the university's transit and parking programs, including maintaining the campus parking infrastructure. A primary revenue source for TAPS is parking permit sales.

A change to the structure and cost of student parking permits is needed to meet student demand and also generate revenue to cover on-going and future expenses for the parking program. This proposal introduces a proximity-based parking model for students that provides tiered options.

The request is to implement the following change to student parking permits:

**STUDENT PERMITS:** Implement a 3-tiered proximity pricing structure as follows. (Currently, all student permits are a flat \$160 annually).

|                 | <b><u>Proposed Permit Tiers</u></b>                       |
|-----------------|---|
| <b>(Tier 1)</b> | Most proximate parking locations – most expensive         |
| <b>(Tier 2)</b> | Mid-proximate parking locations – mid cost                |
| <b>(Tier 3)</b> | Least proximate (Garage 9 Rooftop only) – least expensive |

**FACULTY/STAFF PERMITS:** No proposed changes to faculty/staff parking permits at this time.

**Rationale:**

There has been no revenue increase to support TAPS' operations in eight years, despite rising annual operating expenses. Student parking permit prices have remained flat at \$160 annually for the past eight years. Faculty/staff parking permit pricing was increased strategically each year from FY 2017-18 to FY 2020-21, with the increased revenue specifically pledged to cover the debt incurred to build Garage 14.

Compounding the lack of revenue growth for an extended period, TAPS experienced a significant revenue shortfall (including waiving of parking fees for a period of time) as a result of the pandemic.

COVID Relief Funds received by TAPS partially offset the pandemic-related revenue shortfall (\$1.9 million not covered by relief funds). However, other mitigating circumstances that contribute to the need for the current re-structure request are as follows:

- (1) Parking demand has not rebounded to pre-pandemic levels (as compared to FY 2019)
- (2) Some UF Health employees no longer need permits due to relocation to other facilities off main campus
- (3) Some UF Health employees now purchase parking from UF Health, thereby reducing demand in TAPS
- (4) The campus e-scooter program is likely contributing to the decline in motorcycle/scooter permit sales (TAPS is currently selling approximately 2,200 fewer motorcycle/scooter permits annually)
- (5) Some fully remote and hybrid remote employees may not need permits
- (6) A recent increase in student housing closer to campus may contribute to lower demand for permits

**PROPOSED COMMITTEE ACTION**

The Committee on Facilities and Capital Investments is asked to approve the TAPS proposal for a proximity-based parking model for student parking permits for recommendation to the Board of Trustees for approval on the Consent Agenda. Upon approval, TAPS will work with the relevant campus units on necessary steps, including applicable UF regulation changes, to be presented to the Board of Trustees for approval at a future meeting.

**ADDITIONAL COMMITTEE CONSIDERATIONS**

None.

---

Supporting Documentation Included: Parking Permit Changes TAPS Recommendations presentation

Submitted by: Curtis A. Reynolds, Vice President for Business Affairs

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza "Mori" Hosseini, Chair

---

Ben Sasse, President and Corporate Secretary



# Parking Permit Changes TAPS Recommendations

June 8, 2023

## **Faculty and Staff Permits:**

No changes proposed for FY2023-24. Faculty/staff permit pricing will be re-evaluated for FY2024-25.

# Student Permits:

Students living in residence halls, sororities and fraternities may choose from among three options:

## Permit Type/Proximity

|        |   |
|--------|---|
| Tier 1 | Red 1 Permit, most proximate parking                          |
| Tier 2 | Red 2 Permit, mid-proximate parking                           |
| Tier 3 | Red 3 Permit, least proximate parking (Garage 9 Rooftop only) |

**PROPOSED 3 – Tiered Decal pricing for Resident Students**

Red 1



Red 2



Red 3



**COMMITTEE ON FACILITIES AND CAPITAL INVESTMENTS**  
**ACTION ITEM FCI3**  
**June 8, 2023**

**SUBJECT:** Center for Applied Artificial Intelligence

---

**BACKGROUND INFORMATION**

UF/IFAS Gulf Coast Research and Education Center in Balm, Hillsborough County will be a central research, extension and development hub focused on the use of artificial intelligence and robotics to overcome production limitations identified by the agricultural and natural resources industries. This 35,000 GSF facility will include research labs, offices, conference rooms, and collaborative spaces.

**PROPOSED COMMITTEE ACTION**

The Committee on Facilities and Capital Investments is asked to provide guidance regarding the inclusion to the “preliminary” 2024-2025 Fixed Capital Outlay Legislative Budget Request for the UF/IFAS - Center for Applied Artificial Intelligence to the Board of Trustees for approval on the Consent Agenda.

**ADDITIONAL COMMITTEE CONSIDERATIONS**

None.

---

Supporting Documentation Included: None

Submitted by: Curtis A. Reynolds, Vice President for Business Affairs

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza “Mori” Hosseini, Chair

---

Ben Sasse, President and University Secretary



**COMMITTEE ON FACILITIES AND CAPITAL INVESTMENTS**

**ACTION ITEM FCI4**

**June 8, 2023**

**SUBJECT:** Fixed Capital Outlay Legislative Budget Request for FY25

---

**BACKGROUND INFORMATION**

The Florida Board of Governors requires an annual submission from each university of its Fixed Capital Outlay Legislative Budget Request. This update is used by the Florida Board of Governors to develop the annual Fixed Capital Outlay Legislative Budget Request. Several items are included in this submission as follows;

- Five year Capital Improvement Plan – PECO Eligible Project Requests
- Five year Capital Improvement Plan – CITF Projects
- Five year Capital Improvement Plan – Non-State Supplemental Funding

**PROPOSED COMMITTEE ACTION**

The Committee on Facilities and Capital Investments is asked to provide guidance regarding the “preliminary” 2024-2025 Fixed Capital Outlay Legislative Budget Request that is attached. The Committee is also asked to recommend to the Board of Trustees its approval on the Consent Agenda, an action authorizing the president and board chair to develop and direct the submission of final approved lists to be submitted to the Florida Board of Governors by its July 1<sup>st</sup> deadline and contemporaneously shared with the Board of Trustees.

**ADDITIONAL COMMITTEE CONSIDERATIONS**

Submission to the Board of Governors is required.

---

Supporting Documentation Included: (CIP-1) Cover Letter (Draft), (CIP-2A, CIP-2B, CIP-2C) Five Year Capital Improvement Plans, (CIP-3) Project Details

Submitted by: Curtis A. Reynolds, Vice President for Business Affairs

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza “Mori” Hosseini, Chair

---

Ben Sasse, President and Corporate Secretary

July 1, 2023

Mr. Tim Jones, Vice Chancellor for Finance & Administration  
Florida Board of Governors  
State University System  
325 West Gaines Street  
Suite 1652 Turlington Building  
Tallahassee, Florida 32399-0400

Dear Mr. Jones:

Enclosed is the University of Florida 2024-25 Fixed Capital Outlay Legislative Budget Request submission as originally requested on April 5, 2023, with the due date of July 1, 2023.

The 2024-25 Fixed Capital Outlay Legislative Budget Request was approved by the UF Board of Trustees on June 08, 2023. Prioritization of UF capital improvement projects is based on the strategic goals of the university as set forth by the board of trustees and administration. A thorough evaluation of the utilization and condition of existing facilities is considered, as well as the programmatic and technical requirements for new facilities that meet the unique challenges of a leading academic and research institution. In consultation with the board of trustees and senior administration, the university has developed new priorities for this submission. Furthermore, the proposed projects being presented, reflect the university's commitment towards revitalization of existing facilities that will extend their useful life, as well as providing higher quality space for the nationally ranked academic programs occupying these facilities.

Prioritization of the University of Florida's 2024-25 capital improvement projects are as follows:

- Priority #1 – Thermal Infrastructure Plant & Distribution Upgrades
- Priority #2 – UF Student Experience Center
- Priority #3 – Hamilton Center
- Priority #4 – IFAS Microbiology & Cell Sciences Teaching Lab
- Priority #5 – Jacksonville Health & Financial Tech Graduate Education Center
- Priority #6 – Dental Science Building
- Priority #7 – Academic & Research Collaboration Center
- Priority #8 – Music Building
- Priority #9 – Center for Applied Artificial Intelligence- Balm

Please contact Vice-President for Business Affairs, Curtis A. Reynolds (352-392-1336, [curtrey@ufl.edu](mailto:curtrey@ufl.edu)) if you have questions pertaining to this submission.

Sincerely,

Dr. Ben Sasse

Approved University of Florida Board of Trustees: \_\_\_\_\_  
Morteza Hosseini, Chair

Board of Governors Form CIP-1

State University System  
5-Year Capital Improvement Plan (CIP)  
FY 2024-25 through 2028-29

**Summary of Projects**  
(PECO-Eligible Project Requests)

University University of Florida

Contact: Curtis Reynolds  
(name)

(352) 392-1336  
(phone)

curtrey@ufl.edu  
(email)

| Priority No. | Project Title                                       | Total Supplemental (Non PECO) funding | Total Prior PECO Funding | Projected Annual PECO Funding Requested |               |               |         |         | Programs to Benefit from Project | Net Assignable Sq. Ft. (NASF) | Gross Sq. Ft. (GSF) | Total Project Cost | Project Cost Per GSF | EPS Recommendation Date & Rec. # <sup>(1)</sup> |
|--------------|---|---------------------------------------|--------------------------|---|---------------|---------------|---------|---------|----------------------------------|-------------------------------|---------------------|--------------------|----------------------|---|
|              |   |                                       |                          | FY24-25                                 | FY25-26       | FY26-27       | FY27-28 | FY28-29 |                                  |                               |                     |                    |                      |   |
| 1            | Thermal Infrastructure Plant & Distribution Upgrade | \$ 20,000,000                         | \$ -                     | \$ -                                    | \$ 40,000,000 | \$ 40,000,000 | \$ -    | \$ -    | UF                               | N/A                           | N/A                 | \$ 100,000,000     | N/A                  | N/A   |
| 2            | UF Student Experience Center                        | \$ -                                  | \$ -                     | \$ 8,500,000                            | \$ 8,500,000  | \$ -          | \$ -    | \$ -    | UF                               | 10,200                        | 15,000              | \$ 17,000,000      | \$ 1,133.33          | EPS Action Item                                 |
| 3            | UF Hamilton Center                                  | \$ -                                  | \$20,000,000             | \$27,000,000                            | \$ -          | \$ -          | \$ -    | \$ -    | UF                               | 31,220                        | 46,830              | \$ 47,000,000      | \$ 1,003.63          | N/A   |
| 4            | IFAS Microbiology & Cell Sciences Teaching Lab      | \$ -                                  | \$ 2,750,000             | \$ 2,750,000                            | \$ -          | \$ -          | \$ -    | \$ -    | IFAS                             | 4,500                         | 6,080               | \$ 5,500,000       | \$ 904.61            | N/A   |
| 5            | Jax Health & Financial Tech Graduate Education C    | \$ 100,000,000                        | \$75,000,000             | \$ 75,000,000                           | \$ -          | \$ -          | \$ -    | \$ -    | UF                               | 143,000                       | 243,100             | \$ 250,000,000     | \$ 1,028.38          | N/A   |
| 6            | Dental Science Building                             | \$ 44,000,000                         | \$88,994,870             | \$ 29,305,130                           | \$ -          | \$ -          | \$ -    | \$ -    | Dental                           | 163,900                       | 253,150             | \$ 162,300,000     | \$ 641.12            | N/A   |
| 7            | Academic & Research Collaboration Center            | \$ -                                  | \$11,000,000             | \$ 11,000,000                           | \$ -          | \$ -          | \$ -    | \$ -    | UF                               | 10,495                        | 15,743              | \$ 22,000,000      | \$ 1,397.45          | N/A   |
| 8            | Music Building                                      | \$ 5,000,000                          | \$35,000,000             | \$ 10,000,000                           | \$ -          | \$ -          | \$ -    | \$ -    | Music                            | 16,900                        | 25,460              | \$ 50,000,000      | \$ 1,963.86          | N/A   |
| 9            | Center for Applied Artificial Intelligence - Balm   | \$ -                                  | \$10,965,880             | \$ 14,034,120                           | \$ -          | \$ -          | \$ -    | \$ -    | IFAS                             | 24,150                        | 34,005              | \$ 25,000,000      | \$ 735.19            | N/A   |
|              |   |                                       |                          |   |               |               |         |         |                                  |                               |                     |                    |                      |   |
|              |   |                                       |                          |   |               |               |         |         |                                  |                               |                     |                    |                      |   |
|              |   |                                       |                          |   |               |               |         |         |                                  |                               |                     |                    |                      |   |
|              |   |                                       |                          |   |               |               |         |         |                                  |                               |                     |                    |                      |   |

1) An EPS recommendation is required per s 1013.31 and s. 1001.706(12) if no prior PECO trust fund appropriation received. If the project has received non-PECO appropriation(s) and an EPS Recommendation is not applicable, please cite the General Appropriations Act (GAA) FY and the (\$) amount(s) appropriated, for reference.



State University System  
 5-Year Capital Improvement Plan (CIP)  
 FY 2024-25 through 2028-29

**Summary of Projects**  
 (CITF Project Requests) <sup>1</sup>

University: University of Florida

Contact: Curtis Reynolds (352) 392-1336  
 (name) (phone)

curtrey@ufl.edu  
 (email)

| Project Name                   | Total CITF Funding to Date | Projected Annual CITF Funding for the Project |         |         |         |         | Programs to Benefit from Project (if applicable) | Net Assignable Sq. Ft. (NASF) | Gross Sq. Ft. (GSF) | Total Project Cost <sup>1</sup> | Project Cost Per GSF |
|--------------------------------|----------------------------|---|---------|---------|---------|---------|--|-------------------------------|---------------------|---------------------------------|----------------------|
|                                |                            | FY24-25                                       | FY25-26 | FY26-27 | FY27-28 | FY28-29 |  |                               |                     |                                 |                      |
| New Disability Resource Center | \$12,450,000               | \$0   | \$0     | \$0     | \$0     | \$0     | UF Students                                      | 8,320                         | 12,200              | \$12,450,000                    | \$1,020              |
| Hitchcock Field & Fork Pantry  | \$2,156,826                | \$0   | \$0     | \$0     | \$0     | \$0     | UF Students                                      | 1,780                         | 2,615               | \$2,156,826                     | \$825                |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |
|                                |                            |   |         |         |         |         |  |                               |                     |                                 |                      |

1) This form (CIP-2B) is intended for CITF projects of \$2M or more.

