UF | Board of Trustees
UNIVERSITY of FLORIDA

COMMITTEE ON ACADEMIC, FACULTY AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC COMMUNICATIONS
PRE-MEETING AGENDA
Tuesday, May 14, 2024
10:30 a.m. or at the conclusion
of the FCI Pre-Meeting beginning at 9:30 a.m.
Virtual Meeting: (646) 558-8656, ID#: 964 1535 6817

Committee Members:
Rahul Patel (Committee and Board Vice Chair), John E. Brinkman, Richard P. Cole, 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 Roll Call ..... Board Staff

3.0 Review Draft Agenda for June Meeting ..... Rahul Patel, Chair

3.1 Review Draft Minutes

- March 7, 2024
- April 29, 2024

3.2 Review Action Items

- AFSSPRSC1 Tenure Upon Hire ..... Scott Angle, Angle
- AFSSPRSC2 Annual Tenure Awards ..... Scott Angle
- AFSSPRSC3 Self-Supporting Programs ..... Scott Angle
- AFSSPRSC4 Degree Program Termination ..... Scott Angle
- AFSSPRSC5 Common Prerequisite Manual Changes ..... Scott Angle
- AFSSPRSC6 General Education Courses Annual Review ..... Scott Angle
- AFSSPRSC7 New Degrees ..... Scott Angle

3.3 Review Discussion Items

- Admissions Update ..... Mary Parker, Vice President for Enrollment Management
- Faculty Senate Update ..... Sarah Lynne, Faculty Senate Chair
- Student Body President Update ..... John Brinkman, Student Body President
- Student Life Update ..... Heather White, Vice President for Student Life
- Top 5 Update ..... Ray Sass, Vice President for Innovation and Partnerships
- Marketing Update ..... Dan Dillon, Vice President for Marketing
- Centers/Institutes ..... Scott Angle
- Department Name Change ..... Scott Angle
- Annual Academic Degree Programs List ..... Scott Angle

4.0 New Business ..... Rahul Patel, Chair

5.0 Adjourn ..... Rahul Patel, Chair

UF | Board of Trustees
UNIVERSITY of FLORIDA

COMMITTEE ON ACADEMIC, FACULTY AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC COMMUNICATIONS
Meeting Minutes
March 7, 2024
President's Room 215B, Emerson Alumni Hall
University of Florida, Gainesville, FL
Time Convened: 9:16 a.m.
Time Adjourned: 11:58 a.m.

Committee and Board members present:
Rahul Patel (Board Vice Chair and Committee Chair), David L. Brandon, Richard P. Cole, Christopher T. Corr, Olivia E. Green, Morteza "Mori" Hosseini (Board Chair), Daniel T. O'Keefe, Marsha D. Powers, Fred S. Ridley, Danaya C. Wright, Patrick O. Zalupski, and Anita G. Zucker.

Others present:
Ben Sasse, President; Scott Angle, Provost and Senior Vice President for Academic Affairs; Melissa Curry, Vice President for Human Resources; Dan Dillon, Vice President for Marketing, Kurt Dudas, Vice President/Jacksonville Lead; Elias Eldayrie, Vice President and Chief Information Officer; Robert A. Gilbert, Interim Senior Vice President for Agriculture and Natural Sciences, Amy Hass, Vice President and General Counsel; Taylor Jantz, Interim Chief Financial Officer; Mark Kaplan, Vice President for Government and Community Relations and University Secretary; David Kratzer, Senior Vice President for Construction, Facilities, and Auxiliary Operations; David Nelson, Senior Vice President for Health Affairs and President, UF Health; David Norton, Vice President for Research, Mary Parker, Vice President and Chief Enrollment Strategist; Raymond Sass, Vice President for Innovation and Partnerships; Jim Staten, Senior Advisor to the President; Scott Stricklin, Director of Athletics; James Wegmann, Vice President for Communications; 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 9:16 a.m.

2.0 Verification of Quorum
Provost Scott Angle verified a quorum with all members present except Trustee Bill Heavener who had an excused absence.

3.0 Review and Approval of Minutes

Committee Chair Patel asked for a motion to approve the minutes from the December 7, 2023, Committee Meeting and the February 6, 2024, Committee Pre-Meeting, which was made by Trustee Cole and seconded by Trustee Zucker. 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 Angle summarized the 17 Tenure Upon Hire cases. He noted all cases have met the criteria for tenure and have been recommended to the Board by the Provost and President to receive tenure. The Tenure Upon Hire cases are as follows:

- **Hamilton Center for Classical and Civic Education**
  - Dr. Ryan Owens, Professor and Director of the Program in American Foundations, Ideals and Law
  - Dr. Charles Laderman, Associate Professor
  - Dr. Greg Conti, Associate Professor
  - Dr. Paul Lim, Professor
  - Dr. Richard Aldous, Professor
- **College of Journalism and Communications**
  - Dr. Wenlin Liu, Associate Professor, Department of Public Relations
- **Warrington College of Business**
  - Dr. Trevor Foulk, Associate Professor, Department of Management
  - Dr. Wei Shi, Professor, Department of Management
  - Dr. Murillo Campello, Professor, Eugene F. Brigham Finance, Department of Insurance and Real Estate
- **College of Medicine**
  - Dr. John Hollingsworth, Professor, Department of Urology
  - Dr. Eli Chapman, Professor, Department of Pharmacology & Therapeutics
  - Dr. May Khanna, Associate Professor, Department of Pharmacology & Therapeutics
  - Dr. Rajesh Khanna, Professor, Department Pharmacology & Therapeutics
  - Dr. Servio Ramirez, Professor, Department of Pathology, Immunology and Laboratory Medicine
- **IFAS Extension**
  - Dr. Shannon Horrillo, Associate Professor and Associate Dean for Extension, Families, Youth and Communities
- **Levin College of Law**
  - Mr. Gary Lawson, Professor of Law
- **Herbert Wertheim College of Engineering**
  - Dr. Chris Kim, Professor, Department of Electrical and Computer Engineering

Board Chair Hosseini stated these are amazing faculty that could go anywhere and are choosing to come to UF, despite the implementation of the Post Tenure Review process. President Sasse echoed Board Chair Hosseini's comments. He indicated that the turnover rate that was recently announced in the news is not accurate. Our turnover is less than the national average. He stated that we have received over 1,100 faculty applications for the Hamilton Center and the quality of

applications is unprecedented. Trustee Brandon stated that he looks forward to the annual evaluations and encourages the best faculty to come to UF.

Committee Chair Patel asked for any questions or further discussion. He then asked for a motion to approve 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 Wright. 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 Degree Program Terminations

Committee Chair Patel stated the committee reviewed the three Degree Program Terminations, that were approved by the Faculty Senate, during the February 6 Pre-Meeting. The degree program terminations are as follows: Bachelor of Science in Horticultural Science in the College of Agricultural and Life Sciences, Master of International Construction Management in the College of Design, Construction and Planning and the Master of Arts with a major in Classical Studies in the College of Liberal Arts and Sciences.

Committee Chair Patel asked for any questions or further discussion. He then asked for a motion to approve Action Item AFSSPRSC2 for recommendation to the Board for its approval on the Consent Agenda, which was made by Trustee Zucker, and second which was made by Trustee Cole. 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 Self Supporting Program

Committee Chair Patel stated the committee reviewed the Self Supporting Program the College of Journalism and Communications is requesting to add as a new graduate concentration in Digital Journalism and Multimedia Storytelling in the Master of Arts in Mass Communication program during the February 6 Pre-Meeting. This program will help educate the next generation of journalist who can build the public's trust in media and act in the public's interest.

Committee Chair Patel asked for any questions or further discussion. He then asked for a motion to approve Action Item AFSSPRSC3 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 Cole. 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.

AFSSPRSC4 Instruction Site: Jacksonville Site

Committee Chair Patel stated a new Instructional Site in Jacksonville will provide clearly defined programs and services that will lead to graduate degrees which reflects a commitment by the university for the foreseeable future.

Committee Chair Patel asked for any questions or further discussion. He then asked for a motion to approve Action Item AFSSPRSC4 for recommendation to the Board for its approval on the Consent Agenda, which was made by Trustee Zucker, and second which was made by Trustee

Cole. 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 Hamilton Center Update

Hamilton Center Director Will Inboden provided an update on faculty recruitment for the Hamilton Center. He thanked President Sasse and Provost Angle for their support and leadership. He stated the Hamilton Center's ambition is to make UF the top university in the nation for research and teaching on Western Civilization. He wants other universities to notice UF. The Hamilton Center has been building their faculty and expect to announce a new class of 20-25 faculty next month. The Center has been spreading the word and faculty are reaching out to them about coming to UF. They have been hiring the following 3 types of faculty: Rising stars (junior scholars), Diamonds in the rough (accomplished scholars teaching in fields not taught at other universities), and Senior luminaries (established scholars).

Director Inboden indicated they have designed a curriculum for students, currently with 29 classes offered and 600 students enrolled. He indicated that he and President Sasse have been teaching "The American Idea" this semester. The Hamilton Center is currently working on 5 proposed majors that are multidisciplinary required common core: 1. Politics, Philosophy, Economics and Law, 2. Great Books and Ideas, 3. History, Strategy and Statecraft, 4. American Foundations, Ideals and Law, and 5. Science, Technology, Ethics and Society. The goal of these majors is to provide students with 3 things: knowledge or knowledge on specific topics, skills, and values.

The Hamilton Center has been holding campus events on Civil Discourse and Public Engagement. He has been working with Bob Graham Center Director Matt Jacobs who has been very helpful. Trustee O'Keefe asked if the campus events were on a website where someone could watch them. Director Inboden indicated they just created a new website and the links can be found there, as well as on their YouTube channel. President Sasse indicated the news is making the Hamilton Center sound like a right-wing movement in academics and that is not the case. We are distinguishing between education and ideology, style and format of teaching to big debates, and the magnitude and quality of teaching is world class. Committee Chair Patel shared his excitement for our recruitment of world class faculty.

5.2 Rankings Update

Vice President Ray Sass provided an update on rankings specific metrics and strategic initiatives that have already been launched or will be launched. The four focal points to improve outputs and rankings are: Research faculty productivity, Student outcomes, Reputation, and Data at speed. Many iniatives are already underway with further iniatives in development.

The following strategic initiatives are underway for Faculty/Research: Faculty Honorifics, Faculty Citations & Corrections, Faculty Profiles, and Faculty Research Moonshot. Board Chair Hosseini stated the original goal of a 16:1 ratio for a Top 5 ranking was to increase the quality of faculty with the need to hire more and increase pay for our current faculty. He asked how the 15:1 ratio goal will be accomplished. President Sasse noted the 15:1 ratio is the directional goal. The

definition of faculty is important as to what counts as "faculty." We need to look at what faculty advisors can be counted as "faculty." VP Sass stated they are working to move forward on the goals of increased salaries for current faculty and recruiting more faculty with research, although this has not been fully vetted through the organization.

5.3 Professional Schools Passage Rate Update

Committee Chair Patel stated we have completed a deep dive into how students perform on professional exams and what the areas are for improvement. Apart from the Law School passage rate, the university is doing well. We have focused our effort on the Law School. He indicated Provost Angle will provide an overview of all professional school passage rates and then Interim Dean Merritt McAlister will provide an update on the steps the Law School has taken to help students pass the bar exam.

Provost Angle stated that over a year ago he was asked by Board Chair Hosseini why the Veterinary School passage rate decreased. He indicated we were not able to capture as much data as we would have liked to because there is not much data that is publicly available for professional exam passing rates. Overall, we perform really well. The Veterinary School rates decreased due to tightening up on the exam, which caused passing rates for schools nationwide to decrease. In comparison, our passing rates decreased less than the national average. Based on the data we acquired, the Law School was the only professional school with issues we need to work on.

Interim Dean McAlister shared the remediation plan for the Law School. She indicated stakeholders, constituents, prospective students and faculty, care a lot about where we are in the U.S. News rankings. Overall, we are ranked 22 overall in the nation and in the Top 30 in 5 different subject areas. From 2016-2023, we rose from 48 to 22 in overall rankings. The U.S. News rankings metric used to calculate employment outcomes has changed and will focus on 3 measures: job placement 10 months after graduation, weighted first-time bar passage, and ultimate bar passage rate. This metric change increased our overall outcomes substantially from 21% to 58%. Bar passage consists of 2 data points: first-time passage and ultimate bar passage. Our overall bar passage is 25th pecentilewith the current U.S. News rankings methodology. First-time passage is 18 percentile (increased from 3 percentile) and ultimate bar passage is 7 percentile(new metric). Our differential is strong for first-time bar passage over time compared to the national average. However, our weighted bar passage rate for first-time takers is the lowest among Top 50 institutions. This is not where we want to be and there is room for improvement. One of our biggest challenges is the Florida Bar exam which is one of the most comprehensive in the nation that includes multiple choice and essay. Our first-time bar passage rates for 2023 out of state takers was 91.67% compared to Florida in state takers of 79.52%.

We have borrowed practices from peer institutions that work with the students from the 1st year (Leveling Up) through the 3rd year (Chomp the Bar). Interim Dean McAlister is confident that we will see improved results in July.

Committee Chair Patel stated the key takeaway to changes in how the U.S. News calculates this metric is to have better bar passage rates and to secure employment for graduates as quickly as

possible after law school. He appreciates everything Interim Dean McAlister is doing to get our graduates hired.

Trustee Cole commented that FIU has had success and we should look at what they do. In the City of Miami, FIU students do not have a hard time finding jobs. He hopes the new plan includes teaching students to pass the bar, even if it's not called that. Interim Dean McAlister indicated we are implementing the best practices from other schools (including FIU), but it will take time to see results. We have over 90% compliance with students taking bar prep classes using the same instructor as FIU. We have implemented the methodology the University of Georgia uses: hands on tutoring and individual work on student support for writing workshops to develop their writing skills. We have gone from doing very little to doing everything we can.

Board Chair Hosseini asked when students take the bar exam this July, what do we expect the pass percentage to be? Interim Dean McAlister indicated they expect 85% in Florida and over 90% out of state. Board Chair Hosseini asked how many students are in each graduating class. Interim Dean McAlister indicated 180-220 students, depending on the year. Board Chair Hosseini stated if our passage rates do not improve, it will have a big effect on the Law School. Last year we obtained $10M in special funding for the Law School, with $5M recurring. If we don't get to 90% or close to it, the Board will take action. Committee Chair Patel indicated with the change in this metric from 3% to 25%, other law schools in the nation will focus on this metric as well and teach the bar. Interim Dean McAlister indicated the law faculty have been more receptive and share your deep concern. They have been hyper focused on it this year. Trustee O'Keefe asked if we know what part of the test that the students don't pass. Interim Dean McAlister indicated that we only know whether they failed the Florida portion or the multi-state portion, we do not receive the granular data.

5.4 Huron Report Update
Committee Chair Patel stated this item will not be discussed due to time constraints.

5.5 Admissions Update
Vice President Mary Parker provided an Admissions update on the Class of 2028. Total applications received was 74,300, which is the highest it has been, along with 17,023 Honors applications received. Transfer and graduate student applications are ongoing. Board Chair Hosseini indicated that the transfer applications are going down and asked how we could better manage the transfer student process. President Sasse stated we recognize where admissions processes need to be centralized. VP Parker shared the university wide Admissions Release event was held on February 23. It was a collaboration with many campus partners, including President Sasse who called a few students personally to tell them they had been accepted into UF.

VP Parker stated the Federal Application for Federal Student Aid (FAFSA) overhaul for the 2024-25 award year impacted 177 students who receive Pell grants, but the new formula would not be eligible for Pell. We are working on what they can do to help students. Some students who were not Pell eligible previously are now eligible. President Sasse said that the change made students anxious and VP Parker reached out to students to let them know what was happening.

President Sasse noted that UF is radically underpriced, most students attend UF for free through Bright Futures.

VP Parker indicated we are moving forward with Early Action Admission, which will put UF in line with its highly selective peers. This will provide more certainty to students earlier. In 2025, students will receive notice of admission on January 24, 2025. UF will be the first public university to release offers and scholarships. President Sasse gave kudos to VP Parker for making these changes, which Trustee Brandon seconded. Trustee Cole stated it was important to have that change. Trustee Zucker agreed and indicated this has been coming for a long time. This is such good work and a great team.

VP Parker shared methods her team along with Student Life used in spring 2024 to improve student retention with proactive outreach. With 1 week of dedicated calling, we were able to reach all 334 unregistered students. Of those 334 students, we were able to retain and enroll 132. The reasons for students not enrolling were: Past due balance and Changes in family income. She indicated that they are also reaching out to students who are requesting to transfer their transcripts to other schools to find out what the challenges at UF are.

VP Sass stated they are launching a pilot program with Engineering and Education to direct admit students into the colleges once they have been admitted into UF. President Sasse indicated that thinking through admissions into programs on the student side and faculty side will increase the quality of both and our yield numbers.