State University System  
5-Year Capital Improvement Plan (CIP)  
FY 2024-25

**Summary of Projects**  
('Back of Bill' Legislative Project Authorizations) \*

University: University of Florida Contact: Curtis Reynolds (352) 392-1336 curtrey@ufl.edu  
(name) (phone) (email)

| Project Name *   | Brief Description of Project        | GSF                           | Project Location   | Project Cost  | Project Funding Source(s) | Estimated Annual Operating & Maintenance Cost |                    |
|--|-------------------------------------|-------------------------------|--|---------------|---------------------------|---|--------------------|
|  |                                     |                               |  |               |                           | Amount (\$)                                   | Funding Source(s)  |
| Biomedical & Life Sciences Research Building & Various Renovations | Interdisciplinary research facility | 120,000<br>New 85,000<br>Reno | Adjacent to Cancer Genetics and Pathogens Buildings on UF Campus | \$250,000,000 | Bond                      | \$2,500,000                                   | Office of Research |
| Ben Hill Griffin Stadium Renovation                                | Renovations to Football Stadium     | 500,000                       | Ben Hill Griffin Stadium   | \$300,000,000 | Bond                      | \$3,000,000                                   | UAA                |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |
|  |                                     |                               |  |               |                           |   |                    |

\* List all proposed FCO projects for FY 2024-25 to be constructed, acquired and financed by the university or DSO via Debt or P3 requiring Legislative (Back-of-Bill) authorization pursuant to s.1010.62 at

## PECO Project Detail

University: University of Florida Priority #: 1  
 Project Name: Thermal Infrastructure Plant & Distribution Upgrades  
 Project Address: UF Main Campus

### PROJECT NARRATIVE

In connection with the extension of the UF-Duke Energy agreement, UF must complete certain utility system renovations and upgrades for portions of the system that are not associated with the Duke plant (e.g., increased chilled water production; expanded chilled water and steam distribution; optimization of existing plants and facilities aimed at efficiency gains, etc.) to replace end-of-life facilities and to ensure service capacity for future campus growth. These improvements are a generational investment for the campus and, with existing poor energy performance in our oldest plants, the ROI could range from moderate to aggressive. The following major building and equipment renovations are contemplated:

- Increase chilled water tonnage to support additional buildings and major renovations in the research and energy dense southern district of campus;
  - Replace end-of-life chillers and appurtenances, reconfigure the secondary pumping design and optimize performance across the balance of plant infrastructure to increase energy efficiency, cut costs, and enhance ease of operational control;
  - Create an industrial-grade control system that integrates all 10 chilled water plants across campus for centralized plant control and operations from a single location;
  - Make distribution improvements to remove flow restrictions on service delivery and replace 30-year-old piping that cannot support modern plant distribution pressures;
  - Rebuild the Rabon Plant's north and south electrical rooms and replace all medium voltage throughout the plant for safe and efficient electrical performance;
  - Rebuild electrical substation #2 with modernized switch gear and breakers and replace protection and controls systems in order to increase UF's electrical grid resiliency.
- The University of Florida has one of the oldest and largest district energy systems in higher education. With district energy being central to decarbonization and resiliency, this investment is essential for the University of Florida's future.

### RESERVE ESCROW PLAN

|                           | Renovation/Remodeling Projects<br><small>(1% per s. 1001.706(12)(c) F.S.)</small>             | New Construction Projects<br><small>(2% per Board Regulation 14.002)</small> |
|---------------------------|---|--|
| Estimated Bldg Value:     | \$ 100,000,000  | \$ -   |
| Value Basis/Source:       | Total construction cost or insurable value, whichever is greater, per Board Regulation 14.002 |  |
| Estimated 1st Yr Deposit: | \$ 1,000,000  | \$ -   |
| Funding Source:           |   |  |
| Comments:                 |   |  |

### BUILDING SPACE DESCRIPTION (account for all building space below)

| Space Type<br><small>(per FICM)</small>            | Net Sq. Ft.<br><small>(NSF)</small> | Net-to-Gross         |  | Gross Sq. Ft.<br><small>(GSF)</small> | Unit Cost *<br><small>(per GSF)</small> | Building Cost |   |   |
|--|-------------------------------------|----------------------|--|---------------------------------------|---|---------------|---|---|
|  |                                     | Conversion<br>Factor |  |                                       |   |               |   |   |
| NEW CONSTRUCTION                                   |                                     |                      |  |                                       |   |               |   |   |
|  | -                                   |                      |  | -                                     |   | -             |   |   |
|  | -                                   |                      |  | -                                     |   | -             |   |   |
|  | -                                   |                      |  | -                                     |   | -             |   |   |
|  | -                                   |                      |  | -                                     |   | -             |   |   |
|  | -                                   |                      |  | -                                     |   | -             |   |   |
|  | -                                   |                      |  | -                                     |   | -             |   |   |
|  | -                                   |                      |  | -                                     |   | -             |   |   |
|  | -                                   |                      |  | -                                     |   | -             |   |   |
|  | -                                   |                      |  | -                                     |   | -             |   |   |
| Subtotal NASF:                                     | -                                   |                      |  | -                                     |   | -             |   |   |
| 'Other Assignable' E&G Space                       | -                                   |                      |  | -                                     |   | -             |   |   |
| Other Non-E&G Budget Entity Space                  | -                                   |                      |  | -                                     |   | -             |   |   |
| Total:   | -                                   |                      |  | -                                     |   | -             |   |   |
| * Apply Unit Cost to total GSF based on Space Type |                                     |                      |  |                                       |   |               |   |   |
| REMODELING / RENOVATION                            |                                     |                      |  |                                       |   |               |   |   |
|  | -                                   |                      |  | -                                     |   | -             | - | - |
|  | -                                   |                      |  | -                                     |   | -             | - | - |
|  | -                                   |                      |  | -                                     |   | -             | - | - |
|  | -                                   |                      |  | -                                     |   | -             | - | - |
|  | -                                   |                      |  | -                                     |   | -             | - | - |
|  | -                                   |                      |  | -                                     |   | -             | - | - |
|  | -                                   |                      |  | -                                     |   | -             | - | - |
| Subtotal NASF:                                     | -                                   |                      |  | -                                     |   | -             | - | - |
| 'Other Assignable' E&G Space                       | -                                   |                      |  | -                                     |   | -             | - | - |
| Other Non-E&G Budget Entity Space                  | -                                   |                      |  | -                                     |   | -             | - | - |
| Total:   | -                                   |                      |  | -                                     |   | -             | - | - |
| <b>Grand Total:</b>                                | -                                   |                      |  | -                                     |   | -             | - | - |

**PROJECT COMPONENT COSTS & PROJECTIONS**

|                                       | Costs Incurred to Date | Projected Costs |        |        |        |        | Total |
|---------------------------------------|------------------------|-----------------|--------|--------|--------|--------|-------|
|                                       |                        | Year 1          | Year 2 | Year 3 | Year 4 | Year 5 |       |
| <b>Basic Construction Costs</b>       |                        |                 |        |        |        |        |       |
| Building Cost (from above)            | -                      | -               | -      | -      | -      | -      | -     |
| Environmental Impacts/Mitigation      | -                      | -               | -      | -      | -      | -      | -     |
| Site Preparation                      | -                      | -               | -      | -      | -      | -      | -     |
| Landscape / Irrigation                | -                      | -               | -      | -      | -      | -      | -     |
| Plaza / Walks                         | -                      | -               | -      | -      | -      | -      | -     |
| Roadway Improvements                  | -                      | -               | -      | -      | -      | -      | -     |
| Parking : <input type="text"/> spaces | -                      | -               | -      | -      | -      | -      | -     |
| Telecommunication                     | -                      | -               | -      | -      | -      | -      | -     |
| Electrical Service                    | -                      | -               | -      | -      | -      | -      | -     |
| Water Distribution                    | -                      | -               | -      | -      | -      | -      | -     |
| Sanitary Sewer System                 | -                      | -               | -      | -      | -      | -      | -     |
| Chilled Water System                  | -                      | -               | -      | -      | -      | -      | -     |
| Storm Water System                    | -                      | -               | -      | -      | -      | -      | -     |
| Energy Efficient Equipment            | -                      | -               | -      | -      | -      | -      | -     |
| <b>Subtotal: Basic Const. Costs</b>   | -                      | -               | -      | -      | -      | -      | -     |
| <b>Other Project Costs</b>            |                        |                 |        |        |        |        |       |
| Land / existing facility acquisition  | -                      | -               | -      | -      | -      | -      | -     |
| Professional Fees                     | -                      | -               | -      | -      | -      | -      | -     |
| Fire Marshall Fees                    | -                      | -               | -      | -      | -      | -      | -     |
| Inspection Services                   | -                      | -               | -      | -      | -      | -      | -     |
| Insurance Consultant                  | -                      | -               | -      | -      | -      | -      | -     |
| Surveys & Tests                       | -                      | -               | -      | -      | -      | -      | -     |
| Permit / Impact / Environmental Fees  | -                      | -               | -      | -      | -      | -      | -     |
| Artwork                               | -                      | -               | -      | -      | -      | -      | -     |
| Moveable Furnishings & Equipment      | -                      | -               | -      | -      | -      | -      | -     |
| Project Contingency                   | -                      | -               | -      | -      | -      | -      | -     |
| <b>Subtotal: Other Project Costs</b>  | -                      | -               | -      | -      | -      | -      | -     |
| <b>Total Project Cost:</b>            | -                      | -               | -      | -      | -      | -      | -     |

**PROJECT FUNDING**

| Funding Received to Date (all sources) |    |        | Projected Supplemental Funding |       | Projected PECO Requests |                          | Total Project Cost                           |
|--|----|--------|--------------------------------|-------|-------------------------|--------------------------|--|
| Source                                 | FY | Amount | Source                         | FY    | Amount                  | Amount                   |  |
|  |    |        | Auxiliaries                    | 25-26 | 20,000,000              | 25-26<br>26-27           | Should equal <i>Total Project Cost</i> above |
|  |    |        |                                |       |                         | 40,000,000<br>40,000,000 |  |
|  |    | -      |                                |       | 20,000,000              | 80,000,000               | 100,000,000                                  |

State University System  
5-Year Capital Improvement Plan (CIP)  
FY 2024-25 through 2028-29

## PECO Project Detail

University: University of Florida Priority #: 2  
 Project Name: UF Student Experience Center  
 Project Address: UF Main Campus

### PROJECT NARRATIVE

The University of Florida Welcome Center is often the first impression for many future gators and their families. As UF has grown, the current Welcome Center does not meet the needs for our gator families. There is more demand for tours than they have the capacity to provide, which has created a month's long waiting list.

The new UF Student Experience Center is the first access point for visitors and will be easily accessible, exceed the expectations of our guests and project the image of the Gator spirit that campus and alumni embrace. It will have a large welcoming entry, large auditorium for welcoming tours for interested families, a mock residence hall room for families to tour, offices and small break out spaces for families to meet with admissions and financial aid. The center will be a visual centerpiece of UF that is interactive and innovative and tells the story of the student experience from academics to student life to athletics to career connections. In short, the new building will provide a curated experiences which will leave an impactful introduction of the University of Florida.

### RESERVE ESCROW PLAN

|                           | Renovation/Remodeling Projects<br>(1% per s. 1001.706(12)(c) F.S.)                            | New Construction Projects<br>(2% per Board Regulation 14.002) |
|---------------------------|---|---|
| Estimated Bldg Value:     | \$ -  | \$ 17,000,000   |
| Value Basis/Source:       | Total construction cost or insurable value, whichever is greater, per Board Regulation 14.002 |   |
| Estimated 1st Yr Deposit: | \$ -  | \$ 340,000  |
| Funding Source:           |   |   |
| Comments:                 |   |   |

### BUILDING SPACE DESCRIPTION (account for all building space below)

| Space Type<br>(per FICM)          | Net Sq. Ft.<br>(NSF) | Net-to-Gross         |                        | Unit Cost *<br>(per GSF) | Building Cost |
|-----------------------------------|----------------------|----------------------|------------------------|--------------------------|---------------|
|                                   |                      | Conversion<br>Factor | Gross Sq. Ft.<br>(GSF) |                          |               |
| <b>NEW CONSTRUCTION</b>           |                      |                      |                        |                          |               |
| Office                            | 1,500                | 1.6                  | 2,400                  | 375                      | 900,000       |
| Auditorium/Exhibition             | 7,000                | 1.6                  | 11,200                 | 600                      | 6,720,000     |
| Campus Support Services           | 1,100                | 1.6                  | 1,760                  | 300                      | 528,000       |
|                                   | -                    |                      | -                      |                          | -             |
|                                   | -                    |                      | -                      |                          | -             |
|                                   | -                    |                      | -                      |                          | -             |
|                                   | -                    |                      | -                      |                          | -             |
|                                   | -                    |                      | -                      |                          | -             |
|                                   | -                    |                      | -                      |                          | -             |
| Subtotal NASF:                    | 9,600                |                      | 15,360                 |                          | 8,148,000     |
| 'Other Assignable' E&G Space      | -                    |                      | -                      |                          | -             |
| Other Non-E&G Budget Entity Space | 600                  | 1                    | 600                    | 500                      | 300,000       |
| Total:                            | 10,200               |                      | 15,960                 |                          | 8,448,000     |

\* Apply Unit Cost to total GSF based on Space Type

| REMODELING / RENOVATION           |               | Remodeling Projects <b>Only</b> |                  |
|-----------------------------------|---------------|---------------------------------|------------------|
|                                   |               | BEFORE                          | AFTER            |
|                                   | -             | -                               | -                |
|                                   | -             | -                               | -                |
|                                   | -             | -                               | -                |
|                                   | -             | -                               | -                |
|                                   | -             | -                               | -                |
|                                   | -             | -                               | -                |
|                                   | -             | -                               | -                |
|                                   | -             | -                               | -                |
|                                   | -             | -                               | -                |
| Subtotal NASF:                    | -             | -                               | -                |
| 'Other Assignable' E&G Space      | -             | -                               | -                |
| Other Non-E&G Budget Entity Space | -             | -                               | -                |
| Total:                            | -             | -                               | -                |
| <b>Grand Total:</b>               | <b>10,200</b> | <b>15,960</b>                   | <b>8,448,000</b> |