5.6 Faculty Senate Update

Trustee and Faculty Senate Chair Danaya Wright stated this will be her last board meeting. She thanked Board Chair Hosseini, President Sasse, the Trustees, and everyone on the administrative team for their support. She introduced Faculty Senate Chair-Elect Sarah Lynne and noted she will be an incredible asset to the Board.

Trustee Wright provided an update on the initiative to reduce faculty administration burdens. She thanked Board Chair Hosseini and President Sasse for their morale and financial support of this project, as well as several members of the Senior Administration. McKinsey consultants concluded our faculty spend 40% on administrative activities. The most common areas faculty are experiencing administrative burdens are – HR, Reporting & Compliance, Research, Finance, and Students & Teaching. The overarching guiding principle is to strike the right balance between improving the faculty experience while protecting the institutions interests.

President Sasse thanked Trustee Wright for her diligence and hard work on this project. He noted Vice President Eldayrie is working on the Workday system that will integrate and improve many of these administrative burdens.

Trustee Wright reviewed the Ongoing Initiatives:

- **Civil discourse resolution:** On the March 21 Faculty Senate agenda.

- **Countries of Concern restrictions:** This remains a significant issue for faculty and the effects on faculty research and labs. The Board of Governors (BOG) has been asked to look at this issue again and they have been receptive.
- **Academic Excellence Initiative:** Chair-Elect Sarah Lynne will chair a task force to rethink the general education requirements and continue to ask for more resources for the Center for Teaching Excellence.
- **Post-tenure Review:** Underway. She thanked Associate Provost Chris Hass and Senior Advisor to the President and Associate Provost Diane Schanzenbach for creating a process that creates the least administrative burden for the faculty.
- **Bathroom audit:** Underway.

Trustee Wright concluded with comments on the termination of DEI. This decision has had a negative effect on our reputation and our ability to recruit top faculty and students. She stated the faculty understand it is a state law and why it had to be done. However, It is hard to square with the BOG requirement that state universities promote and protect equal access and opportunity. She knows Faculty Senate Chair-Elect Sarah Lynne will do her best to represent the faculty and that we will continue to work together with the Board to make UF the best it can be for all members of the Gator Nation.

5.7 Student Body President Update

Trustee and Student Body President Olivia Green provided her final Student Body President update. She thanked Provost Angle for continuing to fund the 24/7 libraries into the Spring semester and thanked the Board for providing student autonomy in Student Government. She emphasized student autonomy championed this administration by being able to use Activity & Service (A&S) fees to fund student initiatives and relieve the pressure from the university.

Trustee Green provided an update on the progress of several projects and initiatives:

- **South Terrace project for Veteran's Commemoration:** This project began under Student Body President Cooper Brown's administration. Due to increased construction costs, the project has been stunted for 2 years. $272,698 in funds were needed for completion. The Executive Committee transferred reserves of $275,000 to help complete the project by June 30, 2025. She expressed her excitement for the completion of this important project.
- **Gator Network:** This initiative is a network (like LinkedIn) to connect UF students and alumni. Increased push to create a mentor/mentee program within the Network to help with outreach and to increase active viewership. This is a continued collaboration with Career Connections Center (C3) and UF Alumni Association (UFAA).
- **Enacted Initiatives:** Gator Needs – Convenience Corner, Research Rescue, and Coins for Clean. Community Building – Homebound Helper and Football Ticket Giveaway. Inclusion – Cultivating Creativity.

Trustee Green concluded by announcing John Brigman as the Student Body President-Elect. She expressed her gratitude to the Board for this experience. For a 2nd generation Gator, it has been very impactful, and she doesn't take it for granted. As Student Body President, she has an obligation to represent the students she serves. She echoed Trustee Wright's sentiments on the recent DEI program elimination and added the need for updated communication to the students.

While she understands this was a state decision, the students are concerned how this will ultimately affect them in the future. The students don't have the opportunity to see the amazing changes the Board is making. Having that updated communication to ensure students are aware they have a supportive and inclusive environment would be very beneficial.

President Sasse thanked Trustee Green for the opportunity to have worked with her and her thoughtful approach to student needs.

5.8 Student Life Update

Vice President Heather White provided an update on the First-Generation Students and Machen Florida Opportunity Scholars (MFOS). She stated what is done to foster these students from the beginning to the end. She shared a video of a student who was a MFOS student and how his life was impacted in positive ways by the program. She outlined the vision and model to create a roadmap for success individualized for each student.

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 11:58 a.m.

UF | Board of Trustees
UNIVERSITY of FLORIDA

COMMITTEE ON ACADEMIC, FACULTY AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC COMMUNICATIONS
Virtual Meeting Minutes
Monday, April 29, 2024
University of Florida, Gainesville, FL
Time Convened: 11:02 a.m.
Time Adjourned: 11:51 a.m.

Committee and Board members present:
Rahul Patel (Committee and Board Vice Chair), David L. Brandon, John E. Brinkman, Richard P. Cole, Christopher T. Corr, James W. Heavener, Morteza "Mori" Hosseini (Board Chair), Daniel T. O'Keefe, Marsha D. Powers, Fred S. Ridley, Danaya C. Wright, Patrick O. Zalupski and Anita G. Zucker.

Others present:
Ben Sasse, President; Scott Angle, Provost and Senior Vice President for Academic Affairs; Melissa Curry, Vice President for Human Resources; Dan Dillon Jr., Vice President for Marketing and Senior Advisor; Kurt Dudas, Vice President/Jacksonville Lead; Elias Eldayrie, Vice President and Chief Information Officer; Amy Hass, Vice President and General Counsel; Taylor Jantz, Interim Chief Financial Officer; Mark Kaplan, Vice President for Government and Community Relations and University Secretary; David Kratzer, Senior Vice President for Construction, Facilities, and Auxiliary Operations; Maria Gutierrez Martin, Interim Vice President for Advancement; Stephen Motew, UF Health President and System Chief Executive Officer; Mary Parker, Vice President and Chief Enrollment Strategist; Jim Staten, Senior Advisor to the President; James Wegmann, Vice President for Communications; Heather White, Vice President for Student Life; Cathy Lebo, Associate Provost and Director of Institutional Planning and Research; 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 11:02 a.m.

He extended a special welcome to new Trustee and Student Body President John Brinkman. Trustee Brinkman shared his gratitude and looks forward to working with all the members of the Board this coming year.

2.0 Verification of Quorum
Provost Scott Angle verified a quorum with all members present.

3.0 Action Items

AFSSPRSC1 UF Accountability Plan

Committee Chair Patel stated the UF Accountability Plan is an annual report tied to the state plan for higher education. It is used to align institutional goals with state priorities, and to distribute strategic funding. All twelve institutions in the State University System complete the plan each year. Associate Provost Cathy Lebo is appointed as the University Data Administrator to oversee this process. UF must also submit an annual Data Integrity Certification, based on an internal audit, to prove that the data behind all the metrics are accurate and complete.

He reviewed the 3 key groups of metrics in the UF Accountability Plan:

- **Performance Based Funding Metrics (PBF)**
- **Preeminent Funding Metrics (PFM)**
  - He noted the first two state of Florida universities to receive preeminent status were UF and FSU. USF qualified for preeminent status in 2018. FIU was named as an emerging preeminent institution in 2019.
- **Key Performance Indicators (KPI)**

Committee Chair Patel asked Provost Scott Angle and Associate Provost Lebo to review the UF Accountability Plan.

Provost Angle outlined the 3 basic principles for how we revise our goals each year to better reflect our ambitions and challenges. First, we revise only a few goals per year to not overwhelm ourselves. Secondly, we have never lowered our goals, we always improve them. Lastly, we set enhanced goals that are both achievable and realistic.

Associate Provost Lebo reviewed the UF Accountability Plan by summarizing the metrics, benchmarks set by the state, goals we set for the university, and changes in scores from last year to this year in the following 4 categories: Performance Based Funding, Preeminent Funding, License & Certification, and Enrollment.

Performance Based Funding (PBF)

UF's PBF score increased from 90 to 92 points from 2023 to 2024, which she noted is sufficient to meet our top 3 goal amongst state universities. UF gained two additional overall points on two metrics: 1 point on our percentage of students who graduate or are either still seeking additional education or employed and making at least $40K and 1 point from improving our three-year graduation rate for students who transfer with an AA from the Florida college system. Overall, UF improved performance on 8 of 11 factors (PBF's #1, #2, $3, #5, #8, #9a, #9b, #10).

UF decreased performance on 3 of 11 factors (PBF's #3.1, #6, #7). She explained the reason behind the decreased performance in these three metrics:

- PBF #3.1 Average Cost to Student: This decrease is misleading as our average cost to student is negative. We technically improved on this metric by being slightly less negative, but we are still less than $0 on the average cost based on the way the state calculates.

- PBF #6 PSE Bachelor Degrees: UF remained above the state goal of 50% in bachelor's degrees awarded in areas the state has designated as programs of strategic emphasis. However, our actual percentage was 59.5% which was short of our goal of 60.0%.
- PBF #7 University Access Rate: We continue to have challenges against the state goals for the percentage of undergraduates who are Pell recipients.

Board Chairman Hosseini emphasized that PBF #7 is a metric he and President Sasse need to work on with the Board of Governors to change the formula to compare us to our national peers, not our sister state universities. The current access rate automatically has UF only being able to achieve 5 out of 10 points because we are becoming more selective. As we increase our selectivity, our access rate score will continue to decrease. Overall, for the maximum 100 points, UF is starting out at 95. We should be judged in comparison to our national peer universities, not our sister state universities because our strategic goals are not the same. This change is something that the Board of Governors needs to take into consideration at their future meetings.

President Sasse stated he is completely aligned with Board Chairman Hosseini's comments. He noted the Board of Governors are open to having conversations on how to upgrade performance based funding in the future to compare us to our national peers. This is a good example of the unintended consequence of how the formula works now. We should be having a conversation where we couldn't be penalized for the fact that we have these price controls in place, and we need more revenue to be able to fund the talent upgrade on the faculty. He added he looks forward to working with the Board and the Board of Governors on this.

Board Chairman Hosseini noted that at the time this PBF ranking was created, we never thought that the market rate was going to stay stagnant. President Sasse agreed and reiterated he is aligned with the Chairman's comments. We want drive us toward more excellence. The formula is from years ago and needs to be reformulated for where we are now. Provost Angle agreed. He added comparisons to several of our national peer institutions. UF scored 22%, University of Michigan scored 18%, and University of Virginia scored 15%. We do well compared to our aspirational peers. He noted the state of California system tends to be a little higher than we are, but there are other factors to that. Board Chairman Hosseini agreed and noted they have their own state Pell grant and federal Pell grant, while the state of Florida system only has the federal Pell grant.

Associate Provost Lebo continued by providing background on how we establish our goals for the PBF metrics. We begin by taking into consideration the state plan, which establishes the benchmarks. We certainly are looking at scores of our peer institutions and at our own position. We are trying to set realistic and achievable goals. We know there is a new state plan to be released this summer, which may change the next iteration of this effort.

She outlined the 4 changed PBF goal funding metrics for 2025:
- PBF #1 Enrolled or Employed: UF goal increased from 79% to 80% to align with new state goal.
- PBF #2 Median Wages: UF goal increased from $44K to $50K to align with new state goal.
- PBF #4 Four-year Graduation Rate: UF goal previously planned increase from 74% to 75%.

- PBF #10 Endowment: UF goal previously planned increase from $2.2B to $2.291B.

She provided additional background on PFB #10 Endowment and PBF #4 Four-Year Graduation Rate. UF's endowment increased 2.7% between FY22 and FY23. Our goals are based on a conservative 6% return. The endowment is affected by returns and losses on the investments, new cash increases to the base, the payout, and operating costs. For PBF #4 Four-year Graduation Rate, the metrics measured by the state include both undergraduate Main students and Online students. For the U.S. News rankings, there are two separate rankings for undergraduate Main students and Online students. Compared to our national peer institutions, we have good graduation rates, but there is room for improvement. Compared to our sister state universities, we are in the top 4.

Provost Angle noted we have identified some of the bottlenecks that hold up our four-year graduation rates. Vice President Mary Parker's Enrollment Management office and Vice President Heather White's Student Life office have been working diligently on how we can improve. Associate Provost Lebo added her office coordinates with the Career Connections Center to administer a graduation survey to help identify time to degree challenges. She shared that UF is part of the American Talen Initiative (ATI) project. This project looks at Pell access rate trends. VP Parker added the ATI is a national project that many of our top five peers are part of. The group meets to discuss how large public flagships can address the access rate issue. Our data is compared to the other universities in the group. ATI is helping us find ways we can better improve our access rates on a national level.

Preeminent Funding (PRM)

Associate Provost Lebo noted there are 12 metrics a university needs to achieve to be designated as a preeminent institution. UF always achieves 12 out of 12 on these metrics. In FY2023, we improved on 7 metrics, received lower scores on 2 metrics, and had no change on 3 metrics.

For FY2025, our UF goals are to improve scores in 5 PRM metrics:

- PRM C Freshman Retention: UF goal increased from 96% to 97%.
- PRM D Four-Year Graduation Rate: UF goal increased from 75.3% to 76.9%.
- PRM E National Academy Memberships: UF goal increased from 36 to 37.
- PRM F-AP24 Research Expenditures (total): UF goal increased from $1.086B to $1.250B.
- PRM G Research Expenditures (Sci Engr non-med): UF goal increased from $641M to $767M.

License & Certification - First-Time Pass Rates

Associate Provost Lebo explained there are two standards that are used to examine the license and certification pass rates. The first is a national benchmark in each discipline and the second is the goal we set for UF. In all 8 disciplines, UF passed the national benchmark in every field the last four years.

Board Chairman Hosseini asked for clarification on why our Veterinary pass rate dropped to 92% compared to previous years pass rate of 98%. Provost Angle indicated the national standard was changed as they tried to reduce the pass rate for the entire country. Technically, UF's score decreased less than the national average, so we improved in comparison to other institutions.

Enrollment
Associate Provost Lebo stated as part of the UF Accountability Plan, we are required to include our anticipated enrollment for the next 5-6 years. In tandem with VP Parker's Enrollment Management office, we estimated slight increases from year to year for undergraduate and graduate students.

Board Chairman Hosseini emphasized the importance of further discussion with the President and Board on fall undergraduate headcount. The Board has been focusing on increasing graduate and post-doctoral enrollment. His recommendation to the President and Board is a flat enrollment rate of 38,000 for undergraduates through 2028. President Sasse and Committee Chair Patel expressed their support of the recommended change.

Associate Provost Lebo continued by sharing the significant increase goal for non-resident enrollment from 13% to 21%. Non-residents enrollment includes out-of-state and international students and is based on residency status for tuition. VP Parker asked for clarification on if the 21% is for overall undergraduate enrollment. She stated the 21% was given as our goal for FTIC of the freshman class only, not overall undergraduate enrollment and should be adjusted. Associate Provost Lebo agreed.

Board Chairman Hosseini emphasized the importance of having this conversation of increasing our percentage of out-of-state students, not to exceed 25%, to ensure the vision of the President and Board comes to fruition. We need to make sure this is included in our goals that we submit to the Board of Governors.

He asked for confirmation from President Sasse and Committee Chair Patel to move forward with the two changes discussed: the fall undergraduate headcount to remain at 38,000 and the total of out-of-state undergraduate student maximum to not exceed 25%. Both confirmed their support of the two changes to the report before submission.

Trustee Wright indicated she noticed an error in the numbers on the UF Accountability Plan endowment page. Associate Provost Lebo indicated she would review the page and make any corrections needed.

Committee Chair Patel asked for any questions or further discussion. He then asked for a motion to approve Action Item AFSSPRSC1 for recommendation to the Board for its approval on the Consent Agenda subject to the two changes discussed including a fall undergraduate headcount to remain at 38,000 and the total out-of-state undergraduate student maximum to not exceed 25%. A motion was made by Trustee Zucker and second was made by Trustee Cole. 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 Tenure Upon Hire
Provost Angle summarized the 6 Tenure Upon Hire cases. He noted all cases have met the criteria for tenure and have been recommended to the Board by the Provost and President to receive tenure. The Tenure Upon Hire cases are as follows:

- **College of Pharmacy**
  - Dr. Marco Bortolato, Professor, Department of Pharmacodynamics
- **Herbert Wertheim College of Engineering**
  - Dr. Girish Chowdhary, Professor, Department of Mechanical and Aerospace Engineering
  - Dr. Rickard Ewetz, Associate Professor, Department of Electrical and Computer Engineering
  - Dr. Pamela Wisniewski, Associate Professor, Department of Computer and Information Science and Engineering
  - Dr. Jie Xu, Associate Professor, Department of Electrical and Computer Engineering
- **College of Education**
  - Dr. Laura Shannonhouse, Associate Professor, School of Human Development and Organizational Studies in Education

Committee Chair Patel asked for any questions or further discussion. He then asked for a motion to approve Action Item AFSSPRSC2 for recommendation to the Board for its approval on the Consent Agenda, which was made by Trustee Wright, and second which was made by Trustee Brandon. 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.