**PROJECT COMPONENT COSTS & PROJECTIONS**

|                                      | Costs Incurred to Date | Projected Costs   |        |        |        |        | Total             |
|--------------------------------------|------------------------|-------------------|--------|--------|--------|--------|-------------------|
|                                      |                        | Year 1            | Year 2 | Year 3 | Year 4 | Year 5 |                   |
| <b>Basic Construction Costs</b>      |                        |                   |        |        |        |        |                   |
| Building Cost (from above)           | -                      | 8,448,000         | -      | -      | -      | -      | 8,448,000         |
| Environmental Impacts/Mitigation     | -                      | -                 | -      | -      | -      | -      | -                 |
| Site Preparation                     | -                      | 70,000            | -      | -      | -      | -      | 70,000            |
| Landscape / Irrigation               | -                      | 150,000           | -      | -      | -      | -      | 150,000           |
| Plaza / Walks                        | -                      | 150,000           | -      | -      | -      | -      | 150,000           |
| Roadway Improvements                 | -                      | 75,000            | -      | -      | -      | -      | 75,000            |
| Parking : 5 spaces                   | -                      | 75,000            | -      | -      | -      | -      | 75,000            |
| Telecommunication                    | -                      | 220,000           | -      | -      | -      | -      | 220,000           |
| Electrical Service                   | -                      | 85,000            | -      | -      | -      | -      | 85,000            |
| Water Distribution                   | -                      | 75,000            | -      | -      | -      | -      | 75,000            |
| Sanitary Sewer System                | -                      | 90,000            | -      | -      | -      | -      | 90,000            |
| Chilled Water System                 | -                      | 150,000           | -      | -      | -      | -      | 150,000           |
| Storm Water System                   | -                      | 75,000            | -      | -      | -      | -      | 75,000            |
| Energy Efficient Equipment           | -                      | -                 | -      | -      | -      | -      | -                 |
| <b>Subtotal: Basic Const. Costs</b>  | -                      | <b>9,663,000</b>  | -      | -      | -      | -      | <b>9,663,000</b>  |
| <b>Other Project Costs</b>           |                        |                   |        |        |        |        |                   |
| Land / existing facility acquisition | -                      | -                 | -      | -      | -      | -      | -                 |
| Professional Fees                    | -                      | 1,150,000         | -      | -      | -      | -      | 1,150,000         |
| Audio Visual                         | -                      | 2,000,000         | -      | -      | -      | -      | 2,000,000         |
| Inspection Services                  | -                      | 45,000            | -      | -      | -      | -      | 45,000            |
| Insurance Consultant                 | -                      | 5,000             | -      | -      | -      | -      | 5,000             |
| Surveys & Tests                      | -                      | 40,000            | -      | -      | -      | -      | 40,000            |
| Permit / Impact / Environmental Fees | -                      | 210,000           | -      | -      | -      | -      | 210,000           |
| Artwork                              | -                      | 50,000            | -      | -      | -      | -      | 50,000            |
| Moveable Furnishings & Equipment     | -                      | 1,650,000         | -      | -      | -      | -      | 1,650,000         |
| Project Contingency                  | -                      | 2,187,000         | -      | -      | -      | -      | 2,187,000         |
| <b>Subtotal: Other Project Costs</b> | -                      | <b>7,337,000</b>  | -      | -      | -      | -      | <b>7,337,000</b>  |
| <b>Total Project Cost:</b>           | -                      | <b>17,000,000</b> | -      | -      | -      | -      | <b>17,000,000</b> |

**PROJECT FUNDING**

| Funding Received to Date (all sources) |    |        | Projected Supplemental Funding |    |        | Projected PECO Requests |                   | Total Project Cost                    |
|--|----|--------|--------------------------------|----|--------|-------------------------|-------------------|---------------------------------------|
| Source                                 | FY | Amount | Source                         | FY | Amount | FY                      | Amount            |                                       |
|  |    |        |                                |    |        | 24-25                   | 8,500,000         | Should equal Total Project Cost above |
|  |    |        |                                |    |        | 25-26                   | 8,500,000         |                                       |
|  |    | -      |                                |    | -      |                         | <b>17,000,000</b> | <b>17,000,000</b>                     |



|                                      | to Date | Year 1     | Year 2     | Year 3 | Year 4 | Year 5 | Total             |
|--------------------------------------|---------|------------|------------|--------|--------|--------|-------------------|
| <b>Basic Construction Costs</b>      |         |            |            |        |        |        |                   |
| Building Cost (from above)           | -       | 12,018,000 | 12,018,000 | -      | -      | -      | 24,036,000        |
| Environmental Impacts/Mitigation     | -       | 2,000,000  | 2,000,000  | -      | -      | -      | 4,000,000         |
| Site Preparation                     | -       | 64,000     | -          | -      | -      | -      | 64,000            |
| Landscape / Irrigation               | -       | 50,000     | 200,000    | -      | -      | -      | 250,000           |
| Plaza / Walks                        | -       | -          | 100,000    | -      | -      | -      | 100,000           |
| Roadway Improvements                 | -       | -          | 100,000    | -      | -      | -      | 100,000           |
| Parking : 0 spaces                   | -       | -          | -          | -      | -      | -      | -                 |
| Telecommunication                    | -       | 500,000    | 200,000    | -      | -      | -      | 700,000           |
| Electrical Service                   | -       | 250,000    | 250,000    | -      | -      | -      | 500,000           |
| Water Distribution                   | -       | 300,000    | 300,000    | -      | -      | -      | 600,000           |
| Sanitary Sewer System                | -       | 250,000    | 250,000    | -      | -      | -      | 500,000           |
| Chilled Water System                 | -       | 500,000    | 500,000    | -      | -      | -      | 1,000,000         |
| Storm Water System                   | -       | 350,000    | 300,000    | -      | -      | -      | 650,000           |
| Energy Efficient Equipment           | -       | 500,000    | 300,000    | -      | -      | -      | 800,000           |
| <b>Subtotal: Basic Const. Costs</b>  | -       | 16,782,000 | 16,518,000 | -      | -      | -      | <b>33,300,000</b> |
| <b>Other Project Costs</b>           |         |            |            |        |        |        |                   |
| Land / existing facility acquisition | -       | -          | -          | -      | -      | -      | -                 |
| Professional Fees                    | -       | 2,500,000  | 2,200,000  | -      | -      | -      | 4,700,000         |
| Fire Marshall Fees                   | -       | -          | -          | -      | -      | -      | -                 |
| Inspection Services                  | -       | 75,000     | 55,000     | -      | -      | -      | 130,000           |
| Insurance Consultant                 | -       | 10,000     | 10,000     | -      | -      | -      | 20,000            |
| Surveys & Tests                      | -       | 100,000    | 50,000     | -      | -      | -      | 150,000           |
| Permit / Impact / Environmental Fees | -       | 100,000    | -          | -      | -      | -      | 100,000           |
| Artwork                              | -       | -          | 100,000    | -      | -      | -      | 100,000           |
| Moveable Furnishings & Equipment     | -       | 1,000,000  | 1,900,000  | -      | -      | -      | 2,900,000         |
| Project Contingency                  | -       | 2,800,000  | 2,800,000  | -      | -      | -      | 5,600,000         |
| <b>Subtotal: Other Project Costs</b> | -       | 6,585,000  | 7,115,000  | -      | -      | -      | <b>13,700,000</b> |
| <b>Total Project Cost:</b>           | -       | 23,367,000 | 23,633,000 | -      | -      | -      | <b>47,000,000</b> |

#### PROJECT FUNDING

| Funding Received to Date (all sources) |       |                   | Projected Supplemental Funding |    |        | Projected PECO Requests |                   | Total Project Cost                    |
|--|-------|-------------------|--------------------------------|----|--------|-------------------------|-------------------|---------------------------------------|
| Source                                 | FY    | Amount            | Source                         | FY | Amount | FY                      | Amount            |                                       |
| PECO                                   | 23-24 | 20,000,000        |                                |    | -      | 24-25                   | 27,000,000        | Should equal Total Project Cost above |
|  |       | -                 |                                |    | -      |                         | -                 |                                       |
|  |       | -                 |                                |    | -      |                         | -                 |                                       |
|  |       | -                 |                                |    | -      |                         | -                 |                                       |
|  |       | -                 |                                |    | -      |                         | -                 |                                       |
|  |       | <b>20,000,000</b> |                                |    | -      |                         | <b>27,000,000</b> | <b>47,000,000</b>                     |



## PECO Project Detail

University: University of Florida  
 Project Name: UF Microbiology and Cell Sciences Teaching Lab Addition  
 Project Address: UF Main Campus

Priority #: 4

### PROJECT NARRATIVE

This request is to build 4,500 net square feet of new space to double the available teaching laboratory space at the Microbiology and Cell Science building on the main campus at the University of Florida. The project will add 72 seats to the teaching laboratory inventory. This is a state-owned building maintained by UF/IFAS.

Located on the southwest side of campus near the corner of Museum Road and Hull Road, the Microbiology and Cell Science building (UF Bldg. 981) is home to teaching and research programs. The amount of space to teach students in teaching laboratories is limited, and the demand for access to classes in microbiology is restricted by the available space. Students find the classes full after about the first 15 minutes of registration, causing them to have to delay taking this class which is required for biological science majors, nursing, and pre-professional preparation for medicine, dentistry, pharmacy, and veterinary medicine.

### RESERVE ESCROW PLAN

|                           | Renovation/Remodeling Projects<br><small>(1% per s. 1001.706(12)(c) F.S.)</small> | New Construction Projects<br><small>(2% per Board Regulation 14.002)</small> |
|---------------------------|---|--|
| Estimated Bldg Value:     | \$ 12,051,000   |  |
| Value Basis/Source:       |   | Total construction cost or insurable value, whichever is greater.            |
| Estimated 1st Yr Deposit: | \$ 120,510  | \$ -   |
| Funding Source:           |   |  |
| Comments:                 |   |  |

### BUILDING SPACE DESCRIPTION (account for all building space below)

| Space Type<br><small>(per FICM)</small>                           | Net Sq. Ft.<br><small>(NSF)</small> | Net-to-Gross         |  | Gross Sq. Ft.<br><small>(GSF)</small> | Unit Cost *<br><small>(per GSF)</small> | Building Cost |        |       |
|---|-------------------------------------|----------------------|--|---------------------------------------|---|---------------|--------|-------|
|   |                                     | Conversion<br>Factor |  |                                       |   |               | BEFORE | AFTER |
| <b>NEW CONSTRUCTION</b>   |                                     |                      |  |                                       |   |               |        |       |
| Teaching Lab  | 3,400                               | 1.4                  |  | 4,760                                 | 550                                     | 2,618,000     |        |       |
| Campus Support Services   | 1,100                               | 1.2                  |  | 1,320                                 | 450                                     | 594,000       |        |       |
|   | -                                   |                      |  | -                                     |   | -             |        |       |
|   | -                                   |                      |  | -                                     |   | -             |        |       |
|   | -                                   |                      |  | -                                     |   | -             |        |       |
|   | -                                   |                      |  | -                                     |   | -             |        |       |
|   | -                                   |                      |  | -                                     |   | -             |        |       |
|   | -                                   |                      |  | -                                     |   | -             |        |       |
| Subtotal NASF:  | 4,500                               |                      |  | 6,080                                 |   | -             |        |       |
| Other   | -                                   |                      |  | -                                     |   | -             |        |       |
| Total:  | 4,500                               |                      |  | 6,080                                 |   | 3,212,000     |        |       |
| <small>* Apply Unit Cost to total GSF based on Space Type</small> |                                     |                      |  |                                       |   |               |        |       |
| <b>REMODELING / RENOVATION</b>                                    |                                     |                      |  |                                       |   |               |        |       |
|   | -                                   |                      |  | -                                     |   | -             |        |       |
|   | -                                   |                      |  | -                                     |   | -             |        |       |
|   | -                                   |                      |  | -                                     |   | -             |        |       |
|   | -                                   |                      |  | -                                     |   | -             |        |       |
|   | -                                   |                      |  | -                                     |   | -             |        |       |
|   | -                                   |                      |  | -                                     |   | -             |        |       |
|   | -                                   |                      |  | -                                     |   | -             |        |       |
|   | -                                   |                      |  | -                                     |   | -             |        |       |
| Subtotal NASF:  | -                                   |                      |  | -                                     |   | -             |        |       |
| Other   | -                                   |                      |  | -                                     |   | -             |        |       |
| Total:  | -                                   |                      |  | -                                     |   | -             |        |       |
| Grand Total:  | 4,500                               |                      |  | 6,080                                 |   | 3,212,000     |        |       |