President Sasse expressed his thanks to the Board, to Committee Chair Patel, and Board Chairman Hosseini for the continued fast paced rhythm in approving tenure upon hire cases. He added Provost Angle and his team have done a great job recruiting new additional faculty talent.

5.0 New Business

There was no new business to come before the committee.

6.0 Adjourn

There being no further discussion, Committee Chair Patel adjourned the meeting at 11:51 a.m.

UF | Board of Trustees
UNIVERSITY of FLORIDA

COMMITTEE ON ACADEMIC, FACULTY AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC COMMUNICATIONS
ACTION ITEM AFSSPRSC1
June 13, 2024

SUBJECT: Tenure Upon Hire

BACKGROUND INFORMATION

The Chairs and Deans have recommended to the Provost and Senior Vice President for Academic Affairs that 1 faculty member be granted tenure commencing with their appointment. This individual meets the criteria set forth in the University's tenure and permanent status policy and have been recommended by the Provost and President to receive tenure. Attached is a Summary of the Tenure Upon Hire case.

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: J. Scott Angle, Provost and Senior Vice President for Academic Affairs

Approved by the University of Florida Board of Trustees, June 13, 2024

_____ _____

Morteza "Mori" Hosseini, Chair Ben Sasse, President and Corporate Secretary

UF | Board of Trustees
UNIVERSITY of FLORIDA

Tenure Upon Hire Summary
June 13, 2024

Dr. Mark Kistler – Institute of Food and Agricultural Sciences
Professor, Department of Agricultural Education and Communication and Center Director, Indian River Research and Education Center
Dr. Mark Kistler earned his B.S. and M.S. in Agriculture, Animal Science from the University of Florida in 1987 and 1993 and his Ph.D. in Agricultural Education from Texas A&M University in 2002. His prior institution is Abraham Baldwin Agricultural College. Dr. Kistler is a distinguished scholar and leader in his field and has been inducted into the Academy of Fellows of the American Association of Agricultural Education in 2016.

UF | Board of Trustees
UNIVERSITY of FLORIDA

COMMITTEE ON ACADEMIC, FACULTY AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC COMMUNICATIONS
ACTION ITEM AFSSPRSC2
June 13, 2024

SUBJECT: Annual Tenure Awards

BACKGROUND INFORMATION

The Board of Trustees has the authority to award tenure and permanent status. Provost Angle 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: To be provided.

Submitted by: J. Scott Angle, Provost and Senior Vice President for Academic Affairs

Approved by the University of Florida Board of Trustees, June 13, 2024

_____ _____

Morteza "Mori" Hosseini, Chair Ben Sasse, President and Corporate Secretary

UF | Board of Trustees
UNIVERSITY of FLORIDA

COMMITTEE ON ACADEMIC, FACULTY AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC COMMUNICATIONS
ACTION ITEM AFSSPRSC3
June 13, 2024

SUBJECT: Self-Supporting Programs

BACKGROUND INFORMATION

Pursuant to Board of Governors Regulation 8.011, the following Colleges are requesting approval of Self-Supporting Programs:

The College of Agricultural and Life Sciences is proposing to add a new concentration within the Ph.D. in Microbial and Cellular Data Science (CIP 26.0503). The program will serve an unsupported segment of online degree completers in the life sciences who are interested in completing a Ph.D. but unable to attend a residential doctoral program.

The College of Liberal Arts and Sciences is proposing to develop a fully online, self-supporting Master of Arts in Economics with a concentration in Econometrics and Data Analysis (CIP 45.0603). This program will enroll working professionals from around the State, the nation, and the globe. It will accommodate a new population of students that is not currently served.

PROPOSED COMMITTEE ACTION

The Committee on Academic, Faculty and Student Success, Public Relations and Strategic Communications is asked to approve the above Self-Supporting Programs 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: State University System of Florida Board of Governors Self-Supporting Programs Request Form

Submitted by: J. Scott Angle, Provost and Senior Vice President for Academic Affairs

Approved by the University of Florida Board of Trustees, June 13, 2024

_____ _____

Morteza "Mori" Hosseini, Chair Ben Sasse, President and Corporate Secretary

STATE UNIVERSITY SYSTEM OF FLORIDA

State University System of Florida Board of Governors

REQUEST TO OFFER A COLLEGE-CREDIT SELF-SUPPORTING OR MARKET TUITION RATE EDUCATION COURSE OR PROGRAM WHEN OFFERED AS PART OF AN EXISTING APPROVED PROGRAM (SHORT FORM)

In accordance with Board of Governors Regulations 8.011 & 8.002

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

University of Florida
Institution Submitting Proposal

Fall 2024/Spring 2025 or earliest possible
Proposed Implementation Term

College of Agricultural and Life Science
Name of College(s) or School(s)

Microbiology and Cell Science
Name of Department(s)/Division(s)

Microbial and Cellular Data Science
Academic Specialty or Field

Ph.D.
Complete Name of Degree

26.0503
Proposed CIP Code (2020 CIP)

Proposed Program Type

☐ **Market Tuition Rate Program**
- ☐ **Online**
- ☐ **Continuing Education**

☒ **Self-Supporting Program**

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 before the program's initiation.

Date Approved by the University Board of Trustees

President's Signature **Date**

Board of Trustees Chair's Signature **Date**

3/13/2024 | 11:44 AM EDT

Provost's Signature **Date**

Projected Enrollments

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.

Implementation Timeframe	HC	FTE
Year 1	5	2.5
Year 2	10	5
Year 3	15	7.5
Year 4	20	10
Year 5	25	12.5

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 the following.

The PhD in Microbiology and Cell Science with a concentration in Microbial and Cellular Data Science will operate as an 18-credit concentration within the current Ph.D. program in Microbiology and Cell Science. A master's degree in a life science discipline (biology, microbiology, genetics, biochemistry, etc.) will be required for admission to this PhD concentration. The ideal applicant to this program will be a successful graduate of the online Master of Science in Microbiology and Cell Science (MCS) with concentration in Medical Microbiology and Biochemistry or the Online MS in MCS with concentration in Microbiome in Health and Disease. Students with a completed master's degree in life science from other programs or institutions will also be considered. Ultimately, this program will serve a heretofore unsupported segment of online degree completers in the life sciences who are interesting in completing a PhD but unable to attend a residential doctoral program.

Assuming admitted students transfer in 30 credits from the Online MS in MCS or from a master's degree completed at an outside accredited institution, 60 credits will be required to complete the online PhD degree concentration. Of those 60 credits, 30 credits of required coursework are listed below: The coursework requirements for the Concentration in Microbial and Cellular Data Science will include a minimum of 18 credits in the following:

Concentration Core Courses (14 credits):		
Course no.	Course title	Credits
BSC 6438	R for Functional Genomics	3
BSC 6459	Fundamentals of Bioinformatics	3
MCB 6937	Python Programming	3
MCB 6796	Analysis, Interpretation, & Visualization of Micro. Data	3
MCB 6318	Comparative Microbial Genomics	2
Elective Courses: (at least 4 credits)		
MCB 6670C	The Microbiome	3
MCB 6937	AI in Agriculture and Life Sciences	3
MCB 6937	Synthetic Biology	3
MCB 6095	Careers in Microbiology and Cell Science	1
MCB 6096	Innovation Project Management for Life Sciences	1

Most of the graduate level courses taught by the UF MCS department would be available as optional elective credit, however, those courses would need to be completed in addition to the above concentration electives. Optional elective credits would require faculty advisor approval.

Journal and Seminar Requirement (at least 6 credits of each):		
MCB 7922	Journal Colloquy: Microbial & Cellular Data Science	6
MCB 6930	Seminar	6

Please note that all students in the MCS PhD programs are expected to take journal colloquies and seminars each semester in the fall and spring. These courses are not concentration specific. Only the Journal Colloquy will be synchronous (but also online). Beyond these required courses, the number of Supervised and Advanced Research credits will vary depending on the needs of the student and the requirements of the graduate school.

Research will be guided by departmental faculty advisors. Students in the online program will have the opportunity to interview potential faculty advisors during the admissions process. Once a match has been made, the student will be assigned a faculty advisor by the department at the beginning of their first term. Virtual communication by video, email, and phone will be frequent, probably every business day. The faculty advisor will formally assess the PhD student's progress after each academic term. If after the end of the first year either the student or faculty is dissatisfied with the match, a new advisor will be appointed. A graduate committee will be appointed for each student after 30 of the 60 credits required are completed. At that point, a student is expected to form a dissertation committee. From that point, overall research productivity will be assessed by the graduate committee each academic year. A large part of that assessment will be research publications in the peer-reviewed literature.

We assume most (if not all) students in the MCS PhD with concentration in Microbial and Cellular Data Science will be working full-time throughout their degree. As such, these students will most likely be completing between 3 and 6 credits per semester with some variation depending on their availability. Assuming these students pass qualifying exams on their first attempt and produce an appropriate amount of research, we anticipate time to degree would be between 4-6 years, which is similar to face-to-face PhD cohorts at UF MCS.

The PhD experience will be similar for all students, both on-campus and online, with the exception that the online students will be doing their dissertation work remotely. Access to faculty mentors will be similar but will be done virtually for online students. The department will establish a peer-mentoring system for our online students which will include formal meetings twice per term but will be free to meet informally at their discretion. An online orientation which includes a full guide of department resources and a link to the student handbook will be provided to the students and available asynchronously.

Drs. Jennifer Drew (MCS) and Sebastian Galindo (Agricultural Education and Communication Dept.) will work together on the evaluation of this program and publish the results as we have done with the MCS online BS degree program and in progress for the online MCS MS with concentration in Medical Microbiology and Biochemistry. The activities below are approved under IRB201601296. The evaluation will include a comparison with standard on-campus Ph.D. program and an evaluation of: 1) retention, 2) time and progress to degree, 3) program enrollment over time, 4) number of faculty advisors involved, 5) number of credits taken by term on average per student and overall across all students, 6) tracking of standard milestones toward degree such as the timing and success of qualifying exams, 7) participation of the students in meetings, seminars, and symposia will be tracked, 8) tracking of graduate student committee establishment and meetings, and 9) conducting separate focus groups for current students and faculty advisors in an anonymous manner. Evaluation of data from these activities will be reviewed every two years by our online Ph.D. committee to implement new policies and procedures that improve student outcomes.

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

- **Critical Workforce**
  - ☐ Education
  - ☐ Health
  - ☐ Gap Analysis
- **Economic Development**
  - ☐ Global Competitiveness
  - ☒ Science, Technology, Engineering, and Math (STEM)

Note, the program is listed here as a program of strategic emphasis based on the list provided by the BOG that is active through the 2023-24 academic year, but the program is no longer listed effective 2024-25.

☐ **Does not qualify as a Program of Strategic Emphasis.**

Indicate if the program qualifies for the Programs of Strategic Emphasis Waiver.

☐ Yes
☒ No

If yes, the provost or their designee should contact Board staff to discuss prior to requesting any changes to the program.

CIP CODE	CIP TITLE	CATEGORY
11.0101	Computer and Information Sciences	STEM
11.0103	Information Technology	STEM
14.0801	Civil Engineering	STEM
14.0901	Computer Engineering	STEM
14.1001	Electrical and Electronics Engineering	STEM
27.0101	Mathematics	STEM
40.0801	Physics	STEM
52.0301	Accounting	GAP ANALYSIS
52.0801	Finance	GAP ANALYSIS
52.1201	Management Information Systems	STEM

C. If the program qualifies as a Program of Strategic Emphasis, provide a justification for charging higher tuition for this program.

Not applicable – as the program will be charging the same tuition for in-state students and a lower out-of-state tuition for out-of-state students.

Institutional and State-Level Accountability

II. Need and Demand

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

Scientific and technological advances within the life sciences have enabled the generation of very large datasets that must be processed, stored, and managed computationally (Sun et al., 2022). Researchers increasingly require data science skills to work with these datasets at scale in order to convert information into actionable insights. Because this significant rise in sequencing output has not been accompanied by a proportional increase in computational resources, whether in terms of available processing capacity or data integration, many microbiome sequences are used only once, with limited potential for data reuse beyond the

original study. (Kyrpides et al., 2016). Microbiologists in more data driven specializations are needed to analyze these vast repositories of data. Data science empowers microbiologists to engage with massive amounts of data available in the field, and enables them to:

1. Analyze and interpret this data effectively, extracting valuable insights about microbial behavior, interactions, and characteristics.
2. Identify patterns and correlations within microbiological data that may not be immediately apparent to researchers. This capability aids in the discovery of microbial trends, associations, and potential causative factors, leading to deeper understanding and more accurate predictions.
3. Develop predictive models for microbial behavior, disease outbreaks, antibiotic resistance, and other critical factors. These models enhance decision-making processes in areas such as public health interventions, clinical treatment strategies, and environmental management.
4. Contribute to advancements in microbiological research by enabling the integration of multi-omics data (genomics, transcriptomics, proteomics, etc.) and facilitating systems biology approaches. These interdisciplinary approaches help unravel complex microbial interactions, host-microbe relationships, and mechanisms of microbial pathogenesis.
5. Use bioinformatics tools and algorithms to assist in genome annotation, comparative genomics, metagenomics, and phylogenetic analysis, among other applications relevant to microbiology.

Academic Outlook

For the purposes of this analysis, we used four Classification for Instructional Program (CIP) codes including 26.0502, 26.0503, 26.0508, and 26.0599.

- Microbiology General (26.0502)
    - 2018-2022 (5-year) doctoral completions showed compound annual growth rate (CAGR) of 3.8% (from 201 to 233). The number of institutions offering programs has changed very little, from 54 to 55. The number of online programs increased from 0 to 1. Programs with the largest number of conferrals were Cal Berkely, Michigan State, Alabama at Birmingham, Vanderbilt, Georgia, and Colorado state (with 14, 12, 12, 11, 10, and 10 respectively).
- Medical Microbiology and Bacteriology (26.0503)
    - 2018-2022 (5-year) doctoral completions showed compound annual growth rate (CAGR) of minus 6.1%(from 131 to 102). The number of institutions offering programs has declined, from 37 to 30. There are not currently any online programs in this space. Programs with the largest number of conferrals were North Carolina, Virginia, Tennessee, Montana State, and Florida (with 13, 12, 9, 8, and 8 respectively).
- Microbiology and Immunology (26.0508)
    - 2018-2022 (5-year) doctoral completions showed compound annual growth rate (CAGR) of 6.1% (from 75 to 95). The number of institutions offering programs has changed very little, from 19 to 23. There are currently zero online programs. Programs with the largest number of conferrals were Pittsburgh, Wisconsin, Minnesota, Drexel, and Michigan (with 11, 10, 8, 7, and 7 respectively).
- Microbiological Sciences and Immunology, other (26.0599)
    - 2018-2022 (5-year) doctoral completions showed compound annual growth rate (CAGR) of minus 6.1% (from 58 to 45). The number of institutions offering programs has declined, from 15 to 13. There are currently zero online programs. Programs with the largest number of conferrals were Dartmouth, Washington University of St. Louis, Washington, and Rutgers (with 19, 12, 5, and 4 respectively).

Figure 1. *HDR Growth Categories for CIP Codes Related to Microbiology & Cell Science*

Program	Overall Growth Category	Student Demand	Labor Demand
'26.0502 - Microbiology, General.	Mixed	Emerging	High Growth
'26.0503 - Medical Microbiology and Bacteriology.	Mixed	Low Growth	High Growth
'26.0508 - Microbiology and Immunology.	Mixed	Emerging	High Growth
'26.0599 - Microbiological Sciences and Immunology, Other.	Mixed	Low Growth	Emerging

Lightcast Market Analysis Software (LMAS) shows that cumulatively, across all four CIP Codes, the number of completions has stayed relatively the same from 2018-2022 (464 to 475) for a CAGR of 0.47%. The total number of programs has decreased from 94 to 93 in the same period. In 2018, no programs were available online, and in 2022 there is only one available. Figure 2 provides a complete breakdown of enrollment trends since 2003.

Table 1. *Completions by Institution in 2022 – Top 10 institutions by Market Share for Microbiology Programs*

Institution	Doctoral Completions 2022	Growth % YOY 2022	Market Share 2022	IPEDS Tuition & Fees 2022 In-state	IPEDS Tuition & Fees 2022 Out of State
Dartmouth College	19	90.00%	4.00%	$8,092	$8,092
Univ. of Pittsburgh	15	-11.80%	3.20%	$1,003	$1,728
Univ. of California-Berkeley	14	75.00%	2.90%	N/A	N/A
Univ. of North Carolina	13	62.50%	2.70%	$586	$1,602
Univ. of Alabama Birmingham	12	-7.70%	2.50%	$468	$1,109
Michigan State Univ.	12	71.40%	2.50%	$842	$1,654
Washington Univ. in St Louis	12	50.00%	2.50%	$2,476	$2,476
Univ. of Virginia	12	50.00%	2.50%	$827	$1,394
Vanderbilt Univ.	11	120.00%	2.30%	$2,215	$2,215
Colorado State Univ.	10	42.90%	2.10%	$602	$1,476
Univ. of Georgia	10	-44.40%	2.10%	$370	$1,050
Columbia Univ.	10	42.90%	2.10%	$2,178	$2,178
Medical College of Wisconsin	10	150.00%	2.10%	$1,250	$1,250

Example Similar Programs – note these may not all be in the CIP codes above.

Oregon State University
https://microbiology.oregonstate.edu/research/microbial-informatics-data-science
Microbial Informatics and Data Science

University of Washington
https://www.biology.washington.edu/programs/graduate/advanced-data-science-phd-option
PhD in Biology with Data Science Options

University of Delaware
https://bioinformatics.udel.edu/education/degrees/binf-phd/
PhD in Bioinformatics Data Science

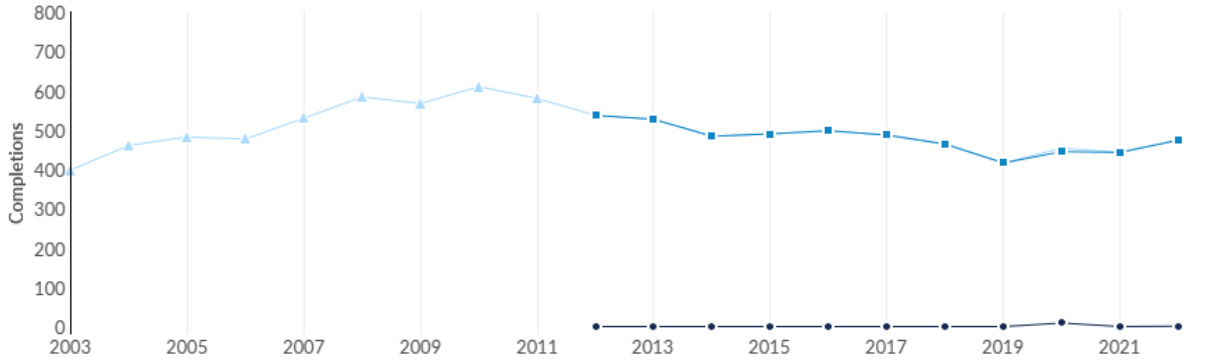
University of Wisconsin
https://biostat.wiscweb.wisc.edu/education/current-students/phd-bds/
PhD in Biomedical Data Science

Stanford
https://bulletin.stanford.edu/programs/BMDS-PHD
PhD in Biomedical Data Science

Clemson
https://www.cs.clemson.edu/bdsi/
PhD In Biomedical Data Science and Informatics

Washington University in St. Louis
https://dbbs.wustl.edu/programs/biomedical-informatics-data-science/
PhD in Biomedical Informatics & Data Science

Figure 2. *Completion Trends for Microbiology PhD Completions 2003-2022.*



	2012 Completions	2022 Completions	% Change
Distance Offered Programs	0	1	+Insf. Data
Non-Distance Offered Programs	537	474	-11.7%
All Programs	537	475	-11.5%

Occupation Data

LMAS identified seven broad occupational categories from occupation-academic program crosswalks that would be most likely to pursue a doctoral degree in microbiology (see Table 2). The demand for these jobs is expected to grow by 14.3% over the next 10 years and report having 41,174 average annual job openings. Further, LMAS reports over 91,000 employees working in this sector with at least a master's degree, and another 135,000 with a bachelor's degree, which suggests that there is a large audience that may be interested in upskilling in this area. These data do not include the large number of bachelor's and master's degree holders in adjacent disciplines like biology, biochemistry, and genetics. One thing to consider though is that, from a competition perspective, there are over several thousand similar doctoral degrees awarded annually and these students in adjacent disciplines including biomedical sciences, biological sciences, biochemistry, and microbiology among many others that would also be competitive for these positions.

Table 2. *Target Occupations Filtered for Microbiology Program CIP Codes*

Occupation	2021 Jobs	Avg. Annual Openings	Growth 2021-31	Entry Level
Postsecondary (Biological & Health) Teachers	325,200	33,000	14.32%	D/P
Medical Scientists, Except Epidemiologists	60,503	4,285	15.95%	D/P
Natural Sciences Managers*	18,532	1,578	10.91%	B
Biological Scientists, All Other	14,120	1,236	10.32%	B
Microbiologists	5,043	443	10.05%	B
Biological Technicians	4,279	608	11.31%	B
Food Science Technicians	155	24	9.68%	A

*Experience typically required

Job Data

Keyword search (Microbiology OR Microbiome OR microbial OR Cell science) AND “Data Science” and a filter for doctoral degrees. There were 832 available jobs in calendar year 2023 compared to 161 postings in calendar year 2018. When you drop the “data science” search term, there were 10,787 jobs in calendar year 2018 for microbiology positions with a PhD and 15,009 in calendar year 2023. So, there has been pretty strong growth for microbiology PhD’s overall, but significant growth for people with both microbiology and data science skills. Further, the average salary for the job postings seeking microbiology and data science skills was much higher, with a median salary in 2023 of 118.1 thousand compared to 94.5 thousand without the data science skills. Given that, employers are putting a premium on having the two skills together. The top jobs over the past five years are listed in Table 3.

Table 3. *Unique Job Postings for Occupations related to Microbiology & Data Science December 2018 – 2023 Filtered by Relevant Search Terms and Requiring/Preferring a PhD*

Job Title	**Postings**
Computational Biologists	109
Bioinformatics Scientists	104
Data Scientists	98
Nuclear Chemistry Technicians	93
Postdoctoral Fellows	83
Organizational Managers	75
Biological Scientists	47
Bioinformaticians	45
Scientists	43
Computational Scientists	42
Modeling Analysts	40
Science and Technology Directors	36
Principal Scientists	32
Bioinformatics Analysts	31
Research Scientists	30
Assistant/Associate/Full Professors	24
Postdoctoral Associates	23
Insights Analysts	21
Professors of Microbiology	21
Statistical Geneticists	21

LMAS also allows us to examine in-demand skills for these job postings. Tables 3 and 4 provides insight into the supply and demand of relevant skills by comparing the frequency of skills present in job postings against skills present in today's workforce. Ideally, the curriculum of the degree programs aligns with the skills that are most in-demand in the workforce. Upon request, we can drill down further into these skills by specific job or occupation.

Table 3. Specialized Skills for Microbiology & Data Science Jobs filtered by Relevant Search Terms and Requiring/Preferring a PhD

Skill	% of postings	Projected skill growth
Data Science	77%	Growing
Biology	58%	Rapidly Growing
Microbiology	46%	Growing
Data Analysis	39%	Rapidly Growing
Bioinformatics	35%	Stable
Python (Programming Language)	29%	Rapidly Growing
Machine Learning	28%	Growing
Genomics	27%	Growing
R (Programming Language)	27%	Rapidly Growing
Computational Biology	27%	Stable
Computer Science	27%	Rapidly Growing
Chemistry	22%	Growing
Molecular Biology	20%	Growing
Biochemistry	19%	Growing
Genetics	17%	Stable
Workflow Management	16%	Growing
Artificial Intelligence	15%	Growing
Immunology	15%	Growing
Biostatistics	14%	Growing
Project Management	12%	Growing

Table 4. Specialized Skills for Microbiology Jobs filtered by Relevant Search Terms and Requiring/Preferring a PhD (leaving out Data Science as a key search term)

Skill	% of postings	Projected skill growth
Microbiology	66%	Growing
Biology	50%	Rapidly Growing
Molecular Biology	29%	Growing
Biochemistry	28%	Growing
Immunology	24%	Growing
Chemistry	21%	Growing
Data Analysis	17%	Rapidly Growing
Biochemical Assays	15%	Growing
Cell Biology	14%	Growing
Genetics	13%	Stable
Infectious Diseases	12%	Growing
Biotechnology	11%	Growing
Pharmaceuticals	11%	Growing
Project Management	11%	Growing
Good Manufacturing Practices	10%	Growing
Virology	10%	Growing
Cell Cultures	9%	Growing

Genomics	9%	Growing
Bioinformatics	9%	Stable
New Product Development	9%	Rapidly Growing

In summary, there appears to be significant demand in the workforce for microbiology related PhDs, with over 15,000 job postings in 2023 compared to only 475 doctoral completions. While there are similar doctoral completions in biochemistry, genetics, biology, and the biomedical sciences, the total number of PhD's awarded annually even in adjacent disciplines was still just above 3,000 in 2022. This suggests that there are more jobs available than there are working professionals with the qualifications to fill them. Several popular and peer-reviewed articles have also been published that suggest a large shortage of microbiologists. One study suggests that 80% of microbiology laboratories have vacant positions (Leber et al., 2023). Given that, in addition to the growing demand for data science in microbiology, the noted gap of data scientists with microbiology skills, and finally the limited number of microbiology/data science doctoral training, we believe this program is entering the market at an ideal time. Further, the fact that so few degrees in this space are available online provides a huge competitive advantage, as working professionals who wish to require the relevant training in microbial data science will not have to stop working to complete their PhD. In addition, the price point looks to be much cheaper than other programs, which is critical as most students will not receive stipends and tuition waivers, and finally, given the huge number of graduates from the online MS at UF Microbiology, there is already an audience interested in the program. In sum, the data suggests that the program should be able to successfully maintain self-supporting status.

National and Florida Workforce Demand

In the table below, provide occupational linkages or jobs graduates will be qualified to perform based on the training provided for the proposed program that does not currently appear in the most recent version of the Search by CIP or SOC Employment Projections Data Tool provided periodically by Board staff.

Not applicable. All linkages were in the CIP-SOC crosswalk.

Complete the table below and summarize its contents in narrative form. Include data for all linked occupations, including those in the table above. Use data from the Search by CIP or SOC Employment Projections Data Tool provided periodically by Board staff.

Table 5. Labor Market Demand, All CIP Codes in Analysis

Occupations	Percent Change in Job Openings		Annual Average Job Openings		Total # of New Jobs		Education Level Needed for Entry
	FL 2023-33	U.S. 2023-33	FL 2023-33	U.S. 2023-33	FL 2023-33	U.S. 2023-33	
25-1071 Health Specialties Teachers, Postsecondary	20%	19%	1146	27400	2191	50200	Doctoral
25-1042 Biological science teachers, postsecondary	5%	4%	874	20900	310	7100	Doctoral

Medical Scientists, Except Epidemiologists	17%	11%	281	7,698	654	9,855	Bachelors
Natural Sciences Managers*	7%	10%	295	5,517	262	6,504	Bachelors
Biological Scientists, All Other	8%	10%	368	1,976	360	2,264	Bachelors
Microbiologists	15%	11%	47	11,919	75	9,500	Bachelors
Biological Technicians	12%	9%	402	2,631	348	1,602	Bachelors
Food Science Technicians	7%	11%	84	7,698	41	9,855	Associates

Sources: LMAS and USBLS 1/31/2024

III. Self-Supporting and Market Tuition Rate Programs

A. Provide supporting documentation in a separate attachment that serves as evidence that the proposed program will not supplant any existing similar or equivalent E&G degree offering. Describe the evidence in narrative form below. *Note that Board Regulation 8.002 considers a program similar if it is offered under the same CIP code as one funded under the E&G budget entity.*

There will not initially be an E&G equivalent for the concentration in Microbial and Cellular Data Science. The program is intended for a much different audience than the existing E&G PhD program in Microbiology and Cell Science (without concentration). We do anticipate that the addition of the self-supporting doctoral concentration to the microbiology portfolio will bring additional attention and visibility to the E&G PhD, which we believe will result in more competitive applicants to the program. Over time, if E&G students are interested, the concentration can be formally made available to on-campus E&G students. All the courses are available to any graduate student in the program at any time as an elective, either E&G or self-supporting. Table 6 below demonstrates how the existence of the self-supporting online MS in microbiology and cell science has not negatively impacted either of the E&G graduate options in the department, and in fact, has been associated with increased enrollment in the PhD program.

Table 6. *Enrollment in E&G and Self-Supporting Programs in the Department of Microbiology and Cell Science 2015 - 2023*

Year	PhD	Campus MS	Online MS
2015	49	2	32
2016	57	1	170
2017	64	1	244
2018	60	6	338
2019	63	6	379
2020	61	7	636
2021	58	5	937
2022	63	2	904
2023	68	2	844

B. If the proposed self-supporting or market tuition rate program will be a track under an existing E&G program or has a similar existing E&G program, provide a side-by-side tuition and fee comparison in the table below. Provide a link to the university's website that provides students with information about financial assistance and obligations for repayment of loans for these programs.

☐ **Not applicable because the program will not be a track under an existing E&G program or is not similar to an existing E&G program.**

Table 7. Tuition and Fee Comparison between E&G and Self-Supporting Programs within a Similar CIP Code

E&G Track or Program	Proposed Program
In-state Tuition – $448.73 Out-of-state Tuition – $448.73 Non-resident Fee – $690.21 Non-resident SFA - $34.51 Capital Improvement Trust Fund – $6.76 Student financial aid – $22.43 Technology Fee – $6.56 Activity and Service Fee - $19.06 Athletic Fee - $1.90 Health Fee - $15.81 Transportation Access – $9.44 In-state Total - $530.69 Out-of-state Total – $1,255.41 All amounts per credit	In-state Tuition – $448.73 Out-of-state Tuition – $600.00 Capital Improvement Trust Fund – $6.76 Student financial aid – $22.43 Technology Fee – $6.56 In-state Total - $484.48 Out-of-state Total – $635.75 All amounts per credit

C. Explain whether the program leads to initial licensing or certification in occupational areas identified as a state critical workforce need. If so, which licenses and certifications will graduates receive upon completion, and explain why implementing the program as self-supporting or market tuition rate is the best strategy to increase the number of graduates in the state.

Not applicable

IV. Estimate of Investment

Use Appendix A – Table 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.

V. 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 2 below.

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 1B & 3B	Complete only tables 1B & 3B of the file	Yes		X	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	n/a		X	X
H	Attestations for Self-Supporting and Market Tuition Rate Programs	Required only for self-supporting or market tuition rate programs	Yes		X	X

Additional Appendices

Appendix	Appendix Title	Description
A	Budget and Headcount Projections	Table 1b and 3b
H	Attestation for Self-supporting status	

References

Kyrpides, N. C., Eloe-Fadrosh, E. A., & Ivanova, N. N. (2016). Microbiome data science: understanding our microbial planet. *Trends in microbiology*, *24*(6), 425-427.

Leber, A. L., Peterson, E., & Dien Bard, J. (2022). The hidden crisis in the times of COVID-19: critical shortages of medical laboratory professionals in clinical microbiology. *Journal of clinical microbiology*, *60*(8), e00241-22.

Sun, E., König, S. G., Cirstea, M., Hallam, S. J., Graves, M. L., & Oliver, D. C. (2022). Development of a data science CURE in microbiology using publicly available microbiome datasets. *Frontiers in Microbiology*, *13*, 1018237.

APPENDIX A

TABLE 1-B

PROJECTED HEADCOUNT FROM POTENTIAL SOURCES

(Graduate Degree Program)

Source of Students (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	3	1.5	6	3	9	4.5	12	6	15	7.5
Individuals who graduated from preceding degree programs at other Florida public universities	0	0	0	0	0	0	0	0	0	0
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***	2	1	4	2	6	3	8	4	10	5
Additional foreign residents***	0	0	0	0	0	0	0	0	0	0
Other (Explain)***	0	0	0	0	0	0	0	0	0	0
Totals	**5**	**2.5**	**10**	**5**	**15**	**7.5**	**20**	**10**	**25**	**12.5**

* 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 3B
CONTINUING EDUCATION, SELF-SUPPORTING
AND MARKET RATE PROGRAM BUDGET

Institutions may edit the table below as applicable to their specific program and circumstances. The general headings (in bold) should serves as a guide, but institutions may edit the information below the headings as needed or desired. Detailed definitions are located at the bottom of the table. The Description or Explanation column is optional and should not replace the narratives required in the new degree program proposal.