### PROJECT COMPONENT COSTS & PROJECTIONS

| Costs Incurred | Projected Costs |
|----------------|-----------------|
|                |                 |

|                                      | to Date | Year 1           | Year 2 | Year 3 | Year 4 | Year 5 | Total            |
|--------------------------------------|---------|------------------|--------|--------|--------|--------|------------------|
| <b>Basic Construction Costs</b>      |         |                  |        |        |        |        |                  |
| Building Cost (from above)           | -       | 3,212,000        | -      | -      | -      | -      | 3,212,000        |
| Environmental Impacts/Mitigation     | -       | -                | -      | -      | -      | -      | -                |
| Site Preparation                     | -       | 35,000           | -      | -      | -      | -      | 35,000           |
| Landscape / Irrigation               | -       | 18,000           | -      | -      | -      | -      | 18,000           |
| Plaza / Walks                        | -       | 15,000           | -      | -      | -      | -      | 15,000           |
| Roadway Improvements                 | -       | -                | -      | -      | -      | -      | -                |
| Parking : 0 spaces                   | -       | -                | -      | -      | -      | -      | -                |
| Telecommunication                    | -       | 90,000           | -      | -      | -      | -      | 90,000           |
| Electrical Service                   | -       | 60,000           | -      | -      | -      | -      | 60,000           |
| Water Distribution                   | -       | 50,000           | -      | -      | -      | -      | 50,000           |
| Sanitary Sewer System                | -       | 45,000           | -      | -      | -      | -      | 45,000           |
| Chilled Water System                 | -       | 75,000           | -      | -      | -      | -      | 75,000           |
| Storm Water System                   | -       | 60,000           | -      | -      | -      | -      | 60,000           |
| Energy Efficient Equipment           | -       | 95,000           | -      | -      | -      | -      | 95,000           |
| <b>Subtotal: Basic Const. Costs</b>  | -       | <b>3,755,000</b> | -      | -      | -      | -      | <b>3,755,000</b> |
| <b>Other Project Costs</b>           |         |                  |        |        |        |        |                  |
| Land / existing facility acquisition | -       | -                | -      | -      | -      | -      | -                |
| Professional Fees                    | -       | 500,000          | -      | -      | -      | -      | 500,000          |
| Fire Marshall Fees                   | -       | -                | -      | -      | -      | -      | -                |
| Inspection Services                  | -       | 20,000           | -      | -      | -      | -      | 20,000           |
| Insurance Consultant                 | -       | 3,000            | -      | -      | -      | -      | 3,000            |
| Surveys & Tests                      | -       | 40,000           | -      | -      | -      | -      | 40,000           |
| Permit / Impact / Environmental Fees | -       | 100,000          | -      | -      | -      | -      | 100,000          |
| Artwork                              | -       | 22,000           | -      | -      | -      | -      | 22,000           |
| Moveable Furnishings & Equipment     | -       | 460,000          | -      | -      | -      | -      | 460,000          |
| Project Contingency                  | -       | 600,000          | -      | -      | -      | -      | 600,000          |
| <b>Subtotal: Other Project Costs</b> | -       | <b>1,745,000</b> | -      | -      | -      | -      | <b>1,745,000</b> |
| <b>Total Project Cost:</b>           | -       | <b>5,500,000</b> | -      | -      | -      | -      | <b>5,500,000</b> |

#### PROJECT FUNDING

| Funding Received to Date (all sources) |       |                  | Projected Supplemental Funding |    |        | Projected PECO Requests |                  | Total Project Cost                    |
|--|-------|------------------|--------------------------------|----|--------|-------------------------|------------------|---------------------------------------|
| Source                                 | FY    | Amount           | Source                         | FY | Amount | FY                      | Amount           |                                       |
| PECO                                   | 23-24 | 2,750,000        |                                |    | -      | 24-25                   | 2,750,000        | Should equal Total Project Cost above |
|  |       |                  |                                |    | -      |                         |                  |                                       |
|  |       |                  |                                |    | -      |                         |                  |                                       |
|  |       |                  |                                |    | -      |                         |                  |                                       |
|  |       | <b>2,750,000</b> |                                |    |        |                         | <b>2,750,000</b> | <b>5,500,000</b>                      |

State University System  
5-Year Capital Improvement Plan (CIP)  
FY 2024-25 through 2028-29

## PECO Project Detail

University: University of Florida  
 Project Name: Jacksonville Health & Financial Tech Graduate Education Center  
 Project Address: Jacksonville, Florida

Priority #: 5

### PROJECT NARRATIVE

Continuing UF's longstanding commitment to Northeast Florida, the UF Jacksonville Center for Health and Financial Technology will offer world-class, interdisciplinary, professional graduate programs facilitating the creation of a state pipeline of highly trained students and enabling the connection of invention/innovation through solutions-based programs developed by UF Health and UF's colleges of Business and Engineering, which will boost core competencies in biomedical technology and AI, patient quality and safety, health care admin, fintech, and more. Funding to support the initial phase of development of urban core location in downtown Jacksonville potentially including classroom, multi-use space, student center, and related facilities. State funds could be used for planning, design, construction, lease payments, and other eligible purposes. Private and local funds will be used to match the state's investment.

### RESERVE ESCROW PLAN

|                           | Renovation/Remodeling Projects<br>(1% per s. 1001.706(12)(c) F.S.)                            | New Construction Projects<br>(2% per Board Regulation 14.002) |
|---------------------------|---|---|
| Estimated Bldg Value:     | \$ -  | \$ 250,000,000  |
| Value Basis/Source:       | Total construction cost or insurable value, whichever is greater, per Board Regulation 14.002 |   |
| Estimated 1st Yr Deposit: | \$ -  | \$ 5,000,000  |
| Funding Source:           |   |   |
| Comments:                 |   |   |

### BUILDING SPACE DESCRIPTION (account for all building space below)

| Space Type<br>(per FICM)                           | Net-to-Gross         |                      |                        | Unit Cost *<br>(per GSF) | Building Cost                   |
|--|----------------------|----------------------|------------------------|--------------------------|---------------------------------|
|  | Net Sq. Ft.<br>(NSF) | Conversion<br>Factor | Gross Sq. Ft.<br>(GSF) |                          |                                 |
| <b>NEW CONSTRUCTION</b>                            |                      |                      |                        |                          |                                 |
| Classroom  | 50,000               | 1.7                  | 85,000                 | 750                      | 63,750,000                      |
| Office   | 24,000               | 1.7                  | 40,800                 | 400                      | 16,320,000                      |
| Auditorium/Exhibition                              | 15,000               | 1.7                  | 25,500                 | 650                      | 16,575,000                      |
| Instructional Media                                | 5,000                | 1.7                  | 8,500                  | 450                      | 3,825,000                       |
| Campus Support Services                            | 8,000                | 1.7                  | 13,600                 | 350                      | 4,760,000                       |
| Teaching Lab                                       | 25,000               | 1.7                  | 42,500                 | 850                      | 36,125,000                      |
| Study  | 10,000               | 1.7                  | 17,000                 | 450                      | 7,650,000                       |
|  | -                    |                      | -                      |                          | -                               |
|  | -                    |                      | -                      |                          | -                               |
| Subtotal NASF:                                     | 137,000              |                      | 232,900                |                          | 149,005,000                     |
| 'Other Assignable' E&G Space                       | -                    |                      | -                      |                          | -                               |
| Other Non-E&G Budget Entity Space                  | -                    |                      | -                      |                          | -                               |
| Total:   | 137,000              |                      | 232,900                |                          | 149,005,000                     |
| * Apply Unit Cost to total GSF based on Space Type |                      |                      |                        |                          |                                 |
| <b>REMODELING / RENOVATION</b>                     |                      |                      |                        |                          |                                 |
|  |                      |                      |                        |                          | Remodeling Projects <b>Only</b> |
|  |                      |                      |                        |                          | <b>BEFORE      AFTER</b>        |
|  | -                    |                      | -                      |                          | -      -                        |
|  | -                    |                      | -                      |                          | -      -                        |
|  | -                    |                      | -                      |                          | -      -                        |
|  | -                    |                      | -                      |                          | -      -                        |
|  | -                    |                      | -                      |                          | -      -                        |
|  | -                    |                      | -                      |                          | -      -                        |
|  | -                    |                      | -                      |                          | -      -                        |
|  | -                    |                      | -                      |                          | -      -                        |
|  | -                    |                      | -                      |                          | -      -                        |
|  | -                    |                      | -                      |                          | -      -                        |
| Subtotal NASF:                                     | -                    |                      | -                      |                          | -      -                        |
| 'Other Assignable' E&G Space                       | -                    |                      | -                      |                          | -      -                        |
| Other Non-E&G Budget Entity Space                  | -                    |                      | -                      |                          | -      -                        |
| Total:   | -                    |                      | -                      |                          | -      -                        |
| <b>Grand Total:</b>                                | <b>137,000</b>       |                      | <b>232,900</b>         |                          | <b>149,005,000</b>              |

**PROJECT COMPONENT COSTS & PROJECTIONS**

|                                      | Costs Incurred to Date | Projected Costs |          |          |          |          | Total              |
|--------------------------------------|------------------------|-----------------|----------|----------|----------|----------|--------------------|
|                                      |                        | Year 1          | Year 2   | Year 3   | Year 4   | Year 5   |                    |
| <b>Basic Construction Costs</b>      |                        |                 |          |          |          |          |                    |
| Building Cost (from above)           | 149,005,000            | -               | -        | -        | -        | -        | 149,005,000        |
| Environmental Impacts/Mitigation     | 1,200,000              | -               | -        | -        | -        | -        | 1,200,000          |
| Site Preparation                     | 3,500,000              | -               | -        | -        | -        | -        | 3,500,000          |
| Landscape / Irrigation               | 560,000                | -               | -        | -        | -        | -        | 560,000            |
| Plaza / Walks                        | 380,000                | -               | -        | -        | -        | -        | 380,000            |
| Roadway Improvements                 | 3,200,000              | -               | -        | -        | -        | -        | 3,200,000          |
| Parking : 400 spaces                 | 14,000,000             | -               | -        | -        | -        | -        | 14,000,000         |
| Telecommunication                    | 5,568,000              | -               | -        | -        | -        | -        | 5,568,000          |
| Electrical Service                   | 5,200,000              | -               | -        | -        | -        | -        | 5,200,000          |
| Water Distribution                   | 2,500,000              | -               | -        | -        | -        | -        | 2,500,000          |
| Sanitary Sewer System                | 2,500,000              | -               | -        | -        | -        | -        | 2,500,000          |
| Chilled Water System                 | 6,800,000              | -               | -        | -        | -        | -        | 6,800,000          |
| Storm Water System                   | 2,200,000              | -               | -        | -        | -        | -        | 2,200,000          |
| Energy Efficient Equipment           | -                      | -               | -        | -        | -        | -        | -                  |
| <b>Subtotal: Basic Const. Costs</b>  | <b>196,613,000</b>     | <b>-</b>        | <b>-</b> | <b>-</b> | <b>-</b> | <b>-</b> | <b>196,613,000</b> |
| <b>Other Project Costs</b>           |                        |                 |          |          |          |          |                    |
| Land / existing facility acquisition | -                      | -               | -        | -        | -        | -        | -                  |
| Professional Fees                    | 2,500,000              | -               | -        | -        | -        | -        | 2,500,000          |
| Fire Marshall Fees                   | -                      | -               | -        | -        | -        | -        | -                  |
| Inspection Services                  | 578,000                | -               | -        | -        | -        | -        | 578,000            |
| Insurance Consultant                 | 65,000                 | -               | -        | -        | -        | -        | 65,000             |
| Surveys & Tests                      | 550,000                | -               | -        | -        | -        | -        | 550,000            |
| Permit / Impact / Environmental Fees | 450,000                | -               | -        | -        | -        | -        | 450,000            |
| Artwork                              | 100,000                | -               | -        | -        | -        | -        | 100,000            |
| Moveable Furnishings & Equipment     | 15,720,000             | -               | -        | -        | -        | -        | 15,720,000         |
| Project Contingency                  | 33,424,000             | -               | -        | -        | -        | -        | 33,424,000         |
| <b>Subtotal: Other Project Costs</b> | <b>53,387,000</b>      | <b>-</b>        | <b>-</b> | <b>-</b> | <b>-</b> | <b>-</b> | <b>53,387,000</b>  |
| <b>Total Project Cost:</b>           | <b>250,000,000</b>     | <b>-</b>        | <b>-</b> | <b>-</b> | <b>-</b> | <b>-</b> | <b>250,000,000</b> |

**PROJECT FUNDING**

| Funding Received to Date (all sources) |       |                   | Projected Supplemental Funding |       |                    | Projected PECO Requests |            | Total Project Cost                    |
|--|-------|-------------------|--------------------------------|-------|--------------------|-------------------------|------------|---------------------------------------|
| Source                                 | FY    | Amount            | Source                         | FY    | Amount             | FY                      | Amount     |                                       |
| PECO                                   | 23-24 | 75,000,000        | Others                         | 23-24 | 100,000,000        | 24-25                   | 75,000,000 | Should equal Total Project Cost above |
|  |       | <b>75,000,000</b> |                                |       | <b>100,000,000</b> |                         |            |                                       |

## PECO Project Detail

University: University of Florida  
 Project Name: Dental Science Building  
 Project Address: UF Main Campus

Priority #: 6

### PROJECT NARRATIVE

The Dental School is currently housed in the Dental Science Building. This building does not meet the needs of the College and the College needs new space to meet their educational requirements and continue to rise in the rankings nationally. The addition will provide a new welcoming space; clinical teaching, clinical student, and clinical resident space; Faculty Practice clinics; clinical support; teaching labs; simulation labs; Classrooms; School amenities; administration offices; faculty offices; Oral and Maxillofacial Surgery Clinic; and research space. In addition, it will remove a parking lot and replace it with 400 parking spaces in a structured parking garage under the building. This will enhance the accessibility for physically challenged patients and visitors by proximity and providing a connected covered parking option for when it is raining.