Category	Year 1	Year 5	Description or Explanation - If Needed
Tuition	**in-state**		
Program Tuition (Full Cost to the Student)	$6,292.38	$6,292.38	We anticipate students will be half time, so roughly 12 credits per year
Program Tuition (Per Credit Hour)	$524.37	$524.37	In-state 448.73, out-of-state 600, anticipating 50-50 IS vs OOS. So average tuition per credit hour is (600+448.73)/2 = 524.37
Headcount	5.00	25.00	
Total Tuition Revenue	**$31,461.90**	**$157,309.50**	
Faculty Salaries and Benefits			
Faculty Salaries	$10,836.80	$54,184.00	Committee members will be paid a lump sum of $400 per year per student. Faculty who teach lecture courses to these students will also be paid $40/SCH. At 5 students in year 1 x 4 committee members, x 400 per member, + 5 students x 12 credits x 40/SCH = year 1 amount. Olverload payments will also include a 4.2% fringe for additional pays.
Program Director/Department Chair	$0.00	$0.00	
Total Faculty Salaries	10,837	54,184	
Staff and Administrative Support			
USPS Staff	$0.00	$0.00	
A&P Staff	$0.00	$0.00	
OPS Staff	$1,375.44	$6,877.20	Our departmental Ph.D. advisor will be paid overload $10 per student credit hour plus 4.2% fringe for additional pay. - Department marketing costs of $12 per SCH overload payments to marketing specialist +4.2% fringe for additional pay.
Assistantships and Fellowships	$0.00	$0.00	
Total Staff and Administrative Support Costs	$ 1,375.44	$ 6,877.20	
Programmatic Expenses			
Equipment - Purchase and Servicing	$0.00	$0.00	
Materials and Supplies	$0.00	$0.00	
Other Programmatic Expenses - Please Explain	$3,146.19	$15,730.95	10% reinvestment into advertising
Total Programmatic Expenses	$ 3,146.19	$ 15,730.95	

Overhead Costs			
See definitions below	$ 4,682.03	$ 23,410.17	Overhead assessment
Total Overhead Costs	$ 4,682.03	$ 23,410.17	
Total Program Costs	**$20,040.46**	**$100,202.32**	

Definitions	
Faculty Salaries and Benefits	The total amount of faculty salaries and benefits that will be attributed to this program. Because the program is funded through an auxiliary budget source. A separate line was added to reflect the portion of the Program Director/Department Chair's salary and benefits that are funded through this program. Institutions may further edit the expenses as needed to reflect the unique nature of their program.
Staff and Administrative Support Costs	Includes all non-faculty personnel costs, including benefits, that will be directly and indirectly attributed to this program. Not all categories may be applicable to every program.
Programmatic Expenses	Includes all non-personnel costs that will be directly and indirectly attributed to this program. Institutions may edit the categories in the template to best reflect the programmatic expenses for each program.
Overhead Costs	Any institutional overhead costs associated with the program should be reflected in the table. This can include startup costs, program administration fees, or other fees not represented else ware in the table that are attributed to the program from other units within the institution.

STATE UNIVERSITY SYSTEM OF FLORIDA

Appendix H – Attestations for Self-Supporting or Market Tuition Rate Programs

Instructions: *Please attest to the items below for the proposed self-supporting or market tuition rate programs.*

Please check one of the options below.

☒ The proposed program will be similar to or a track under an existing E&G program.
☐ The proposed program is not intended to be a track under an existing E&G program or similar to an existing E&G program.

For a program that will be a track under an existing E&G program or similar to an existing E&G program, the institution attests to the following:

☒ The institution will provide students with a side-by-side tuition and fee comparison and publicize this information on the institution's public-facing website and any non-public websites or applications that provide information about the program.

☒ The institution will provide students with information about financial assistance and obligations for repayment of loans for these programs.

☒ Admissions, graduation criteria, and academic standards for the proposed self-supporting or market tuition rate program align with the criteria and standards for similar or equivalent existing E&G programs.

☒ Similar or equivalent existing E&G programs will not be closed as a result of the new program unless prior approval is obtained from the Board of Governors.

For a proposed self-supporting program, the institution attests to the following:

☒ Tuition and fees charged for the proposed self-supporting program will be sufficient to offset the full instructional cost of serving the student and shall not exceed the existing approved tuition and out-of-state fees for similar-level courses.

For a proposed market tuition rate program, the institution attests to the following:

☒ Offering the proposed program at a market tuition rate will not increase the state's fiscal liability or obligation.

STATE UNIVERSITY SYSTEM OF FLORIDA

State University System of Florida Board of Governors

REQUEST TO OFFER A COLLEGE-CREDIT SELF-SUPPORTING OR MARKET TUITION RATE EDUCATION COURSE OR PROGRAM WHEN OFFERED AS PART OF AN EXISTING APPROVED PROGRAM (SHORT FORM)

In accordance with Board of Governors Regulations 8.011 & 8.002

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

University of Florida
Institution Submitting Proposal

Summer 2025
Proposed Implementation Term

College of Liberal Arts and Sciences
Name of College(s) or School(s)

Department of Economics
Name of Department(s)/Division(s)

Economics
Academic Specialty or Field

Master of Arts in Economics with a concentration in Econometrics and Data Analysis.
Complete Name of Degree

45.0603
Proposed CIP Code (2020 CIP)

Proposed Program Type

☐ **Market Tuition Rate Program**
- ☐ **Online**
- ☐ **Continuing Education**

☒ **Self-Supporting Program**

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 before the program's initiation.

Date Approved by the University Board of Trustees

President's Signature **Date**

Board of Trustees Chair's Signature **Date**

3/13/2024 | 11:44 AM EDT
Provost's Signature **Date**

Projected Enrollments

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.

Implementation Timeframe	HC	FTE
Year 1	20	15
Year 2	40	30
Year 3	40	30
Year 4	50	37.5
Year 5	60	45

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 the following.

The Department of Economics proposes developing a new fully online, Self-supporting Master of Arts (M.A.) in Economics program with a concentration in Econometrics and Data Analysis. This new program will enroll working professionals from around the State of Florida, the nation, and the globe. The fully online modality will accommodate a new population of students that is not currently served by the existing E&G economics graduate programs.

The approved M.A. in Economics curriculum requires students to complete 36 credits of degree-eligible coursework. The proposed program will satisfy this requirement with nine four-credit graduate economics courses. Three of these courses (12 credits) are specifically focused on economic data and econometric analysis and will satisfy the requirements for the Econometric and Data Analysis concentration. The proposed program will equip students with highly employable data and econometric analysis skills. It will also develop a deeper understanding of economic forces in business and the economy at large. In turn, the proposed program will contribute to strategic workforce development in Florida and the Nation. The E&G M.A. in Economics program has already demonstrated this potential by placing students in high-paying professional positions throughout the State of Florida and the nation. The Department has an established reputation for offering a strong M.A. program and placing students in high-paying professional positions around the State of Florida and beyond. For example, recent graduates currently work at HSBC (Miami), Spirit Airlines (Miami), Florida Blue (Jacksonville), KPMG (Miami), Citi Bank (Tampa), InfoTech (Gainesville), JP Morgan (Atlanta), the United States Bureau of Labor Statistics (Washington), and the United States Federal Reserve (Washington).

This new program supports several of the State University System's and University of Florida's strategic goals. It will (1) promote workforce development by building mastery of coding, econometric modelling, and business analytics, (2) foster a culture of lifelong learning by providing an accessible graduate program to working professionals, and (3) expand the University of Florida's visibility and reputation.

There is a robust market for a fully online M.A. in Economics program for working professionals. Several peer institutions offer similar programs. Johns Hopkins, Missouri, and Purdue offer fully online programs. UCLA, Illinois, Texas, and Wisconsin offer similar programs, but in a fully in-person modality. The University of Florida is exceptionally well positioned to enter this market and quickly. The Department of Economics successfully introduced an in-person E&G M.A. in Economics program in 2019. The curriculum is already in place (see below).

Students will complete the following courses each term.

Term 1	Term 2	Term 3
ECO 5114 Microeconomic Analysis	ECO 5464 Game Theory and Industrial Organization	ECP 6035 Cost Benefit Analysis
ECO 5207 Macroeconomic Analysis	ECO 6936 International Macroeconomics	ECP 6455 Antitrust Economics
ECO 5435 Economic Data Analysis	ECO 5426 Econometric Analysis 1	ECO 5427 Econometric Analysis 2

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

Indicate if the program qualifies for the Programs of Strategic Emphasis Waiver.

☐ Yes
☒ No

If yes, the provost or their designee should contact Board staff to discuss prior to requesting any changes to the program.

CIP CODE	CIP TITLE	CATEGORY
11.0101	Computer and Information Sciences	STEM
11.0103	Information Technology	STEM
14.0801	Civil Engineering	STEM
14.0901	Computer Engineering	STEM
14.1001	Electrical and Electronics Engineering	STEM
27.0101	Mathematics	STEM
40.0801	Physics	STEM
52.0301	Accounting	GAP ANALYSIS
52.0801	Finance	GAP ANALYSIS
52.1201	Management Information Systems	STEM

C. If the program qualifies as a Program of Strategic Emphasis, provide a justification for charging higher tuition for this program.

Not applicable – as the program will be charging the same tuition for in-state students and a lower tuition for out-of-state students.

Institutional and State-Level Accountability

II. Need and Demand

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

Economics is a social science that studies how individuals, businesses, societies, and governments allocate resources in the most logical and effective ways to meet private and social goals. It can include the analysis of production, distribution, and the consumption of goods and services, and is relevant across other fields including (but not limited to) political science, geography, mathematics, sociology, psychology, engineering, law, medicine, and business. According to the American Economic Association:

> Economics can be defined in a few different ways. It's the study of scarcity, the study of how people use resources and respond to incentives, or the study of decision-making. It often involves topics like wealth and finance, but it's not all about money. Economics is a broad discipline that helps us understand historical trends, interpret today's headlines, and make predictions about the coming years.

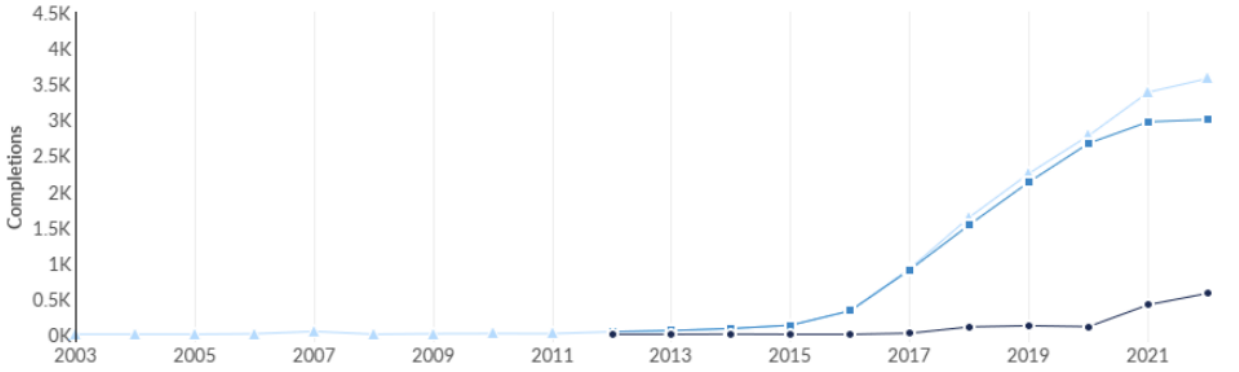
Econometrics is a branch of economics that combines economic theory, mathematics, and statistical methods to test hypotheses and forecast future trends. It is a quantitative approach to economic analysis that aims to give empirical content to economic relationships. The primary goal of econometrics is to provide a framework for analyzing and interpreting economic data to better understand how the economy works. The field is constantly evolving, and researchers continue to develop new techniques and methodologies to address challenges and improve the accuracy of economic analysis. Econometrics plays a crucial role in informing economic policy decisions and understanding the dynamics of economic systems.

Academic Program Overview – Using CIP Code 45.0603

The Classification for Instruction Programs (CIP) codes for Economics fall under the broad category of 45.06 *Economics*, within which there are six, 6-digit CIP code designations for more specific economics programs. The department of economics at the University of Florida College of Liberal Arts and Sciences uses CIP code 45.0603 *Econometrics and Quantitative Economics.* Given that econometrics is specific and distinct from more qualitative and theoretical approaches to economics, only one CIP code will be used in this analysis, although it is important to note that econometrics programs may exist within other CIP codes at different institutions.

There were 152 institutions reporting 3,577 master's degree completions in CIP code 45.0603 in 2022. It is important to note that only 16% of these completions came from 10 online programs (see figure 1). Further, the largest program at Johns Hopkins has only been available since 2020, and the oldest online programs at Purdue and Missouri have only been in existence since 2017. Given the size and popularity of this degree path, we see an opportunity for the UF Department of Economics to enter the market at a key inflection point where a growing segment of degree seeking students are looking for online options (which are still limited) in this space.

Figure 1. *Trends in Degree Completion by Modality in CIP code 45.0603 from 2003-2022*



	2012 Completions	2022 Completions	% Change
Distance Offered Programs	0	574	+Insf. Data
Non-Distance Offered Programs	37	3,003	+8,016.2%
All Programs	37	3,577	+9,567.6%

Table 1. *Completions by Institution in 2022 for CIP codes* 45.0603 *– Top 10 institutions by Market Share*

Institution	Master's Completions 2022	Growth % YOY 2022	Market Share 2022	IPEDS Tuition & Fees 2022 In-state	IPEDS Tuition & Fees 2022 Out of State
Johns Hopkins University	303	5.90%	52.80%	$2,016	$2,016
Boston College	82	Insf. Data	14.30%	$1,884	$1,884
Northeastern University	59	Insf. Data	10.30%	$1,079	$1,079
Purdue University	47	-2.10%	8.20%	$348	$948
University of Missouri-Columbia	34	6.30%	5.90%	$435	$1,192
University of North Dakota	20	33.30%	3.50%	$498	$748
Western Kentucky University	13	44.40%	2.30%	$607	$917
Western Michigan University	7	-12.50%	1.20%	$731	$1,096
North Carolina at Greensboro	5	-37.50%	0.90%	$290	$1,052
Northern Illinois University	4	Insf. Data	0.70%	$503	$503

LMAS has identified five occupations related to CIP code 45.0603 (see Table 2). Note that post-secondary economics teachers were excluded because they typically require a PhD. These occupations included 490,864 individuals with a bachelor's degree in 2023. These occupations are expected to grow 16.7% overall between 2023 and 2033. LMAS suggests that there will be 27,084 average annual openings over the next 10 years for these occupations requiring a MS degree What this data suggests is that there is a large population of professionals in the workforce who may be interested in pursuing a master's degree, and the number of annual completions nationally (3,577) is much lower than the number of average annual job openings (27,084), which suggests unmet demand in this discipline. We do offer one qualifier: LMAS suggests that there are business programs especially (CIP code 52.0201 – so primarily MBAs) with a lot of discipline adjacent graduate completions (106,249 in 2022) and that these degree holders may be competitive for some positions in this space.

Table 2. *Target Occupations Filtered for CIP Code 45.0603 and Master's Completions*

Occupation	2023 Jobs	Avg. Annual Openings	Growth 2021-31	Entry Level
11-9199 Managers, All Other	198,723	17,903	13.10%	B
15-2051 Data Scientists	62,970	6,644	35.75%	B
15-2041 Statisticians	12,911	1,304	32.29%	M
19-3011 Economists	8,468	639	12.20%	M
19-4061 Social Science Research Assistants	4,213	594	10.80%	B

LMAS identified 4.56 million job postings between October 2018 and October 2023 in these five broad occupational categories, and this number only drops to 1.01 million when filtering for a master's degree. When adding an additional filter that includes econometrics as a keyword search, 31,708 unique job postings remain over the past five years. The top job postings ranked by unique postings between 2018 and 2023 are listed in Table 3.

Table 3. *Unique Jobs for Occupations related to CIP Codes 45.0603 October 2018 - 2023*

Job Title	**Postings**
Data Scientists	6,983
Economists	1,460
Data Analysts	1,141
Lead Data Scientists	1,022
Analytics Consultants	898
Principal Data Scientists	815
Data Science Managers	808
Directors of Data Science	793
Analytics Managers	629
Quantitative Analysts	582
Data Analytics Scientists	491
Data Analytics Consultants	484
Business Intelligence Analysts	351
Analytics Associates	332
Business Data Analysts	309
Data Science and Analytics Managers	294
Data Analysts/Data Scientists	261
Lead Economists	239
Financial Economists	226
Marketing Data Scientists	225
Research Assistants	206
Transfer Pricing Managers	206
Quantitative Researchers	202
Machine Learning Data Scientists	202
Statisticians	200

The number of unique postings for these jobs has experienced some variance over the past five years, ranging from a low of 260 during the pandemic to a high of 978 before the March 2022 interest rate increases. Despite that variance, overall job posting change from October 2018-2023 was only -1%, down 422 – 417, during that time (see Figure 2). LMAS also provides a list of skills that are most frequently listed in job postings in this area and compares them to the number of times the skill is listed in unique applicant profiles. That data is available in Figure 3. The median salary for these jobs was $126,000 annually, up 26% from five years ago.