### RESERVE ESCROW PLAN

|                           | Renovation/Remodeling Projects<br><small>(1% per s. 1001.706(12)(c) F.S.)</small> | New Construction Projects<br><small>(2% per Board Regulation 14.002)</small> |
|---------------------------|---|--|
| Estimated Bldg Value:     | \$ -  | \$ 235,000,000   |
| Value Basis/Source:       |   | Total construction cost or insurable value, whichever is greater.            |
| Estimated 1st Yr Deposit: | \$ -  | \$ 4,700,000   |
| Funding Source:           |   |  |
| Comments:                 |   |  |

### BUILDING SPACE DESCRIPTION (account for all building space below)

| Space Type<br><small>(per FICM)</small> | Net Sq. Ft.<br><small>(NSF)</small> | Net-to-Gross         |                                       | Unit Cost *<br><small>(per GSF)</small> | Building Cost |
|---|-------------------------------------|----------------------|---------------------------------------|---|---------------|
|   |                                     | Conversion<br>Factor | Gross Sq. Ft.<br><small>(GSF)</small> |   |               |
| <b>NEW CONSTRUCTION</b>                 |                                     |                      |                                       |   |               |
| Classroom                               | 14,300                              | 1.5                  | 21,450                                | 462                                     | 9,909,900     |
| Teaching Lab                            | 56,300                              | 1.6                  | 90,080                                | 587                                     | 52,876,960    |
| Research Lab                            | 36,700                              | 1.6                  | 58,720                                | 545                                     | 32,002,400    |
| Office                                  | 45,000                              | 1.5                  | 67,500                                | 466                                     | 31,455,000    |
| Study                                   | 7,600                               | 1.5                  | 11,400                                | 445                                     | 5,073,000     |
| Campus Support Services                 | 4,000                               | 1                    | 4,000                                 | 435                                     | 1,740,000     |
|   | -                                   |                      | -                                     |   | -             |
|   | -                                   |                      | -                                     |   | -             |
|   | -                                   |                      | -                                     |   | -             |
| Subtotal NASF:                          | -                                   |                      | -                                     |   | -             |
| Other                                   | -                                   |                      | -                                     |   | -             |
| Total:                                  | 163,900                             |                      | 253,150                               |   | 133,057,260   |

\* Apply Unit Cost to total GSF based on Space Type

| REMODELING / RENOVATION |         |  |         |  | Remodeling Projects <b>Only</b> |       |
|-------------------------|---------|--|---------|--|---------------------------------|-------|
|                         |         |  |         |  | BEFORE                          | AFTER |
|                         | -       |  | -       |  | -                               | -     |
|                         | -       |  | -       |  | -                               | -     |
|                         | -       |  | -       |  | -                               | -     |
|                         | -       |  | -       |  | -                               | -     |
|                         | -       |  | -       |  | -                               | -     |
|                         | -       |  | -       |  | -                               | -     |
|                         | -       |  | -       |  | -                               | -     |
|                         | -       |  | -       |  | -                               | -     |
| Subtotal NASF:          | -       |  | -       |  | -                               | -     |
| Other                   | -       |  | -       |  | -                               | -     |
| Total:                  | -       |  | -       |  | -                               | -     |
| Grand Total:            | 163,900 |  | 253,150 |  | 133,057,260                     |       |

### PROJECT COMPONENT COSTS & PROJECTIONS

| Costs Incurred | Projected Costs |
|----------------|-----------------|
|----------------|-----------------|

|                                      | to Date | Year 1     | Year 2      | Year 3      | Year 4 | Year 5 | Total              |
|--------------------------------------|---------|------------|-------------|-------------|--------|--------|--------------------|
| <b>Basic Construction Costs</b>      |         |            |             |             |        |        |                    |
| Building Cost (from above)           | -       | -          | 75,000,000  | 58,057,260  | -      | -      | 133,057,260        |
| Environmental Impacts/Mitigation     | -       | 150,000    | -           | -           | -      | -      | 150,000            |
| Site Preparation                     | -       | 500,000    | -           | -           | -      | -      | 500,000            |
| Landscape / Irrigation               | -       | -          | -           | 100,000     | -      | -      | 100,000            |
| Plaza / Walks                        | -       | -          | 50,000      | 50,000      | -      | -      | 100,000            |
| Roadway Improvements                 | -       | -          | 150,000     | 450,000     | -      | -      | 600,000            |
| Parking : 400 spaces                 | -       | -          | 6,000,000   | 2,000,000   | -      | -      | 8,000,000          |
| Telecommunication                    | -       | 500,000    | 1,500,000   | 2,000,000   | -      | -      | 4,000,000          |
| Electrical Service                   | -       | 500,000    | 1,000,000   | 1,000,000   | -      | -      | 2,500,000          |
| Water Distribution                   | -       | 500,000    | 500,000     | 1,000,000   | -      | -      | 2,000,000          |
| Sanitary Sewer System                | -       | 500,000    | 1,500,000   | 1,000,000   | -      | -      | 3,000,000          |
| Chilled Water System                 | -       | 1,000,000  | 1,500,000   | 2,000,000   | -      | -      | 4,500,000          |
| Storm Water System                   | -       | 250,000    | 300,000     | 1,000,000   | -      | -      | 1,550,000          |
| Energy Efficient Equipment           | -       | -          | 5,000,000   | 9,795,000   | -      | -      | 14,795,000         |
| <b>Subtotal: Basic Const. Costs</b>  | -       | 3,900,000  | 92,500,000  | 78,452,260  | -      | -      | <b>174,852,260</b> |
| <b>Other Project Costs</b>           |         |            |             |             |        |        |                    |
| Land / existing facility acquisition | -       | -          | -           | -           | -      | -      | -                  |
| Professional Fees                    | -       | 5,500,000  | 8,000,000   | 6,900,000   | -      | -      | 20,400,000         |
| Fire Marshall Fees                   | -       | -          | -           | -           | -      | -      | -                  |
| Inspection Services                  | -       | 250,000    | 500,000     | 650,000     | -      | -      | 1,400,000          |
| Insurance Consultant                 | -       | 25,000     | -           | -           | -      | -      | 25,000             |
| Surveys & Tests                      | -       | 100,000    | 200,000     | 100,000     | -      | -      | 400,000            |
| Permit / Impact / Environmental Fees | -       | 300,000    | 300,000     | 50,000      | -      | -      | 650,000            |
| Artwork                              | -       | -          | -           | 100,000     | -      | -      | 100,000            |
| Moveable Furnishings & Equipment     | -       | -          | 3,000,000   | 5,000,000   | -      | -      | 8,000,000          |
| Project Contingency                  | -       | 5,000,000  | 8,000,000   | 16,172,740  | -      | -      | 29,172,740         |
| <b>Subtotal: Other Project Costs</b> | -       | 11,175,000 | 20,000,000  | 28,972,740  | -      | -      | <b>60,147,740</b>  |
| <b>Total Project Cost:</b>           | -       | 15,075,000 | 112,500,000 | 107,425,000 | -      | -      | <b>235,000,000</b> |

#### PROJECT FUNDING

| Funding Received to Date (all sources) |       |            | Projected Supplemental Funding |       |            | Projected PECO Requests |            | Total Project Cost                    |
|--|-------|------------|--------------------------------|-------|------------|-------------------------|------------|---------------------------------------|
| Source                                 | FY    | Amount     | Source                         | FY    | Amount     | FY                      | Amount     |                                       |
| Gen Rev                                | 22-23 | 58,300,000 | Others                         | 23-24 | 34,000,000 | 24-25                   | 29,305,130 | Should equal Total Project Cost above |
| PECO                                   | 23-24 | 30,694,870 | Foundation                     | 23-25 | 25,000,000 |                         |            |                                       |
| Deferred Maint                         | 22-23 | 10,000,000 | Donations/Gifts                | 23-25 | 47,700,000 |                         |            |                                       |
| <b>98,994,870</b>                      |       |            | <b>106,700,000</b>             |       |            | <b>29,305,130</b>       |            | <b>235,000,000</b>                    |

## PECO Project Detail

University: University of Florida  
 Project Name: Academic & Research Collaboration Center  
 Project Address: UF Main Campus

Priority #: 7

### PROJECT NARRATIVE

Originally built in 1953, the University House was the residence for the University President. As well as being a residence, the lower level of the house was used for events. In 2006 the house changed uses to strictly an event space. Since that time, the use of the space has been challenged with accessibility and appropriate size spaces for the types of functions needed. The existing building is a split level building with many steps to move from one area to another, which makes it problematic for anyone with mobility challenges as well as movement of services. The existing building also has outstanding maintenance needs, therefore the University is proposing to demolish the building and replace it with the Academic Research Center.

The University needs an Academic Research Center to serve as a supporting role to the preeminent research happening at the University of Florida. The Center will host small academic conferences, visiting research faculty presentations, and other events. The building will be used as an academic research center that will host conferences and events with different sized meeting rooms, wide corridors to display art, full catering kitchen and support offices. The Center will have technology to allow the conferences to be hybrid to share the research that occurs at UF with the wider international research community. The exterior space will need to be covered for exterior breakout and event space. The building site is approximately 8.5 acres and will include substantial site work – two new vehicular entry sequences, minimal parking and a covered drop-off will need to be included. The landscape is envisioned to be a park like setting where conference attendees, students, faculty, staff and visitors will want to visit. Also on the site will be a pavilion with restrooms, covered event space, and storage. It may have an outdoor kitchen for grilling. The new center should be barrier free and create a warm inviting atmosphere.

### RESERVE ESCROW PLAN

|                           | Renovation/Remodeling Projects<br>(1% per s. 1001.706(12)(c) F.S.) | New Construction Projects<br>(2% per Board Regulation 14.002)     |
|---------------------------|--|---|
| Estimated Bldg Value:     | \$ -   | \$ 22,000,000   |
| Value Basis/Source:       |  | Total construction cost or insurable value, whichever is greater. |
| Estimated 1st Yr Deposit: | \$ -   | \$ 440,000  |
| Funding Source:           |  |   |
| Comments:                 |  |   |

### BUILDING SPACE DESCRIPTION (account for all building space below)

| Space Type<br>(per FICM) | Net Sq. Ft.<br>(NSF) | Net-to-Gross         |                        | Unit Cost *<br>(per GSF) | Building Cost    |
|--------------------------|----------------------|----------------------|------------------------|--------------------------|------------------|
|                          |                      | Conversion<br>Factor | Gross Sq. Ft.<br>(GSF) |                          |                  |
| <b>NEW CONSTRUCTION</b>  |                      |                      |                        |                          |                  |
| Office                   | 345                  | 1.5                  | 518                    | 466                      | 241,155          |
| Auditorium/Exhibition    | 625                  | 1.5                  | 938                    | 535                      | 501,563          |
| Instructional Media      | 4,090                | 1.5                  | 6,135                  | 535                      | 3,282,225        |
| Study                    | 1,230                | 1.5                  | 1,845                  | 465                      | 857,925          |
| Campus Support Services  | 3,155                | 1.5                  | 4,733                  | 455                      | 2,153,288        |
|                          | -                    |                      | -                      |                          | -                |
|                          | -                    |                      | -                      |                          | -                |
|                          | -                    |                      | -                      |                          | -                |
|                          | -                    |                      | -                      |                          | -                |
| Subtotal NASF:           | 9,445                |                      | 14,168                 |                          | -                |
| Other                    | 1,050                | 1.5                  | 1,575                  | 600                      | 945,000          |
| <b>Total:</b>            | <b>10,495</b>        |                      | <b>15,743</b>          |                          | <b>7,981,155</b> |

\* Apply Unit Cost to total GSF based on Space Type

| REMODELING / RENOVATION |               |  |               |  | Remodeling Projects <b>Only</b> |       |
|-------------------------|---------------|--|---------------|--|---------------------------------|-------|
|                         |               |  |               |  | BEFORE                          | AFTER |
|                         |               |  |               |  | -                               | -     |
|                         |               |  |               |  | -                               | -     |
|                         |               |  |               |  | -                               | -     |
|                         |               |  |               |  | -                               | -     |
|                         |               |  |               |  | -                               | -     |
|                         |               |  |               |  | -                               | -     |
|                         |               |  |               |  | -                               | -     |
|                         |               |  |               |  | -                               | -     |
|                         |               |  |               |  | -                               | -     |
|                         |               |  |               |  | -                               | -     |
|                         |               |  |               |  | -                               | -     |
|                         |               |  |               |  | -                               | -     |
|                         |               |  |               |  | -                               | -     |
|                         |               |  |               |  | -                               | -     |
| Subtotal NASF:          |               |  |               |  | -                               | -     |
| Other                   |               |  |               |  | -                               | -     |
| <b>Total:</b>           |               |  |               |  | -                               | -     |
| <b>Grand Total:</b>     | <b>10,495</b> |  | <b>15,743</b> |  | <b>7,981,155</b>                |       |

### PROJECT COMPONENT COSTS & PROJECTIONS

| Costs Incurred | Projected Costs |
|----------------|-----------------|
|                |                 |

|                                      | to Date | Year 1            | Year 2 | Year 3 | Year 4 | Year 5 | Total             |
|--------------------------------------|---------|-------------------|--------|--------|--------|--------|-------------------|
| <b>Basic Construction Costs</b>      |         |                   |        |        |        |        |                   |
| Building Cost (from above)           | -       | 7,981,155         | -      | -      | -      | -      | 7,981,155         |
| Environmental Impacts/Mitigation     | -       | 350,000           | -      | -      | -      | -      | 350,000           |
| Site Preparation                     | -       | 500,000           | -      | -      | -      | -      | 500,000           |
| Landscape / Irrigation               | -       | 1,250,000         | -      | -      | -      | -      | 1,250,000         |
| Plaza / Walks                        | -       | 1,750,000         | -      | -      | -      | -      | 1,750,000         |
| Roadway Improvements                 | -       | 1,750,000         | -      | -      | -      | -      | 1,750,000         |
| Parking : 20 spaces                  | -       | 200,000           | -      | -      | -      | -      | 200,000           |
| Telecommunication                    | -       | 400,000           | -      | -      | -      | -      | 400,000           |
| Electrical Service                   | -       | 100,000           | -      | -      | -      | -      | 100,000           |
| Water Distribution                   | -       | 100,000           | -      | -      | -      | -      | 100,000           |
| Sanitary Sewer System                | -       | 100,000           | -      | -      | -      | -      | 100,000           |
| Chilled Water System                 | -       | 150,000           | -      | -      | -      | -      | 150,000           |
| Storm Water System                   | -       | 200,000           | -      | -      | -      | -      | 200,000           |
| Energy Efficient Equipment           | -       | 950,000           | -      | -      | -      | -      | 950,000           |
| <b>Subtotal: Basic Const. Costs</b>  | -       | <b>15,781,155</b> | -      | -      | -      | -      | <b>15,781,155</b> |
| <b>Other Project Costs</b>           |         |                   |        |        |        |        |                   |
| Land / existing facility acquisition | -       | -                 | -      | -      | -      | -      | -                 |
| Professional Fees                    | -       | 2,180,000         | -      | -      | -      | -      | 2,180,000         |
| Fire Marshall Fees                   | -       | -                 | -      | -      | -      | -      | -                 |
| Inspection Services                  | -       | 65,000            | -      | -      | -      | -      | 65,000            |
| Insurance Consultant                 | -       | 8,600             | -      | -      | -      | -      | 8,600             |
| Surveys & Tests                      | -       | 85,000            | -      | -      | -      | -      | 85,000            |
| Permit / Impact / Environmental Fees | -       | 250,000           | -      | -      | -      | -      | 250,000           |
| Artwork                              | -       | 85,000            | -      | -      | -      | -      | 85,000            |
| Moveable Furnishings & Equipment     | -       | 1,250,000         | -      | -      | -      | -      | 1,250,000         |
| Project Contingency                  | -       | 2,295,245         | -      | -      | -      | -      | 2,295,245         |
| <b>Subtotal: Other Project Costs</b> | -       | <b>6,218,845</b>  | -      | -      | -      | -      | <b>6,218,845</b>  |
| <b>Total Project Cost:</b>           | -       | <b>22,000,000</b> | -      | -      | -      | -      | <b>22,000,000</b> |

| <b>PROJECT FUNDING</b>                        |           |                   |                                       |           |               |                                |                   |  |
|---|-----------|-------------------|---------------------------------------|-----------|---------------|--------------------------------|-------------------|--|
| <b>Funding Received to Date (all sources)</b> |           |                   | <b>Projected Supplemental Funding</b> |           |               | <b>Projected PECO Requests</b> |                   | <b>Total Project Cost</b>                    |
| <b>Source</b>                                 | <b>FY</b> | <b>Amount</b>     | <b>Source</b>                         | <b>FY</b> | <b>Amount</b> | <b>FY</b>                      | <b>Amount</b>     |  |
| PECO  | 23-24     | 11,000,000        |                                       |           | -             | 24-25                          | 11,000,000        | Should equal <i>Total Project Cost</i> above |
|   |           |                   |                                       |           | -             |                                |                   |  |
|   |           |                   |                                       |           | -             |                                |                   |  |
|   |           |                   |                                       |           | -             |                                |                   |  |
|   |           | <b>11,000,000</b> |                                       |           | -             |                                | <b>11,000,000</b> | <b>22,000,000</b>                            |



## PECO Project Detail

University: University of Florida  
 Project Name: Music Building Addition, Renovation and Remodel  
 Project Address: 435 Newell Drive, Gainesville, FL 32611

Priority #: 8

### PROJECT NARRATIVE

The proposed project will provide for a 23,500 GSF addition to the Music Building. The current facility which was constructed in 1970 is in dire need of major renovations to correct numerous deficiencies. This project would address a programmatic deficiency for acoustically sensitive performance space. The addition would include a new 500 seat auditorium, chamber space and support spaces. The existing building will have minimal renovation located at the point of connection.

When completed, this facility will provide the opportunity for the School of Music to fully support its current and future programs, as well as expand the number of students seeking undergraduate and graduate degrees in the various music disciplines.

### RESERVE ESCROW PLAN

|                           | Renovation/Remodeling Projects<br><small>(1% per s. 1001.706(12)(c) F.S.)</small> | New Construction Projects<br><small>(2% per Board Regulation 14.002)</small> |
|---------------------------|---|--|
| Estimated Bldg Value:     | \$ 50,000,000   | \$ -   |
| Value Basis/Source:       |   | Total construction cost or insurable value, whichever is greater.            |
| Estimated 1st Yr Deposit: | \$ 500,000  | \$ -   |
| Funding Source:           |   |  |
| Comments:                 |   |  |

### BUILDING SPACE DESCRIPTION (account for all building space below)

| Space Type<br><small>(per FICM)</small> | Net Sq. Ft.<br><small>(NSF)</small> | Net-to-Gross         |                                       | Unit Cost *<br><small>(per GSF)</small> | Building Cost |
|---|-------------------------------------|----------------------|---------------------------------------|---|---------------|
|   |                                     | Conversion<br>Factor | Gross Sq. Ft.<br><small>(GSF)</small> |   |               |
| <b>NEW CONSTRUCTION</b>                 |                                     |                      |                                       |   |               |
| Auditorium/Exhibition                   | 10,600                              | <u>1.6</u>           | 16,960                                | <u>1,250</u>                            | 21,200,000    |
| Campus Support Services                 | 4,400                               | <u>1.5</u>           | 6,600                                 | <u>800</u>                              | 5,280,000     |
|   | -                                   |                      | -                                     |   | -             |
|   | -                                   |                      | -                                     |   | -             |
|   | -                                   |                      | -                                     |   | -             |
|   | -                                   |                      | -                                     |   | -             |
|   | -                                   |                      | -                                     |   | -             |
|   | -                                   |                      | -                                     |   | -             |
| Subtotal NASF:                          | -                                   |                      | -                                     |   | -             |
| Other                                   | -                                   |                      | -                                     |   | -             |
| Total:                                  | 15,000                              |                      | 23,560                                |   | 26,480,000    |

\* Apply Unit Cost to total GSF based on Space Type

| REMODELING / RENOVATION | Net Sq. Ft.<br><small>(NSF)</small> | Conversion<br>Factor | Gross Sq. Ft.<br><small>(GSF)</small> | Unit Cost *<br><small>(per GSF)</small> | Building Cost | Remodeling Projects <b>Only</b> |       |
|-------------------------|-------------------------------------|----------------------|---------------------------------------|---|---------------|---------------------------------|-------|
|                         |                                     |                      |                                       |   |               | BEFORE                          | AFTER |
| Classroom               | 1,400                               | <u>1</u>             | 1,400                                 | <u>900</u>                              | 1,260,000     | 1,400                           | 1,400 |
| Campus Support Services | 500                                 | <u>1</u>             | 500                                   | <u>600</u>                              | 300,000       | 500                             | 500   |
|                         | -                                   |                      | -                                     |   | -             | -                               | -     |
|                         | -                                   |                      | -                                     |   | -             | -                               | -     |
|                         | -                                   |                      | -                                     |   | -             | -                               | -     |
|                         | -                                   |                      | -                                     |   | -             | -                               | -     |
|                         | -                                   |                      | -                                     |   | -             | -                               | -     |
| Subtotal NASF:          | -                                   |                      | -                                     |   | -             | -                               | -     |
| Other                   | -                                   |                      | -                                     |   | -             | -                               | -     |
| Total:                  | 1,900                               |                      | 1,900                                 |   | 1,560,000     | 1,900                           | 1,900 |
| Grand Total:            | 16,900                              |                      | 25,460                                |   | 28,040,000    |                                 |       |

### PROJECT COMPONENT COSTS & PROJECTIONS

| Costs Incurred | Projected Costs |
|----------------|-----------------|
|----------------|-----------------|

|                                       | to Date | Year 1     | Year 2     | Year 3 | Year 4 | Year 5 | Total             |
|---------------------------------------|---------|------------|------------|--------|--------|--------|-------------------|
| <b>Basic Construction Costs</b>       |         |            |            |        |        |        |                   |
| Building Cost (from above)            | -       | 10,000,000 | 18,040,000 |        | -      | -      | 28,040,000        |
| Environmental Impacts/Mitigation      | -       | 60,000     |            |        | -      | -      | 60,000            |
| Site Preparation                      | -       | 300,000    |            |        | -      | -      | 300,000           |
| Landscape / Irrigation                | -       |            | 150,000    |        | -      | -      | 150,000           |
| Plaza / Walks                         | -       |            | 200,000    |        | -      | -      | 200,000           |
| Roadway Improvements                  | -       |            |            |        | -      | -      |                   |
| Parking : <input type="text"/> spaces | -       |            |            |        | -      | -      |                   |
| Telecommunication                     | -       | 900,000    |            |        | -      | -      | 900,000           |
| Electrical Service                    | -       | 350,000    |            |        | -      | -      | 350,000           |
| Water Distribution                    | -       | 850,000    |            |        | -      | -      | 850,000           |
| Sanitary Sewer System                 | -       | 1,250,000  |            |        | -      | -      | 1,250,000         |
| Chilled Water System                  | -       | 1,120,000  |            |        | -      | -      | 1,120,000         |
| Storm Water System                    | -       | 450,000    |            |        | -      | -      | 450,000           |
| Energy Efficient Equipment            | -       | 2,200,000  |            |        | -      | -      | 2,200,000         |
| <b>Subtotal: Basic Const. Costs</b>   | -       | 17,480,000 | 18,390,000 |        | -      | -      | <b>35,870,000</b> |
| <b>Other Project Costs</b>            |         |            |            |        |        |        |                   |
| Land / existing facility acquisition  | -       | -          | -          | -      | -      | -      |                   |
| Professional Fees                     |         | 2,700,000  | 2,100,000  |        |        |        | 4,800,000         |
| Fire Marshall Fees                    |         |            |            |        |        |        |                   |
| Inspection Services                   |         | 25,000     | 75,000     |        |        |        | 100,000           |
| Insurance Consultant                  |         | 10,000     | 10,000     |        |        |        | 20,000            |
| Surveys & Tests                       |         | 30,000     |            |        |        |        | 30,000            |
| Permit / Impact / Environmental Fees  |         | 125,000    |            |        |        |        | 125,000           |
| Artwork                               |         |            | 100,000    |        |        |        | 100,000           |
| Moveable Furnishings & Equipment      |         | 70,000     | 2,285,000  |        |        |        | 2,355,000         |
| Project Contingency                   |         | 3,300,000  | 3,300,000  |        |        |        | 6,600,000         |
| <b>Subtotal: Other Project Costs</b>  | -       | 6,260,000  | 7,870,000  |        | -      | -      | <b>14,130,000</b> |
| <b>Total Project Cost:</b>            | -       | 23,740,000 | 26,260,000 |        | -      | -      | <b>50,000,000</b> |

#### PROJECT FUNDING

| Funding Received to Date (all sources) |       |            | Projected Supplemental Funding |       |           | Projected PECO Requests |            | Total Project Cost                    |
|--|-------|------------|--------------------------------|-------|-----------|-------------------------|------------|---------------------------------------|
| Source                                 | FY    | Amount     | Source                         | FY    | Amount    | FY                      | Amount     |                                       |
| PECO                                   | 23-24 | 35,000,000 | Donations/Gifts                | 24-25 | 2,500,000 | 24-25                   | 10,000,000 | Should equal Total Project Cost above |
|  |       |            | Donations/Gifts                | 25-26 | 2,500,000 |                         |            |                                       |
| <b>35,000,000</b>                      |       |            | <b>5,000,000</b>               |       |           | <b>10,000,000</b>       |            | <b>50,000,000</b>                     |

## PECO Project Detail

University: University of Florida **Priority #: 9**

Project Name: Center for Applied Artificial Intelligence- Balm

Project Address: 14625 County Road 672, Wimauma, Florida 33598

### PROJECT NARRATIVE

Located at the UF/IFAS Gulf Coast Research and Education Center in Balm in Hillsborough County, this 35,000 GSF facility will be a central research, Extension, and development hub focused on the use of artificial intelligence and robotics to overcome production limitations identified by the agricultural and natural resources industries. The building will include research labs, offices, conference rooms, and collaborative space. This hub will provide a central core that will link with UF/IFAS faculty who are part of the AI initiative across the state to serve the agriculture industry and address environmental issues such as water use and water quality. Some examples of the functions will include breeding plants that resist pests and disease, boost crop yields, reduce the amount of chemicals growers will need to use, and design and build robotic technologies and reduce the amount of cost.

### RESERVE ESCROW PLAN

|                           | Renovation/Remodeling Projects<br><small>(1% per s. 1001.706(12)(c) F.S.)</small>             | New Construction Projects<br><small>(2% per Board Regulation 14.002)</small> |
|---------------------------|---|--|
| Estimated Bldg Value:     | \$ -  | \$ 25,000,000  |
| Value Basis/Source:       | Total construction cost or insurable value, whichever is greater, per Board Regulation 14.002 |  |
| Estimated 1st Yr Deposit: | \$ -  | \$ 500,000   |
| Funding Source:           |   |  |
| Comments:                 |   |  |

### BUILDING SPACE DESCRIPTION (account for all building space below)

| Space Type<br><small>(per FICM)</small> | Net Sq. Ft.<br><small>(NSF)</small> | Net-to-Gross         |                                       | Unit Cost *<br><small>(per GSF)</small> | Building Cost |
|---|-------------------------------------|----------------------|---------------------------------------|---|---------------|
|   |                                     | Conversion<br>Factor | Gross Sq. Ft.<br><small>(GSF)</small> |   |               |
| <b>NEW CONSTRUCTION</b>                 |                                     |                      |                                       |   |               |
| Teaching Lab                            | 13,600                              | <u>1.5</u>           | 20,400                                | <u>500</u>                              | 10,200,000    |
| Office                                  | 3,150                               | <u>1.5</u>           | 4,725                                 | <u>450</u>                              | 2,126,250     |
| Auditorium/Exhibition                   | 3,000                               | <u>1.2</u>           | 3,600                                 | <u>400</u>                              | 1,440,000     |
| Campus Support Services                 | 4,400                               | <u>1.2</u>           | 5,280                                 | <u>300</u>                              | 1,584,000     |
|   | -                                   |                      | -                                     |   | -             |
|   | -                                   |                      | -                                     |   | -             |
|   | -                                   |                      | -                                     |   | -             |
|   | -                                   |                      | -                                     |   | -             |
| Subtotal NASF:                          | 24,150                              |                      | 34,005                                |   | 15,350,250    |
| 'Other Assignable' E&G Space            | -                                   |                      | -                                     |   | -             |
| Other Non-E&G Budget Entity Space       | -                                   |                      | -                                     |   | -             |
| Total:                                  | 24,150                              |                      | 34,005                                |   | 15,350,250    |

\* Apply Unit Cost to total GSF based on Space Type

| REMODELING / RENOVATION           | Remodeling Projects <b>Only</b> |        |
|-----------------------------------|---------------------------------|--------|
|                                   | BEFORE                          | AFTER  |
|                                   | -                               | -      |
|                                   | -                               | -      |
|                                   | -                               | -      |
|                                   | -                               | -      |
|                                   | -                               | -      |
|                                   | -                               | -      |
|                                   | -                               | -      |
|                                   | -                               | -      |
|                                   | -                               | -      |
|                                   | -                               | -      |
| Subtotal NASF:                    | -                               | -      |
| 'Other Assignable' E&G Space      | -                               | -      |
| Other Non-E&G Budget Entity Space | -                               | -      |
| Total:                            | -                               | -      |
| Grand Total:                      | 24,150                          | 34,005 |
|                                   | 15,350,250                      |        |