In sum, there appears to be sufficient demand in the job market to suggest that a self-supporting MA in Economics with a concentration in Econometrics and Quantitative Analysis could be viable. I think it is important to note that for jobs specifically looking for econometrics trained employees, there does not appear to be a significant skill gap (see figure 3 below). Looking at the skill gaps, one additional note is that many of the largest gaps exist in computer science, specific data analysis and visualization software, applied mathematics and operational research – so any coursework that could address those areas specifically would be ideal. It does appear that several MBA programs offer coursework in econometrics, so correctly positioning and advertising the program would be critical to its success so that graduates would appear more competitive in the econometrics job market compared to traditional MBA students who may have a minor, certificate, or some coursework in econometrics. One area that will allow this program to be extremely competitive with MBA programs offering similar coursework is price, which looks to be far cheaper than most other online programs specifically in econometrics, but also significantly cheaper than traditional MBA-type programs, which Education Data Initiative in November 2022 suggesting that the average cost of an MBA in the United States is currently $61,800.

Figure 2. *Unique Job Postings per Month filtered by Occupation and Keyword Econometrics October 2018-2023*

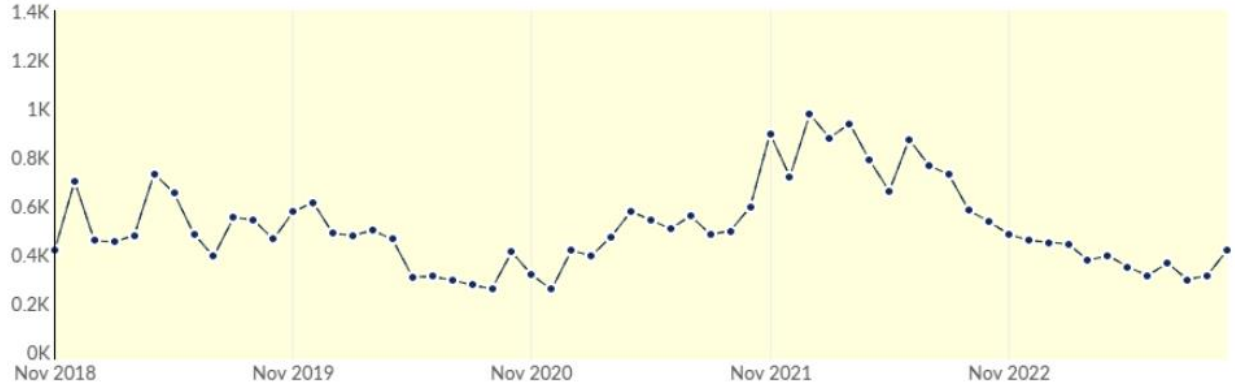
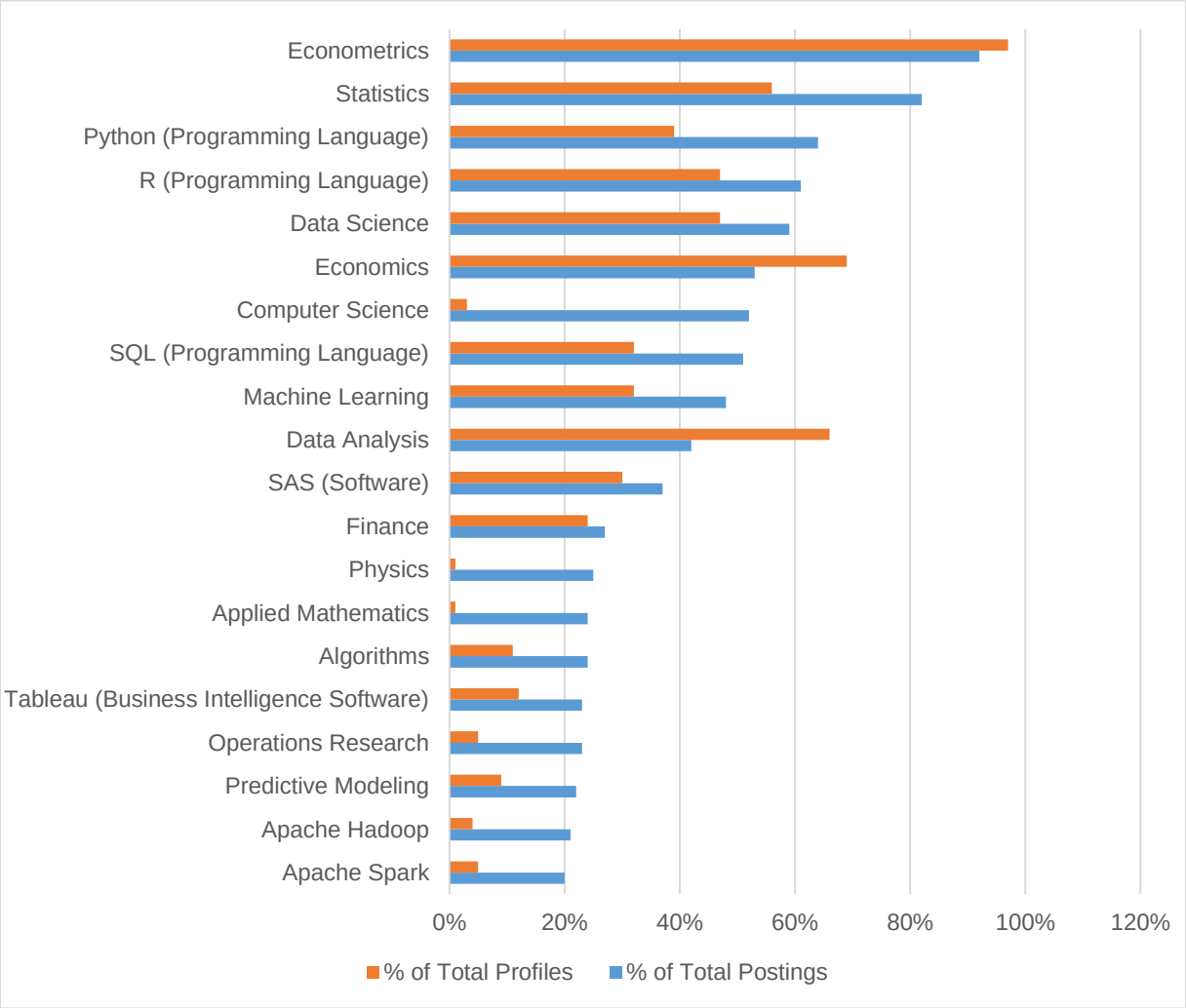


Figure 3. *Specialized Skills for Econometrics related Jobs filtered by MS and Occupations related to CIP code 45.0603*



National and Florida Workforce Demand

In the table below, provide occupational linkages or jobs graduates will be qualified to perform based on the training provided for the proposed program that does not currently appear in the most recent version of the Search by CIP or SOC Employment Projections Data Tool provided periodically by Board staff.

Table 4. Occupational Linkages for the Proposed Program

SOC Code (XX-XXXX)	Occupation Title	Source / Reason for Inclusion
n/a	All programs listed in this analysis were from the CIP-SOC Crosswalk	All programs listed in this analysis were from the CIP-SOC Crosswalk

Complete the table below and summarize its contents in narrative form. Include data for all linked occupations, including those in the table above. Use data from the Search by CIP or SOC Employment Projections Data Tool provided periodically by Board staff.

Table 5. *Labor Market Demand, CIP Code 45.0603*

Occupations	Percent Change in Job Openings		Annual Average Job Openings		Total # of New Jobs		Education Level Needed for Entry
	FL 2023-33	U.S. 2023-33	FL 2023-33	U.S. 2023-33	FL 2023-33	U.S. 2023-33	
11-9199 Managers, All Other	17%	13%	136,890	1,792,873	5,579	100,579	Bachelors
15-2041 Statisticians	43%	32%	14,096	366,487	108	3,653	Masters
15-2051 Data Scientists	37%	36%	1,426	77,266	993	18,611	Bachelors
19-3011 Economists	23%	12%	4,208	105,576	54	1,473	Masters
19-4061 Social Science Research Assistants	18%	11%	5,494	161,803	185	5,255	Bachelors

Sources: Lightcast Market Analysis Software, Date Retrieved: 11/30/2023

III. Self-Supporting and Market Tuition Rate Programs

A. Provide supporting documentation in a separate attachment that serves as evidence that the proposed program will not supplant any existing similar or equivalent E&G degree offering. Describe the evidence in narrative form below. *Note that Board Regulation 8.002 considers a program similar if it is offered under the same CIP code as one funded under the E&G budget entity.*

The proposed program will not supplant the E&G M.A. in Economics program and may even enhance its reputation and the job placement of its graduates. The existing E&G program was developed for an on-campus modality and accordingly can only serve Gainesville-based students who do not have substantial competing time priorities during normal business hours. The proposed self-supporting program would be offered asynchronously and fully online. This alternative modality will serve a distinct student population of working professionals and other interested applicants who cannot relocated to Gainesville.

The Department of Economics plans to market the proposed program aggressively. This marketing and recruitment effort will enhance the visibility of the University of Florida and its many graduate offerings in this CIP code, including programs offered by the Food and Resource Department in the Institute of Food and Agricultural Sciences (IFAS). Interested individuals who see advertisements about the program but can relocate to Gainesville would then be advised regarding face-to-face alternatives, including the E&G M.A. in Economics program.

The Department plans to re-invest self-supporting revenue substantially in course development and educational quality. Instructors who build online courses for this program will, in turn, be trained in online teaching and generally better informed regarding best practices in accessible graduate education. These experiences generate substantial spillovers that will benefit all educational programs offered by the Department of Economics.

B. If the proposed self-supporting or market tuition rate program will be a track under an existing E&G program or has a similar existing E&G program, provide a side-by-side tuition and fee comparison in the table below. Provide a link to the university's website that provides students with information about financial assistance and obligations for repayment of loans for these programs.

☐ Not applicable because the program will not be a track under an existing E&G program or is not similar to an existing E&G program.

Tuition and Fee Comparison

E&G Track or Program	Proposed Program
In-state Tuition – $448.73 Out-of-state Tuition – $448.73 Non-resident Fee – $690.21 Non-resident SFA - $34.51 Capital Improvement Trust Fund – $6.76 Student financial aid – $22.43 Technology Fee – $6.56 Activity and Service Fee - $19.06 Athletic Fee - $1.90 Health Fee - $15.81 Transportation Access – $9.44 In-state Total - $530.69 Out-of-state Total – $1,255.41 All amounts per credit	In-state Tuition – $448.73 Out-of-state Tuition – $853.13 Capital Improvement Trust Fund – $6.76 Student financial aid – $22.43 Technology Fee – $6.56 In-state Total - $484.48 Out-of-state Total – $888.88 All amounts per credit

C. Explain whether the program leads to initial licensing or certification in occupational areas identified as a state critical workforce need. If so, which licenses and certifications will graduates receive upon completion, and explain why implementing the program as self-supporting or market tuition rate is the best strategy to increase the number of graduates in the state.

Not applicable

IV. Estimate of Investment

Use Appendix A – Table 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.

V. 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 2 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 1B & 3B	Complete only tables 1B & 3B of the file	Yes		X	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	Yes		X	X
H	Attestations for Self-Supporting and Market Tuition Rate Programs	Required only for self-supporting or market tuition rate programs	Yes		X	X

Table 2. Additional Appendices

Appendix	Appendix Title	Description
A	Projected headcount and budget	See table 1b and 3b in appendix A
D	Letter of Support from FRE	Letter from Lisa House
H	Attestation for Self-supporting tuition rate	

APPENDIX A

TABLE 1-B

PROJECTED HEADCOUNT FROM POTENTIAL SOURCES

(Graduate Degree Program)

Source of Students (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	5	3.75	10	7.5	10	7.5	10	7.5	15	11.25
Individuals who graduated from preceding degree programs at other Florida public universities	5	3.75	10	7.5	10	7.5	10	7.5	15	11.25
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***	5	3.75	10	7.5	10	7.5	15	11.25	15	11.25
Additional out-of-state residents***	5	3.75	10	7.5	10	7.5	15	11.25	15	11.25
Additional foreign residents***	0	0	0	0	0	0	0	0	0	0
Other (Explain)***	0	0	0	0	0	0	0	0	0	0
Totals	**20**	**15**	**40**	**30**	**40**	**30**	**50**	**37.5**	**60**	**45**

* 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 3B
CONTINUING EDUCATION, SELF-SUPPORTING
AND MARKET RATE PROGRAM BUDGET

Institutions may edit the table below as applicable to their specific program and circumstances. The general headings (in bold) should serves as a guide, but institutions may edit the information below the headings as needed or desired. Detailed definitions are located at the bottom of the table. The Description or Explanation column is optional and should not replace the narratives required in the new degree program proposal.

Category	Year 1	Year 5	Description or Explanation - If Needed
Tuition			
Program Tuition (Full Cost to the Student)	$11,716.74	$11,716.74	To estimate, assume 50-50 in-state/out-of-state, .75 FTE, so 18 credits completed per year times the average cost per credit (depending on residency)
Program Tuition (Per Credit Hour)	$650.93	$650.93	Assuming 50-50 residency split, average tuition per credit is (853.13+448.73)/2 = 650.93
Headcount	20.00	60.00	
Total Tuition Revenue	$234,334.80	$703,004.40	
Faculty Salaries and Benefits			
Faculty Salaries	$90,000.00	$225,000.00	6 classes taught in year 1, all 9 classes taught in year 5 at least one time. Faculty paid 15000 per course overload year 1 and 2, 25000 year 3- and on. Inclusive of fringe.
Program Director/Department Chair	$5,000.00	$15,000.00	The Department will provide compensation to a Program Director, who will be a faculty member in the Department of Economics. Fringe included.
Total Faculty Salaries	95,000	240,000	

Staff and Administrative Support			
USPS Staff	$0.00	$0.00	
A&P Staff	$7,000.00	$20,000.00	The Department will pay its two TEAMS staff members additional compensation for the added responsibilities of administering this program. The added responsibilities include admissions management (including, responding to applicants' inquiries, managing admissions files, providing administrative support to the faculty admissions committee, etc.), course registration, academic advising, assistance with academic petitions, student course evaluations and final grades management, etc. The Academic Assistant I position will receive an additional $3,000 initially, increase to 8,000 annually, and the Academic Assistant II position will receive an additional $4,000 increasing to 12,000 per year, inclusive of fringe benefits.
OPS Staff	$0.00	$0.00	
Assistantships and Fellowships	$0.00	$0.00	
Total Staff and Administrative Support Costs	7,000	20,000	
Programmatic Expenses			
Equipment - Purchase and Servicing	$0.00	$0.00	
Course Development and Instructional Training	$11,716.74	$35,150.22	The program will reinvest 5% of revenue in course development, instructional training, and faculty development. These activities will enhance the program and also benefit the Department's E&G programs.
Materials and Supplies	$0.00	$0.00	
Other Programmatic Expenses - Please Explain	$70,300.44	$210,901.32	30% of revenue will be shared with UF Office of Teaching and Technology for Marketing, Recruiting, and Enrollment Services
Total Programmatic Expenses	82,017	246,052	
Overhead Costs			
See definitions below	$ 39,353.82	$ 111,621.47	10% CLAS tax on revenue, 14% RCM on expenses (not including marketing and recruiting payment within the university)
Total Overhead Costs	$ 39,353.82	$ 111,621.47	
Total Program Costs	**$223,371.00**	**$617,673.01**	

Definitions	
Faculty Salaries and Benefits	The total amount of faculty salaries and benefits that will be attributed to this program. Because the program is funded through an auxiliary budget source. A separate line was added to reflect the portion of the Program Director/Department Chair's salary and benefits that are funded through this program. Institutions may further edit the expenses as needed to reflect the unique nature of their program.
Staff and Administrative Support Costs	Includes all non-faculty personnel costs, including benefits, that will be directly and indirectly attributed to this program. Not all categories may be applicable to every program.
Programmatic Expenses	Includes all non-personnel costs that will be directly and indirectly attributed to this program. Institutions may edit the categories in the template to best reflect the programmatic expenses for each program.
Overhead Costs	Any institutional overhead costs associated with the program should be reflected in the table. This can include startup costs, program administration fees, or other fees not represented else ware in the table that are attributed to the program from other units within the institution.

Appendix D

UF/IFAS
Food and Resource Economics Department
Lisa A. House
Professor and Chair

1171 McCarty Hall A
PO Box 110240
Gainesville, FL 32611-0240
1.352.294.7653

To whom it may concern:

The Economics Department at the University of Florida has consulted with the Food and Resource Economics Department about their proposed Master of Science in Economics with a Concentration in Econometrics. We fully support their proposal as we feel there is not significant overlap with our existing Master of Science in Food and Resource Economics. We believe there may even be opportunity for collaboration in the program as it grows, so we fully support this proposal. Please contact me if you have further questions.