**PROJECT COMPONENT COSTS & PROJECTIONS**

|                                      | Costs Incurred to Date | Projected Costs |            |        |        |        | Total             |
|--------------------------------------|------------------------|-----------------|------------|--------|--------|--------|-------------------|
|                                      |                        | Year 1          | Year 2     | Year 3 | Year 4 | Year 5 |                   |
| <b>Basic Construction Costs</b>      |                        |                 |            |        |        |        |                   |
| Building Cost (from above)           | -                      | -               | 15,350,250 | -      | -      | -      | 15,350,250        |
| Environmental Impacts/Mitigation     | -                      | -               | -          | -      | -      | -      | -                 |
| Site Preparation                     | -                      | -               | 100,000    | -      | -      | -      | 100,000           |
| Landscape / Irrigation               | -                      | -               | 53,750     | -      | -      | -      | 53,750            |
| Plaza / Walks                        | -                      | -               | 50,000     | -      | -      | -      | 50,000            |
| Roadway Improvements                 | -                      | -               | 300,000    | -      | -      | -      | 300,000           |
| Parking : 50 spaces                  | -                      | -               | 50,000     | -      | -      | -      | 50,000            |
| Telecommunication                    | -                      | -               | 471,000    | -      | -      | -      | 471,000           |
| Electrical Service                   | -                      | -               | 300,000    | -      | -      | -      | 300,000           |
| Water Distribution                   | -                      | -               | 100,000    | -      | -      | -      | 100,000           |
| Sanitary Sewer System                | -                      | -               | 60,000     | -      | -      | -      | 60,000            |
| Chilled Water System                 | -                      | -               | 105,000    | -      | -      | -      | 105,000           |
| Storm Water System                   | -                      | -               | 60,000     | -      | -      | -      | 60,000            |
| Energy Efficient Equipment           | -                      | -               | -          | -      | -      | -      | -                 |
| <b>Subtotal: Basic Const. Costs</b>  | -                      | -               | 17,000,000 | -      | -      | -      | <b>17,000,000</b> |
| <b>Other Project Costs</b>           |                        |                 |            |        |        |        |                   |
| Land / existing facility acquisition | -                      | -               | -          | -      | -      | -      | -                 |
| Professional Fees                    | -                      | 1,900,000       | 300,000    | -      | -      | -      | 2,200,000         |
| Fire Marshall Fees                   | -                      | -               | -          | -      | -      | -      | -                 |
| Inspection Services                  | -                      | -               | 60,000     | -      | -      | -      | 60,000            |
| Insurance Consultant                 | -                      | 12,000          | -          | -      | -      | -      | 12,000            |
| Surveys & Tests                      | -                      | 15,000          | 4,000      | -      | -      | -      | 19,000            |
| Permit / Impact / Environmental Fees | -                      | -               | 74,000     | -      | -      | -      | 74,000            |
| Artwork                              | -                      | -               | -          | -      | -      | -      | -                 |
| Moveable Furnishings & Equipment     | -                      | -               | 2,235,000  | -      | -      | -      | 2,235,000         |
| Project Contingency                  | -                      | 680,000         | 2,720,000  | -      | -      | -      | 3,400,000         |
| <b>Subtotal: Other Project Costs</b> | -                      | 2,607,000       | 5,393,000  | -      | -      | -      | <b>8,000,000</b>  |
| <b>Total Project Cost:</b>           | -                      | 2,607,000       | 22,393,000 | -      | -      | -      | <b>25,000,000</b> |

**PROJECT FUNDING**

| Funding Received to Date (all sources) |       |                   | Projected Supplemental Funding |    |        | Projected PECO Requests |                   | Total Project Cost                    |
|--|-------|-------------------|--------------------------------|----|--------|-------------------------|-------------------|---------------------------------------|
| Source                                 | FY    | Amount            | Source                         | FY | Amount | FY                      | Amount            |                                       |
| PECO                                   | 23-24 | 10,965,880        |                                |    |        | 24-25                   | 14,034,120        | Should equal Total Project Cost above |
|  |       | <b>10,965,880</b> |                                |    | -      |                         | <b>14,034,120</b> |                                       |
|  |       |                   |                                |    |        |                         |                   | <b>25,000,000</b>                     |



**COMMITTEE ON FACILITIES AND CAPITAL INVESTMENTS**

**ACTION ITEM FCIS**

**June 8, 2023**

**SUBJECT:** Facilities Spending Plan

---

**BACKGROUND INFORMATION**

During the 2023 Florida Legislative session, the University of Florida received legislative appropriations as follows:

|  |               |
|--|---------------|
| • (PECO) Dental Science Building                               | \$ 30,694,870 |
| • (PECO) Chemical Engineering                                  | \$ 30,000,000 |
| • (PECO) PK Yonge Gymnasium                                    | \$ 12,000,000 |
| • (PECO) Academic/Research Collaboration Center                | \$ 11,000,000 |
| • (PECO) Hamilton Center                                       | \$ 20,000,000 |
| • (PECO) IFAS Microbiology & Cell Science Teaching Lab         | \$ 2,750,000  |
| • (PECO) Whitney Lab for Biosciences                           | \$ 20,000,000 |
| • (PECO) Music Building  | \$ 35,000,000 |
| • (PECO) IFAS Center for Applied AI at Wimauma GREC            | \$ 10,965,880 |
| • (PECO) IFAS SWREC Auditorium & Meeting Rooms                 | \$ 1,435,000  |
| • (PECO) IFAS West Florida Rec Student Dorms                   | \$ 2,100,000  |
| • (PECO) IFAS Horse Teaching Unit/Dormitory                    | \$ 1,992,650  |
| • (PECO) IFAS Lake Watch Bldg                                  | \$ 1,997,280  |
| • (PECO) Jacksonville Campus                                   | \$ 75,000,000 |
| • (CITF) New Disability Resource Center                        | \$ 4,250,000  |
| • (CITF) Hitchcock Field & Fork Pantry                         | \$ 2,156,826  |
| • (CITF) Jennings Creek Bridge                                 | \$ 275,000    |
| • (CITF) Brown Center for Leadership & Service/Machen Scholars | \$ 250,000    |
| • (CITF) Career Connections Center                             | \$ 205,000    |
| • (CITF) Rec Sports Master Plan                                | \$ 150,000    |
| • (CITF) Collegiate Veterans Success Center                    | \$ 25,000     |

**PROPOSED COMMITTEE ACTION**

The Committee on Facilities and Capital Investments is asked to approve the Facilities Spending Plan for Fiscal Year ending June 30, 2024, for recommendation to the Board of Trustees for its approval on the Consent Agenda.

**ADDITIONAL COMMITTEE CONSIDERATIONS**

Submission to the Board of Governors is required for CITF projects.

---

Supporting Documentation Included: CITF Committee Approval Letter

Submitted by: Curtis A. Reynolds, Vice President for Business Affairs

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza "Mori" Hosseini, Chair

---

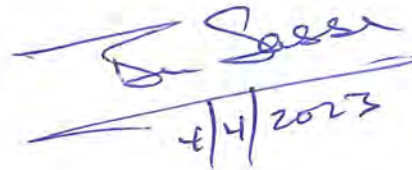
Ben Sasse, President and Corporate Secretary

Division of Student Life  
Office of the Vice President

135 Tigert Hall  
PO Box 113250  
Gainesville, FL 32611-3250  
352-392-1265  
352-392-7301 Fax  
[www.ufsa.ufl.edu](http://www.ufsa.ufl.edu)

March 30, 2023

Dr. Ben Sasse  
President  
University of Florida  
PO Box 113150  
Gainesville, FL 32611



Dear President Sasse,

The University of Florida's Capital Improvement Trust Fund (CITF) Committee met on March 24, 2023 to recommend the expenditure of fiscal year 2023-2024 funds. Student members were nominated by Student Body President Lauren Lemasters and all committee members were approved by former President Fuchs in December 2022.

Nancy Chrystal-Green (Chair), Associate Vice President for Student Life  
Cydney McGlothlin, University Architect, Planning Design and Construction  
Solange Douglas, Associate Director, Student Activities and Involvement  
Michelle Smith, Assistant Dean for Inclusion, Levin College of Law  
Daniel Badell, student member  
John Brinkman, student member  
Robyn Clarke, student member  
Olivia Green, student member

Florida Statute 1013.74(3) states "no project proposed by a university which is to be funded from Capital Improvement Trust Fund fees or building fees shall be submitted to the Board of Governors for approval without prior consultation with the student government association of that university."

As per the Board of Governors, the University of Florida's net allocation is \$7,363,946. Therefore, the committee's final recommended capital improvement project list for FY 2023-2024 is as follows:

1. \$4,250,000 for UF 675. The intent of this funding is to: 1) complete the program for the new Disability Resource Center facility; 2) develop a program and schematic design for expansion of the facility to include university-wide testing services. The committee supports the university's decision to change the location of UF 675 from the University Press site to the corner of Stadium and Fletcher roads.

2. \$2,208,946 for the Hitchcock Field and Fork Pantry. The intent of this funding is to: 1) expand the storage, preparation, and support area of the facility to improve functionality, security, and efficiency; 2) improve the outdoor queuing experience.
3. \$275,000 for the Jennings Creek Bridge. The intent of this funding is to support the design portion of this project since it serves as an important connector for students between parking, residences, and classrooms.
4. \$250,000 for the Brown Center for Leadership & Service/Machen Florida Opportunity Scholars. The intent of this funding is to improve the functionality of this office to better serve students.
5. \$205,000 for the Career Connections Center. The intent of this funding is to improve/replace the audio visual and technology equipment in the meeting/conference rooms.
6. \$150,000 for Recreational Sports. The intent of this funding is to complete the master plan study.
7. \$25,000 for the Collegiate Veterans' Success Center. The intent of this funding is for a feasibility study regarding the need for an expanded facility for collegiate veterans that would include size, scope, and potential locations.

The potential for the University of Florida to receive more or less funding was also addressed. If the university receives greater than \$7,363,946 for FY24, the committee recommends these funds be allocated to the Hitchcock Field and Fork Pantry project. If the university receives less than \$7,363,946 for FY24, the committee recommends decreasing the allocation to the Hitchcock Field and Fork Pantry project.

Following the CITF Committee meeting, the university learned that the Board of Governors revised the CITF allocation to \$7,311,826. Given the above recommendation by the committee, the Hitchcock Field and Fork Pantry project would receive \$2,156,826.

The CITF Committee also recommends that, at the completion of a project listed above, if any funds remain, those can be transferred to another fiscal year 2023-2024 project based on need as determined by Planning, Design & Construction and Student Life.

On behalf of the CITF Committee, we appreciate your support of these capital projects as they will positively impact the student experience on campus.

Sincerely,



Heather White, Ed.D.

Vice President for Student Life

- cc. Dr. Joseph Glover, Senior Vice President and Provost  
Ms. Lauren Lemasters, Student Body President  
Mr. Brian Giunta, Associate Director of Finance, Planning, Design & Construction  
Dr. Nancy Chrystal-Green, Associate Vice President for Student Life





# 2023-2024 CITF Project List

University Name: University of Florida

## 2023-2024 CITF Project List Certification Representations

I hereby certify to the Board of Governors that the projects and proposed funding amounts reflected in the 2023-2024 CITF Project List are hereby submitted to the Board of Governors for approval only after prior consultation with the student government association, pursuant to Section 1013.74(3), Florida Statutes. I understand that any unsubstantiated, false, misleading, or withheld information relating to this statements may render this certification void. My signature below acknowledges that I have read and understand this statements.

Certification: C. Com Date 5/1/23  
Chief Financial Officer



**COMMITTEE ON FACILITIES AND CAPITAL INVESTMENTS**  
**ACTION ITEM FCI6**  
**June 8, 2023**

**SUBJECT:** Energy Agreement

---

**BACKGROUND INFORMATION**

Presently, Duke Energy Florida, LLC (“DEF”) owns and operates a co-generation plant on the University’s campus (the “Plant”) to provide for the entirety of UF’s steam needs. The Plant also produces electricity as a coincidental product of the Plant’s steam generation. The University does not receive a dedicated supply of electricity directly from the Plant; rather, the Plant’s electricity goes back on to DEF’s broader grid from which the University purchases its electricity at the regulated rates as a typical institutional customer. The purchase and sale of steam from the Plant is governed by an existing agreement between the University and DEF (the “Existing Agreement”), but DEF’s obligation to operate the Plant under the Existing Agreement will cease on October 1, 2027.

As a result of DEF’s originally stated intention to decommission the Plant after October 1, 2027, the Board of Trustees, at its June 11, 2021 meeting, approved the University’s pursuit of a public-private partnership (“P3”) as a means of securing an alternative source of campus steam. The University then conducted a competitive solicitation process seeking proposals from qualified developers to engage in a P3 project for a new campus thermal energy plant. However, due to (i) several intervening factors which combined to make any such P3 project considerably more expensive than anticipated (e.g., rising interest rates, disruption to global energy markets, conflicts, inflation, equipment scarcity, etc.), and (ii) DEF shifting its position and now stating that it prefers to continue to operate the Plant over the medium-term, University staff believes it is in the University’s best interest to extend the Existing Agreement with DEF for the provision of steam via the Plant rather than seek a P3 to construct a new facility. For context, note that the estimates from Jacobs Engineering and Goldman Sachs, our P3 consultants, of the P3 project construction costs were originally in the \$250-300M range, but due to the factors identified above, their estimate later rose to \$500-600M, and the proposal received from the P3 developer was ultimately around \$750M.

The conditions under which the University and Duke are proposing to extend the term of the Existing Agreement are generally set forth in the attached executed term sheet (the “Term Sheet”), but the essential terms can be summarized as follows:

- The term of the Existing Agreement for the provision of steam will be extended by 15 years, with at least one, and possibly two (to be negotiated), University options to extend by an additional 7 years each.
- DEF will install, own, operate and maintain new back-up boilers to both provide more reliable steam service to the University and generate additional electricity for the wider grid (removing the University's existing burden of owning and maintaining its own boilers).
- The University will continue to purchase (i) electricity from DEF as a retail customer, but at a transmission-level tariff rate, which is a significant discount off the prior rate, and (ii) steam at a price fixed by the existing formula, including the existing annual \$1M discount.
- DEF will provide up to \$100,000 towards site improvements in connection with its installation of the boilers and expanded Plant footprint.
- DEF will continue to support the University through research grants, scholarships, and sponsorships.
- Implementation of the Term Sheet through a definitive agreement between the University and DEF is subject to the Board of Trustees' approval.

#### **PROPOSED COMMITTEE ACTION**

The Facilities and Capital Investments Committee is asked to approve, for recommendation to the Board of Trustees for its approval on the Consent Agenda, the University's approval of the Term Sheet and authorization for the University President or his designee(s) to negotiate, finalize, and execute a definitive agreement between the University and DEF implementing the terms and conditions of the Term Sheet.

#### **ADDITIONAL COMMITTEE CONSIDERATIONS**

Board of Governors approval is not required.

---

Supporting Documentation Included: UF-DEF Term Sheet

Submitted by: Colt Little, Associate Vice President for Enterprise Projects and Senior Counsel

**Approved by the University of Florida Board of Trustees, June 8, 2023**

---

Morteza "Mori" Hosseini, Chair

---

Ben Sasse, President and Corporate Secretary

## **BINDING TERM SHEET**

THIS BINDING TERM SHEET ("Term Sheet") is entered into between DUKE ENERGY FLORIDA, LLC ("DEF") and THE UNIVERSITY OF FLORIDA BOARD OF TRUSTEES ("University") (collectively, the "Parties"), as of May 3 2023 ("Effective Date").

### **BACKGROUND:**

A. University and DEF are parties to an existing Agreement dated April 11, 2018 (as modified by the First and Second Amendments thereto, the "Master Agreement") concerning certain easements and DEF's operation of an existing cogeneration facility located on the University's campus ("Cogeneration Facility").

B. University and DEF are also parties to an existing Amended and Restated Steam Sales Agreement dated April 11, 2018 (as modified by the First Amendment thereto, the "Steam Sales Agreement"), whereby DEF produces, as a by-product of operation of the Cogeneration Facility, steam that the University purchases from DEF at the rate set out in the Steam Sales Agreement.

C. Unless the University takes further action, DEF's obligation to operate the Cogeneration Facility and to provide steam to the University pursuant to the Master Agreement and Steam Sales Agreement will cease on October 1, 2027.

D. DEF has delivered reliable steam and electric service to University to help ensure the University's operation of its campus.

E. University has taken electric service from DEF at a transmission level rate, which has generated significant savings for University, since 2019.

F. University desires to find an intermediate energy and steam solution that paves the way for a reduced carbon footprint and accommodates future steam needs on the campus.

G. University desires to utilize the existing facility rather than incur the cost and environmental impact of constructing and integrating a net new facility within the existing system.

H. The Parties intend to continue their long-standing and mutually beneficial relationship by extending and modifying the terms of the existing Master Agreement and Steam Sales Agreement.

I. In order to capture the basic terms of the proposed extension and modification of the Master Agreement and Steam Sales Agreement, the Parties are entering into this Term Sheet, which they intend to fully and legally bind the Parties while a definitive agreement is negotiated and drafted to memorialize the terms and conditions of such extension and modification (the "Definitive Agreement"); the Parties also intend to execute the Definitive Agreement by May 31, 2023.

### **AGREEMENT:**

NOW, THEREFORE, for good and valuable consideration, the Parties, intending to be bound hereby, agree to the following terms:

1. The Parties will extend the terms of the existing Master Agreement and Steam Sales Agreement by 15 years (to 2042), with the University having the option to further extend the terms by an

additional 7-year extension period starting at the end of 2042. Under the current Master Agreement, DEF is obligated to operate the Cogeneration Facility until October 1, 2027. University may exercise various six-month term extension options, but University is obligated to essentially cover DEF's costs associated with extending the unit's operation. These six-month extension options will be replaced with the University's option for one 7-year extension. The Parties further agree to negotiate a second 7-year extension, provided that University notifies DEF, in writing, of its intent to exercise that second option no later than three years before the expiration of the first option (i.e., no later than January 1, 2046) and that the Parties agree to a method to re-calculate the amount of the Steam Discount during that second extension period. If the Parties do not reach agreement on this second extension, the Parties will not be obligated to include any such extension in the Definitive Agreement.

2. At the end of the extended term for the Master Agreement (i.e., 2042, or the end of one or more extension periods), University will have the option to purchase DEF's Cogeneration Facility (including the plant, boilers, and associated facilities and any improvements made to such facilities). The purchase price will be equal to the remaining net book value (NBV) of the Cogeneration Facility on DEF's books at the time of closing. University must provide notice of its intent to exercise this purchase option at least six-months before the end of the expiration of the initial term, or applicable extension term, of the Master Agreement. If University exercises this purchase option, University will not be permitted to sell or otherwise transfer the Cogeneration Facility to any other unrelated party (i.e., a party that is not a University affiliate) for ten years after the closing date of the purchase from DEF.

3. DEF will install, own, operate, and maintain, all at DEF's cost and expense, new back-up boilers ("Boilers"), with increased steam capacity, for the benefit of DEF's general body of customers including University. These new Boilers, which will replace the existing boilers owned by University and operated by DEF, will be configured such that they can generate additional megawatts of power for the benefit of DEF's customers. The Boilers will operate during outages at the Cogeneration Facility and during high-risk operational periods to provide auxiliary load to switchyard. The Boilers will result in carbon reduction by generating more power with the same amount of steam, and they will also improve the heat rate of the Cogeneration Facility. University and DEF will negotiate the specific installation timing and specifications for the Boilers, and those details will be included in the Definitive Agreement. DEF will be solely responsible for seeking Florida Public Service Commission approval and any other permits, if required, of the arrangement described herein. DEF shall be obligated to fully implement and carry out the arrangement described herein and its associated obligations without any additional cost or risk to University; provided, however that University shall work in good faith and coordinate with DEF to develop additional reasonable real estate needs, electrical supply services, and a new siting location for the Boilers. The Parties recognize that, as with any construction project, the construction of the Boilers will require certain landscaping changes and improvements to the site. DEF agrees that it will, as part of the Boiler capital project, coordinate with UF on a specific landscaping plan, and contribute up to \$100,000 toward such landscaping project.

4. DEF acknowledges that, under the new arrangement and extended Master Agreement and Steam Sales Agreement, University will continue to (a) purchase electricity from DEF at the transmission-level tariff rate for Accounts 9100-8813-3384 (Gainesville substation) and 9100-8813-3540 (Hull Road substation), provided that UF continues to lease the necessary transmission equipment; (b) purchase steam at the price established by the existing formula in the Steam Sales Agreement; and (c) receive the on-going \$1M annual discount to University's steam purchases.

5. **Clean Energy Connection (CEC):** CEC is a currently approved, regulated community solar program, in which customers can subscribe to all or a portion of their usage to support the development of utility-scale solar and receive renewable energy certificates (RECs) in exchange. CEC has specific capacity allocations by customer segment. One such segment is large customers, and it is fully subscribed. University is part of the large customer segment and is currently subscribed to offset approximately 65% of its load. DEF recognizes that its current CEC program is fully subscribed, and it is analyzing whether to offer another CEC program in the future. If DEF offers to implement a new or extended CEC, and the Public Service Commission approves it, DEF agrees to propose a new universities and higher education institutions customer segment.

6. DEF has committed to collaborate with University facilities and research faculty to jointly seek Department of Energy funding to revolutionize operations with grants available to demonstrate advancement in clean energy. For example, this past summer DEF agreed to be a “Utility Partner Advisor Role” to support two UF grant submittals: (i) DOE Funding Opportunity DE-FOA-0002611, regarding Non-Road Electric Vehicle Charging Concepts; and (ii) DOE Funding Opportunity DE-FOA-0002500, regarding Cybersecurity, Energy Security & Emergency Response. DEF is willing to continue this work as a partner with University on current and/or future such programs.

7. DEF is willing to partner with University researchers and DEF’s industry research partner Electric Power Research Institute (EPRI) to help study and evaluate the transition of the campus steam needs to zero-carbon resources. This could include hydrogen, long duration energy storage that provides high quality steam, electric boilers, or other emerging technologies.

8. DEF has a long history of supporting the University and working closely with the University annually on a number of giving opportunities with sponsorships and donations from Duke Energy shareholders. The Duke Energy Foundation has also historically provided a number of grants to the University. Combined, over the last ten years, the Duke Energy Foundation and DEF have invested more than \$620,000 in sponsorships, research and student programs at the University. The Duke Energy Foundation has supported the development of the University’s Mechanical and Aerospace Engineering School for the Energy Sustainability, Technology and Resiliency Testing Hub “e-START” Hub with an investment of \$150,000 since 2021. Additionally, a number of DEF employees donate to the University of Florida Foundation annually, donations that are matched by the Duke Energy Foundation. Further, DEF has provided technical guidance and utility advisory support for the University’s energy projects and federal research grant applications. DEF is also proud to support Gator Athletics through a box at Ben Hill Griffin Stadium. While no commitment regarding the Duke Energy Foundation can be made in this Term Sheet or the Definitive Agreement, DEF commits to continuing to advise the University of future potential grant opportunities that may be available from the Duke Energy Foundation. In addition, DEF commits to continuing its technical host-utility advisory role, utility collaboration, and financial support of the University in the additional years of the Master Agreement term.

9. This Term Sheet reflects the current agreement of the parties on certain key terms, but the Parties acknowledge and agree that this Term Sheet in no way contains all material terms and provisions that will be contained in the Definitive Agreement. However, the Parties intend to be bound by this Term Sheet and the terms and conditions it does contain (subject to the caveat of the University’s Board approval set forth below), and specifically acknowledge that the Parties are relying on the terms, conditions,

representations, and promises set forth herein, and the legal enforceability of this Term Sheet. DEF recognizes that, by electing to enter into this Term Sheet, University is foregoing certain other opportunities it has with respect to addressing its energy needs. The Parties further agree to work expeditiously to execute the necessary amendments and agreements to implement the terms and conditions of this Term Sheet into the Definitive Agreement. Notwithstanding anything contained herein, the University is under no obligation to enter into the Definitive Agreement unless and until the University's Board of Trustees ("Board") approves the Definitive Agreement, or delegates authority to the University President to finalize and execute such agreement, at the Board's June 8-9 meeting. If the Board elects not to provide such approval or delegation at that meeting, this Term Sheet shall automatically terminate and the Parties shall be released from their obligations hereunder.

10. This Term Sheet may be executed in one or more counter parts which, taken together, shall constitute one and the same instrument. Electronic signatures hereto shall be binding on the Parties.

IN WITNESS WHEREOF, the parties hereto have caused this Term Sheet to be executed on their behalf by duly authorized representatives, all as of the Effective Date first set forth above.

**UNIVERSITY:**  
THE UNIVERSITY OF FLORIDA  
BOARD OF TRUSTEES

WITNESSES:

X Stephanie Fisher

Print: Stephanie Fisher

X Jennifer C. Brown

Print: Jennifer C. Brown

By: Amy Hass  
Amy Hass  
Vice President and General Counsel

Date: May 3, 2023

**DEF:**  
DUKE ENERGY FLORIDA, LLC

WITNESSES:

X Natalia Rutherford

Print: NATALIA RUTHERFORD

X Ana Gibbs

Print: Ana Gibbs

By: Melissa Seixas  
Melissa Seixas  
State President – Florida

Date: May 3, 2023



**BOARD MEETING  
AGENDA  
Thursday, June 8, 2023  
~2:35 p.m.  
President’s Room 215B, Emerson Alumni Hall  
University of Florida, Gainesville, FL**

- 1.0 Call to Order and Welcome .....Morteza “Mori” Hosseini, Chair
- 2.0 Verification of Quorum ..... Mark Kaplan, Vice President and University Secretary
- 3.0 Recognitions.....Mori Hosseini, Chair
- 4.0 Public Comment.....Amy Hass, Vice President and General Counsel
- 5.0 Action Items (Consent) .....Mori Hosseini, Chair

**BOT Minutes**

[March 17, 2023](#)

[April 17, 2023](#) (Virtual Meeting)

[May 15, 2023](#) (Virtual Meeting)

**Committee on Academic, Faculty, Student Success, Public Relations and Strategic Communications (AFSSPRSC)**

AFSSPRSC1 Tenure Upon Hire

AFSSPRSC2 Annual Tenure Awards

AFSSPRSC3 New Degrees

AFSSPRSC4 Degree Program Termination

AFSSPRSC5 Degree Program Changes

**Committee on Audit and Compliance (AC)**

AC1 July 1, 2023-June 30, 2024 Office of Internal Audit Work Plan

**Committee on Facilities and Capital Investments (FCI)**

FCI1 Construction Projects Budget Amendments

FCI2 Parking Fee Restructure for FY24

FCI3 Center for Applied Artificial Intelligence



FCI4 Fixed Capital Outlay Legislative Budget Request for FY25  
FCI5 Facilities Spending Plan  
FCI6 Energy Agreement

**Committee on Finance, Strategic Planning and Performance Metrics (FSPPM)**

FSPPM1 Preliminary Operating Budget FY24  
FSPPM2 Estimated Direct Support Organization Use of University Resources for FY24  
FSPPM3 Enterprise Resource Planning Vendor Software Selection  
FSPPM4 Proposal for Bridge Funding

**Committee on Governance, Government Relations and Internal Affairs (GGRIA)**

GGRIA1 Direct Support Organization Appointments  
GGRIA2 UF Regulation  
GGRIA3 Facility Security Clearance

|     |  |                      |
|-----|--|----------------------|
| 6.0 | President’s Report .....                 | Ben Sasse, President |
| 7.0 | New Business.....                        | Mori Hosseini, Chair |
| 8.0 | Comments by the Chair of the Board ..... | Mori Hosseini, Chair |
| 9.0 | Adjourn .....                            | Mori Hosseini, Chair |