Lisa House

STATE UNIVERSITY SYSTEM OF FLORIDA

Appendix H – Attestations for Self-Supporting or Market Tuition Rate Programs

Instructions: *Please attest to the items below for the proposed self-supporting or market tuition rate programs.*

Please check one of the options below.

☒ The proposed program will be similar to or a track under an existing E&G program.
☐ The proposed program is not intended to be a track under an existing E&G program or similar to an existing E&G program.

For a program that will be a track under an existing E&G program or similar to an existing E&G program, the institution attests to the following:

☒ The institution will provide students with a side-by-side tuition and fee comparison and publicize this information on the institution's public-facing website and any non-public websites or applications that provide information about the program.

☒ The institution will provide students with information about financial assistance and obligations for repayment of loans for these programs.

☒ Admissions, graduation criteria, and academic standards for the proposed self-supporting or market tuition rate program align with the criteria and standards for similar or equivalent existing E&G programs.

☒ Similar or equivalent existing E&G programs will not be closed as a result of the new program unless prior approval is obtained from the Board of Governors.

For a proposed self-supporting program, the institution attests to the following:

☒ Tuition and fees charged for the proposed self-supporting program will be sufficient to offset the full instructional cost of serving the student and shall not exceed the existing approved tuition and out-of-state fees for similar-level courses.

For a proposed market tuition rate program, the institution attests to the following:

☐ Offering the proposed program at a market tuition rate will not increase the state's fiscal liability or obligation.

UF | Board of Trustees
UNIVERSITY of FLORIDA

COMMITTEE ON ACADEMIC, FACULTY AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC COMMUNICATIONS
ACTION ITEM AFSSPRSC4
June 13, 2024

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 Agriculture and Life Sciences is requesting to terminate the Masters in Animal Molecular and Cellular Biology because the program is more focused on awarding Ph.D. degrees and has had only 7 students graduate in the last 5 years. There are currently 5 students enrolled in the program and are expected to complete the program in Spring 2025.

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 approval is required.

Supporting Documentation Included: State University System of Florida Board of Governors Academic Degree Program Termination Form

Submitted by: J. Scott Angle, Provost and Senior Vice President for Academic Affairs

Approved by the University of Florida Board of Trustees, June 13, 2024

_____ _____

Morteza "Mori" Hosseini, Chair Ben Sasse, President and Corporate Secretary

STATE UNIVERSITY SYSTEM OF FLORIDA

State University System of Florida Board of Governors
ACADEMIC DEGREE PROGRAM TERMINATION FORM
In Accordance with Board of Governors Regulation 8.012

INSTITUTION: University of Florida

PROGRAM NAME: Animal Molecular and Cellular Biology

DEGREE LEVEL(S): M **CIP CODE**: 26.0406
B, M, Ed.D., or Ph.D.

ANTICIPATED TERMINATION TERM: SPRING 2024
First term when no new students will be accepted into the program

ANTICIPATED PHASE-OUT TERM: SPRING 2025
First term when no student data will be reported for this program

Use this form for academic program termination. The form should be approved by the University Board of Trustees (UBOT) prior to submission to the State University System of Florida Board of Governors for consideration. Complete this form for each program to be terminated in order for the 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 the termination in accordance with BOG Regulation 8.012. For doctoral level programs, 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. **Does the program fall under one of the CIP codes listed below?** *Please skip this question if this request does not pertain to a baccalaureate program.*

☐ Yes
☒ No

CIP CODE	CIP TITLE	CATEGORY
11.0101	Computer and Information Sciences	STEM
11.0103	Information Technology	STEM
13.1001	Special Education and Teaching	EDUCATION
13.1202	Elementary Education and Teaching	EDUCATION
14.0801	Civil Engineering	STEM
14.0901	Computer Engineering	STEM
14.1001	Electrical and Electronics Engineering	STEM
27.0101	Mathematics	STEM
40.0801	Physics	STEM
52.0301	Accounting	GAP ANALYSIS
52.0801	Finance	GAP ANALYSIS
52.1201	Management Information Systems	STEM

2. **Provide a narrative rationale for the request to terminate the program.**

   The Animal Molecular and Cellular Biology (AMCB) Master's degree program has been flagged by the BOG in its Degree Productivity Analysis because it has graduated only 7 students in the last 5 years. The reason for this is that the AMCB program is more focused on awarding Ph.D. degrees.

3. **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 program is offered on the University of Florida (UF) main campus. Current students enrolled in the program as of Fall 2023 (only 5) will still be able to successfully complete and graduate from the program. It is anticipated that the last student will complete by Spring semester 2025. There will be no reallocation of resources since the Ph.D. program in AMCB will continue.

4. **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.**

   Courses and faculty involved in this program will not be affected by the program termination. Faculty will continue to offer their courses as a part of the AMCB Ph.D. program as well as students from other graduate degree programs. Faculty and students in the program have been notified by email and the students by their supervisor committee chair. All current students will be allowed to finish out their degrees in this program.

5. **Please provide the date when the teach-out plan was submitted to the institution's accreditor. Include a copy of the notification letter with your submission.**

October 3, 2023

6. **Identify the process for evaluation and mitigation on any potential negative impact of the proposed action on the current representation of faculty and students in the program.**

   It is anticipated that there will be no impact on females, minorities, faculty, and students in the program.

7. **If this is a baccalaureate program, please explain how and when the Florida College System institutions have been notified of its termination so that students can be notified accordingly.**

Termination Request Form – Signatures Page

Signature of Requestor/Initiator	10/4/23 Date
Signature of Campus EO Officer	3/29/2024 | 8:45 AM EDT Date
Signature of College Dean	10-4-23 Date
Signature of President or Vice President for Academic Affairs	3/29/2024 | 8:46 AM EDT Date
Signature of Chair of the Board of Trustees	Date
Date Approved by the Board of Trustees	

UF | Board of Trustees
UNIVERSITY of FLORIDA

COMMITTEE ON ACADEMIC, FACULTY AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC COMMUNICATIONS
ACTION ITEM AFSSPRSC5
June 13, 2024

SUBJECT: Common Prerequisite Manual Changes

BACKGROUND INFORMATION

The College of Agriculture and Life Sciences is requesting to create a separate track in the common prerequisite manual for the Agricultural Operations Management degree program. While this program has strong foundations in business, the program stresses the importance of technical science coursework including chemistry, biology and physics which differentiate the program from the social-science weighted courseload.

The College of Agriculture and Life Sciences is requesting to add a common prerequisite course alternatives to the Bachelor of Science and Bachelor of Arts in Environmental Sciences degree programs. The new requirements will bring the common prerequisite manual in line with what the students are currently required to take in order to complete these degrees.

PROPOSED COMMITTEE ACTION

The Committee on Academic, Faculty and Student Success, Public Relations and Strategic Communications is asked to approve the above Common Prerequisite Manual Change 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: Florida Department of Education Common Prerequisites Manual (CPM) Revision Request Form

Submitted by: J. Scott Angle, Provost and Senior Vice President for Academic Affairs

Approved by the University of Florida Board of Trustees, June 13, 2024

_____
Morteza "Mori" Hosseini, Chair

_____
Ben Sasse, President and Corporate Secretary

Common Prerequisites Manual (CPM) Revision Request

Institution:	**University of Florida**
Institution Liaison:	Angela Lindner
Date of Submission:	September 12, 2023
Program/Degree Type:	**Bachelor of Science**
Program CIP Code:	01.0103
Program Credit Hours:	120

If applicable, please complete the following if you are notifying us of a change to:

Program Credit Hours:	Current Credit Hours: Click or tap here to enter text. New Credit Hours: Click or tap here to enter text. Effective Date: Click or tap here to enter text.
Limited Access Program Status:	☐ Change from open access to limited access ☐ Change from limited access to open access Effective Date: Click or tap here to enter text.
Program CIP Code:	Current CIP code: 01.0103 New CIP Code: Click or tap here to enter text. Effective Date: Click or tap here to enter text.
Baccalaureate Program Status:	☐ Notification of a Program Termination – Term/Year Program Should be Removed from the CPM: Click or tap here to enter text. ☐ Notification of New Program – Anticipated Program Implementation Date: Click or tap here to enter text. ☐ Notification of Program Name Change – Revised Program Name: Click or tap here to enter text.

Proposed Revisions(s) to the CPM (check all that apply)

The CIP Code Is Currently in the CPM:

☐ 1. Make curriculum changes to an existing track at proposing institution

☐ 2. Add program to a current track without curriculum changes

☐ 3. Add program to a current track with curriculum changes

☐ 4. Establish a new track without prerequisites

☒ 5. Establish a new track with prerequisites

6. For numbers 1-5, please provide track information below:

a. ☐ Track 1 ☒ Track 2 ☐ Track 3 ☐ Track 4 ☐ Track 5 ☐ Track 6

b. Track Name: Agricultural Operations Management

c. If this is a request to establish a new track, please provide justification as to why a new track is needed: **Agricultural Operations Management (AOM) is a technical management degree that has roots in mechanized agriculture dating back before World War II. While the curriculum includes hands-on training using applied technology through projects, labs, and field work it has a strong business foundation and emphasizes management skills and the goal of the program is to prepare AOM students to solve complex, interrelated problems in agriculture and natural systems. The business foundation of the AOM degree is well recognized within UF and in the wider business community that employs AOM students and many other programs like AOM are closely aligned with Agricultural or Resource Economics programs which are classified under CIP Code 01.0103. Although AOM has strong foundations in business, the program stresses the importance of technical science coursework including chemistry, biology, and physics which differentiate the program from the social-science weighted courseload in FRE. As a result, we request a separate track that reflects the program.**

The CIP Code Is Not Currently in the CPM:

☐ 7. Add program to the CPM without prerequisites

☐ 8. Add program to the CPM with prerequisites

Proposed Curriculum Actions:

☐ Add course(s) and/or course alternative(s)

☐ Eliminate course(s) and/or course alternative(s) (delete course from the CPM)

☐ Exempt course(s) and/or course alternative(s) (request exception from course)

☐ Carry over prerequisites from previous CIP without changes (CIP Code change)

☐ Carry over prerequisites from previous CIP with changes (CIP Code change)

☐ Other – please specify Click or tap here to enter text.

Please include the following supporting documentation with this proposal:

- The program page from the Common Prerequisite Manual, if applicable.
- The program requirements for the baccalaureate degree program at your institution.

If this request is for any of the following, do not complete anything further:

- Add program to a current track without curriculum changes
- Establish a new track without prerequisites
- Add program to the CPM without prerequisites

If this request is for any of the following, please complete 1-8, where applicable:

- Make curriculum changes to an existing track at proposing institution
- Carry over prerequisites from previous CIP with no changes
- Carry over prerequisites from previous CIP with changes
- Add program to a current track with curriculum changes
- Establish a new track with prerequisites
- Add program to the CPM with prerequisites

1. For required prerequisite course(s) and/or course alternative(s), please list the following information for each course (add rows if necessary).

Course Prefix and Number	Course Title	Course Alternative	Justification for Course(s)	Credits
MACX147	**Precalculus: Algebra & Trigonometry**	**MACX140 & MACX114**	**Needed for success in upper-level coursework**	**4**
ACGX021	**Intro to Financial Accounting**	**ACGX001 & ACGX011**	**Needed for success in upper-level coursework**	**4**
ECOX013	**Macroeconomics**	**---**	**Needed for success in upper-level coursework**	**4**
STAX023	**Introduction to Statistics 1**	**---**	**Needed for success in upper-level coursework**	**3**
CHMX045	**General Chemistry 1**	**---**	**Needed for success in upper-level coursework**	**3**
BSCX010	**General Biology 1**	**---**	**Needed for success in upper-level coursework**	**3**
			Total Credits	**21**

2. If the course(s) above includes a course(s) that is offered currently at three or fewer FCS or SUS institutions, please provide justification as to why the course is critical for a student's success in the baccalaureate degree program. Please visit the Statewide Course Numbering System to determine the number of institutions that offer the course(s) (add rows if necessary). Click here for instructions on how to navigate the SCNS.

Course(s) Offered at 3 or Less FCS/SUS Institutions	Number of FCS Institutions Currently Offering Course (out of 28)	Number of SUS Institutions Currently Offering Course (out of 12)	Justification for Course(s)
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

3. If the request includes courses that are offered only at your institution, explain what options are available to students at other institutions for completing the required courses (add rows if necessary).

Course(s) Offered Only at Proposing Institution	Option(s) at Other Institutions	Explanation of Option(s)
AEB 3122	ACGX021 OR ACG X001 & ACG X011	AEB 3122 teaches similar concepts to ACGX021 OR ACG X001 and ACG X011
BOT 2010C	BSC X010	BOT 2010C teaches similar concepts to BSC X010
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

4. If the request includes exemption from or elimination of a prerequisite course(s) and/or course alternative(s), please list the following information for each course that you would like to be exempt from or eliminate (add rows if necessary).

Course Prefix and Number	Course Title	Justification for Course Elimination/Exemption
Click or tap here to enter text.	Click or tap here to enter text.	☐ Exempt from Course ☐ Elimination of Course Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	☐ Exempt from Course ☐ Elimination of Course Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	☐ Exempt from Course ☐ Elimination of Course Click or tap here to enter text.

5. Please provide the college level prerequisite(s) for the common prerequisite course(s) if applicable (add rows if necessary).

Course Prefix	College Level Prerequisites	Credits
CHM 2045	**CHM 1025 with a minimum grade of C, or a passing**	0-2* (shared
Click or tap here	Click or tap here to enter text.	
	Total Credits	

6. Please provide the information requested below for the review of common prerequisite completion within 60 credit hours.

Number of Credit Hours for AA degree	**60**
Subtract the number of credit hours required for common prerequisites	- 21
Subtract the number of credit hours of college-level course prerequisites for common prerequisite courses (if known)	- 0(-2)
Add the number of credit hours for common prerequisites that are also general education core requirements	+ 17
Total Credits remaining to complete the rest of the student's general education requirements	= 56-54

7. If a student does not have enough room in the "Total Credits" above to complete the rest of the general education requirements, please provide justification for requiring more common prerequisite course credit hours than can be accommodated by the student in 60 credit hours.

N/A

8. Other.

N/A

Common Prerequisites Manual (CPM) Revision Request

Institution:	University of Florida
Institution Liaison:	Dr. Angela Lindner
Date of Submission:	6/28/2023
Program/Degree Type:	Bachelor of Science
Program CIP Code:	03.0104
Program Credit Hours:	120

If applicable, please complete the following if you are notifying us of a change to:

Program Credit Hours:	Current Credit Hours: Click or tap here to enter text. New Credit Hours: Click or tap here to enter text. Effective Date: Click or tap here to enter text.
Limited Access Program Status:	☐ Change from open access to limited access ☐ Change from limited access to open access Effective Date: Click or tap here to enter text.
Program CIP Code:	Current CIP code: Click or tap here to enter text. New CIP Code: Click or tap here to enter text. Effective Date: Click or tap here to enter text.
Baccalaureate Program Status:	☐ Notification of a Program Termination – Term/Year Program Should be Removed from the CPM: Click or tap here to enter text. ☐ Notification of New Program – Anticipated Program Implementation Date: Click or tap here to enter text. ☐ Notification of Program Name Change – Revised Program Name: Click or tap here to enter text.

Proposed Revisions(s) to the CPM (check all that apply)

The CIP Code Is Currently in the CPM:

☒ 1. Make curriculum changes to an existing track at proposing institution

☐ 2. Add program to a current track without curriculum changes

☐ 3. Add program to a current track with curriculum changes

☐ 4. Establish a new track without prerequisites

☐ 5. Establish a new track with prerequisites

6. For numbers 1-5, please provide track information below:

a. ☐ Track 1 ☐ Track 2 ☐ Track 3 ☐ Track 4 ☐ Track 5 ☐ Track 6

b. Track Name: Click or tap here to enter text.

c. If this is a request to establish a new track, please provide justification as to why a new track is needed: Click or tap here to enter text.

The CIP Code Is Not Currently in the CPM:

☐ 7. Add program to the CPM without prerequisites

☐ 8. Add program to the CPM with prerequisites

Proposed Curriculum Actions:

☒ Add course(s) and/or course alternative(s)

☒ Eliminate course(s) and/or course alternative(s) (delete course from the CPM)

☐ Exempt course(s) and/or course alternative(s) (request exception from course)

☐ Carry over prerequisites from previous CIP without changes (CIP Code change)

☐ Carry over prerequisites from previous CIP with changes (CIP Code change)

☐ Other – please specify Click or tap here to enter text.

Please include the following supporting documentation with this proposal:

- The program page from the Common Prerequisite Manual, if applicable.
- The program requirements for the baccalaureate degree program at your institution.

If this request is for any of the following, do not complete anything further:

- Add program to a current track without curriculum changes
- Establish a new track without prerequisites
- Add program to the CPM without prerequisites

If this request is for any of the following, please complete 1-8, where applicable:

- Make curriculum changes to an existing track at proposing institution
- Carry over prerequisites from previous CIP with no changes
- Carry over prerequisites from previous CIP with changes
- Add program to a current track with curriculum changes
- Establish a new track with prerequisites
- Add program to the CPM with prerequisites

1. For required prerequisite course(s) and/or course alternative(s), please list the following information for each course (add rows if necessary).

Course Prefix and Number	Course Title	Course Alternative	Justification for Course(s)	Credits
MAC2233	Survey of Calculus 1	MAC2311	Existing prerequisite (GE Core)	3 (MAC2311: 4)
BSC2010	Integrated Principles of Biology I	BSC1010C	Existing prerequisite (GE Core)	3
BSC2010L	Integrated Principles of Biology Lab	BSC1010C	Existing prerequisite	1
BSC2011	Integrated Principles of Biology II	BSC2011C	Existing prerequisite	3
BSC2011L	Integrated Principles of Biology II Lab	BSC2011C	Existing prerequisite	1
CHM2045	General Chemistry	CHM2045C	Existing prerequisite (GE Core)	3
CHM2045L	General Chemistry Laboratory	CHM2045C	Existing prerequisite	1
CHM2046	General Chemistry II	CHM2046C	Existing prerequisite	3
CHM2046L	General Chemistry Laboratory II	CHM2046C	Existing prerequisite	1

PHY2004	Applied Physics I	PHY2048 or PHY2053	Existing prerequisite	3 (PHY 2053: 4)
PHY2004L	Laboratory for Applied Physics 1	PHY2048L or PHY2053L	Existing prerequisite	1
STA2023	Introduction to Statistics I	Click or tap here to enter text.	Existing prerequisite (GE Core)	3
AEB3103	Principles of Food and Resource Economics	ECO2013 and ECO2023	AEB3103 is a more natural resource-focused alternative to the ECO2013/ ECO2023 sequence.	4 (ECO2013/ ECO2023: 8)
			Total Credits	**30-36**

2. If the course(s) above includes a course(s) that is offered currently at three or fewer FCS or SUS institutions, please provide justification as to why the course is critical for a student's success in the baccalaureate degree program. Please visit the Statewide Course Numbering System to determine the number of institutions that offer the course(s) (add rows if necessary). Click here for instructions on how to navigate the SCNS.

Course(s) Offered at 3 or Less FCS/SUS Institutions	Number of FCS Institutions Currently Offering Course (out of 28)	Number of SUS Institutions Currently Offering Course (out of 12)	Justification for Course(s)
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

3. If the request includes courses that are offered only at your institution, explain what options are available to students at other institutions for completing the required courses (add rows if necessary).

Course(s) Offered Only	Option(s) at Other Institutions	Explanation of Option(s)

at Proposing Institution		
AEB3103	ECO2013 and ECO2023	The ECO2013 and ECO2023 sequence teaches similar concepts as AEB3103. While the ECO courses have broad applicability, AEB3103 focuses on applications to agriculture and natural resources.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

4. If the request includes exemption from or elimination of a prerequisite course(s) and/or course alternative(s), please list the following information for each course that you would like to be exempt from or eliminate (add rows if necessary).

Course Prefix and Number	Course Title	Justification for Course Elimination/Exemption
MAC1147	Algebra and Trigonometry	☐ Exempt from Course ☒ Elimination of Course Replaced by MAC2233 or MAC2311
MAC2312	Analytic Geometry and Calculus 2	☐ Exempt from Course ☒ Elimination of Course No longer a degree requirement after recent curriculum revision
PHY2005	Applied Physics 2	☐ Exempt from Course ☒ Elimination of Course No longer a degree requirement after recent curriculum revision
PHY2005L	Applied Physics 2 Lab	☐ Exempt from Course ☒ Elimination of Course No longer a degree requirement after recent curriculum revision

5. Please provide the college level prerequisite(s) for the common prerequisite course(s) if applicable (add rows if necessary).

Course Prefix	College Level Prerequisites	Credits
MAC2233	Any of the following: minimal acceptable score on the online mathematics placement exam; a minimum grade of C in a MAC course numbered 1140 or higher; AP credit for MAC 2311; IB credit for a MAC course numbered 1140 or higher. Any course grades, AP or IB scores used to meet this prerequisite must be on file at UF by registration.	0-4
CHM2045	CHM 1025 with a minimum grade of C, or a passing score on Chem placement plus no attempt of CHM 1025 w/grade <C or W, and MAC 1147, or MAC 1140 plus MAC 1114, or higher MAC course with a minimum grade of C	0-2*
AEB3103	MAC 2233/MAC 2311 or higher	0*
	*shared prerequisites are not double-counted	
	Total Credits	**0-6**

6. Please provide the information requested below for the review of common prerequisite completion within 60 credit hours.

Number of Credit Hours for AA degree	**60**
Subtract the number of credit hours required for common prerequisites	- 30 (-36)
Subtract the number of credit hours of college-level course prerequisites for common prerequisite courses (if known)	- 0 (-6)
Add the number of credit hours for common prerequisites that are also general education core requirements	+ 6 (+7)
Total Credits remaining to complete the rest of the student's general education requirements	= 24-37

7. If a student does not have enough room in the "Total Credits" above to complete the rest of the general education requirements, please provide justification for requiring more common prerequisite course credit hours than can be accommodated by the student in 60 credit hours.

N/A

8. Other.

N/A

Common Prerequisites Manual (CPM) Revision Request

Institution:	University of Florida
Institution Liaison:	Dr. Angela Lindner
Date of Submission:	5/31/2023
Program/Degree Type:	Bachelor of Arts
Program CIP Code:	03.0104
Program Credit Hours:	120

If applicable, please complete the following if you are notifying us of a change to:

Program Credit Hours:	Current Credit Hours: Click or tap here to enter text. New Credit Hours: Click or tap here to enter text. Effective Date: Click or tap here to enter text.
Limited Access Program Status:	☐ Change from open access to limited access ☐ Change from limited access to open access Effective Date: Click or tap here to enter text.
Program CIP Code:	Current CIP code: Click or tap here to enter text. New CIP Code: Click or tap here to enter text. Effective Date: Click or tap here to enter text.
Baccalaureate Program Status:	☐ Notification of a Program Termination – Term/Year Program Should be Removed from the CPM: Click or tap here to enter text. ☐ Notification of New Program – Anticipated Program Implementation Date: Click or tap here to enter text. ☐ Notification of Program Name Change – Revised Program Name: Click or tap here to enter text.

Proposed Revisions(s) to the CPM (check all that apply)

The CIP Code Is Currently in the CPM:

☒ 1. Make curriculum changes to an existing track at proposing institution

☐ 2. Add program to a current track without curriculum changes

☐ 3. Add program to a current track with curriculum changes

☐ 4. Establish a new track without prerequisites

☐ 5. Establish a new track with prerequisites

6. For numbers 1-5, please provide track information below:

a. ☐ Track 1 ☐ Track 2 ☐ Track 3 ☐ Track 4 ☐ Track 5 ☐ Track 6

b. Track Name: Click or tap here to enter text.

c. If this is a request to establish a new track, please provide justification as to why a new track is needed: Click or tap here to enter text.

The CIP Code Is Not Currently in the CPM:

☐ 7. Add program to the CPM without prerequisites

☐ 8. Add program to the CPM with prerequisites

Proposed Curriculum Actions:

☒ Add course(s) and/or course alternative(s)

☒ Eliminate course(s) and/or course alternative(s) (delete course from the CPM)

☐ Exempt course(s) and/or course alternative(s) (request exception from course)

☐ Carry over prerequisites from previous CIP without changes (CIP Code change)

☐ Carry over prerequisites from previous CIP with changes (CIP Code change)

☐ Other – please specify Click or tap here to enter text.

Please include the following supporting documentation with this proposal:

- The program page from the Common Prerequisite Manual, if applicable.
- The program requirements for the baccalaureate degree program at your institution.

If this request is for any of the following, do not complete anything further:

- Add program to a current track without curriculum changes
- Establish a new track without prerequisites
- Add program to the CPM without prerequisites

If this request is for any of the following, please complete 1-8, where applicable:

- Make curriculum changes to an existing track at proposing institution
- Carry over prerequisites from previous CIP with no changes
- Carry over prerequisites from previous CIP with changes
- Add program to a current track with curriculum changes
- Establish a new track with prerequisites
- Add program to the CPM with prerequisites

1. For required prerequisite course(s) and/or course alternative(s), please list the following information for each course (add rows if necessary).

Course Prefix and Number	Course Title	Course Alternative	Justification for Course(s)	Credits
SPC2608	Introduction to Public Speaking	AEC3030C	Needed for success in upper-level courses	3
MAC1147	Precalculus Algebra and Trigonometry	MAC1114 and MAC1140	Existing Prerequisite (GE Core)	4 (MAC1114 and MAC1140: 5)
BSC2010	Integrated Principles of Biology I	BSC1010C	Needed for success in upper-level courses (GE Core)	3
BSC2010L	Integrated Principles of Biology Lab	BSC1010C	Needed for success in upper-level courses	1
BSC2011	Integrated Principles of Biology II	BSC2011C	Needed for success in upper-level courses	3
BSC2011L	Integrated Principles of Biology II Lab	BSC2011C	Needed for success in upper-level courses	1
CHM2045	General Chemistry	CHM2045C	Existing Prerequisite (GE Core)	3
CHM2045L	General Chemistry Laboratory	CHM2045C	Existing Prerequisite	1
PHY2004	Applied Physics I	PHY2020	Existing Prerequisite	3

STA2023	Introduction to Statistics I	Click or tap here to enter text.	Existing Prerequisite (GE Core)	3
ECO2013	Principles of Macroeconomics	Click or tap here to enter text.	Existing Prerequisite (GE Core)	4
ECO2023	Principles of Microeconomics	Click or tap here to enter text.	Existing Prerequisite	4
Credits			**Total**	**33-34**

2. If the course(s) above includes a course(s) that is offered currently at three or fewer FCS or SUS institutions, please provide justification as to why the course is critical for a student's success in the baccalaureate degree program. Please visit the Statewide Course Numbering System to determine the number of institutions that offer the course(s) (add rows if necessary). Click here for instructions on how to navigate the SCNS.

Course(s) Offered at 3 or Less FCS/SUS Institutions	Number of FCS Institutions Currently Offering Course (out of 28)	Number of SUS Institutions Currently Offering Course (out of 12)	Justification for Course(s)
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

3. If the request includes courses that are offered only at your institution, explain what options are available to students at other institutions for completing the required courses (add rows if necessary).

Course(s) Offered Only at Proposing Institution	Option(s) at Other Institutions	Explanation of Option(s)
AEC3030C	SPC2608	Both courses are introductory public speaking courses.

Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

4. If the request includes exemption from or elimination of a prerequisite course(s) and/or course alternative(s), please list the following information for each course that you would like to be exempt from or eliminate (add rows if necessary).

Course Prefix and Number	Course Title	Justification for Course Elimination/Exemption
BSC2005	Biological Sciences	☐ Exempt from Course ☒ Elimination of Course Replaced by BSC2010 and BSC2011. More comprehensive biology sequence required for success in upper-level courses.
BSC2005L	Laboratory in Biological Sciences	☐ Exempt from Course ☒ Elimination of Course Replaced by BSC2010 and BSC2011. More comprehensive biology sequence required for success in upper-level courses.
BSC1005C	General Biology	☐ Exempt from Course ☒ Elimination of Course Was an alternative to BSC2005/L; no longer applicable after recent curriculum revision
CHM2046	General Chemistry II	☐ Exempt from Course ☒ Elimination of Course No longer a degree requirement after recent curriculum revision
CHM2046L	General Chemistry Laboratory II	☐ Exempt from Course ☒ Elimination of Course No longer a degree requirement after recent curriculum revision
PHY2004L	Lab for Physics 2004 and 2005	☐ Exempt from Course ☒ Elimination of Course No longer a degree requirement after recent curriculum revision
POS2041	American Federal Government	☐ Exempt from Course ☒ Elimination of Course

		No longer a degree requirement after recent curriculum revision.

5. Please provide the college level prerequisite(s) for the common prerequisite course(s) if applicable (add rows if necessary).

Course Prefix	College Level Prerequisites	Credits
MAC1147	ALEKS >=61%	0
CHM2045	CHM 1025 with a minimum grade of C, or a passing score on Chem placement plus no attempt of CHM 1025 w/grade <C or W, and MAC 1147, or MAC 1140 plus MAC 1114, or higher MAC course with a minimum grade of C	0-2
	Total Credits	**0-2**

6. Please provide the information requested below for the review of common prerequisite completion within 60 credit hours.

Number of Credit Hours for AA degree	**60**
Subtract the number of credit hours required for common prerequisites	- 33 (-34)
Subtract the number of credit hours of college-level course prerequisites for common prerequisite courses (if known)	- 0 (-2)
Add the number of credit hours for common prerequisites that are also general education core requirements	+ 11 (+12)
Total Credits remaining to complete the rest of the student's general education requirements	= 35-39

7. If a student does not have enough room in the "Total Credits" above to complete the rest of the general education requirements, please provide justification for requiring more common prerequisite course credit hours than can be accommodated by the student in 60 credit hours.

N/A

8. Other.

N/A

UF | Board of Trustees
UNIVERSITY of FLORIDA

COMMITTEE ON ACADEMIC, FACULTY AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC COMMUNICATIONS
ACTION ITEM AFSSPRSC6
June 13, 2024

SUBJECT: General Education Courses Annual Review

BACKGROUND INFORMATION

Pursuant to Board of Governors Regulation 8.005, the Board of Trustees and President must annually review and approve the courses offered by the institution that meet general education course requirements and submit the approved list to the Articulation Coordinating Committee by September 1 of each year.

PROPOSED COMMITTEE ACTION

The Committee on Academic, Faculty and Student Success, Public Relations and Strategic Communications is asked to approve the above General Education Courses Annual Review for recommendation to the Board of Trustees for approval on the Consent Agenda.

ADDITIONAL COMMITTEE CONSIDERATIONS

Board of Governors approval is required after being submitted by the Articulation Coordinating Committee.

Supporting Documentation Included: To be provided.

Submitted by: J. Scott Angle, Provost and Senior Vice President for Academic Affairs

Approved by the University of Florida Board of Trustees, June 13, 2024

_____ _____

Morteza “Mori” Hosseini, Chair Ben Sasse, President and Corporate Secretary

UF | Board of Trustees
UNIVERSITY of FLORIDA

COMMITTEE ON ACADEMIC, FACULTY AND STUDENT SUCCESS, PUBLIC RELATIONS AND STRATEGIC COMMUNICATIONS
ACTION ITEM AFSSPRSC7
June 13, 2024

SUBJECT: New Degrees

BACKGROUND INFORMATION

The proposed Ph.D. and M.S. degrees in Comparative Biomedical Sciences in the College of Veterinary Medicine (CIP 26.0102) is designed to cultivate problem-solving abilities, critical thinking, team science, leadership, and science communication, as well as other professional skills essential for conducting research. The program is flexible and allows students to train in various areas of emphasis including diseases and immunology, physiological sciences, forensic sciences, aquatic animals and ecosystem health and artificial intelligence.

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: State University System of Florida Board of Governors Request to Offer a New Degree Program Form

Submitted by: J. Scott Angle, Provost and Senior Vice President for Academic Affairs

Approved by the University of Florida Board of Trustees, June 13, 2024

_____ _____

Morteza “Mori” Hosseini, Chair Ben Sasse, President and Corporate Secretary

STATE UNIVERSITY SYSTEM OF FLORIDA

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 2024 **Proposed Implementation Term**
College of Veterinary Medicine **Name of College(s) or School(s)**	College of Veterinary Medicine **Name of Department(s)/Division(s)**
Comparative Biomedical Sciences **Academic Specialty or Field**	Doctor of Philosophy with a major in Comparative Biomedical Sciences **Complete Name of Degree**
26.0102 **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**	**Provost's Signature** **Date**

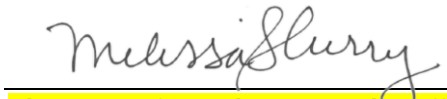
PROJECTED ENROLLMENTS AND PROGRAM COSTS

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	10	7.5	$49,179	$368,843			$368,843
Year 2	11	8.25					
Year 3	12	9					
Year 4	13	9.75					
Year 5	15	11.25	$36,901	$415,137			$415,137

Additional Required Signatures

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

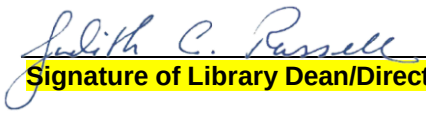


Signature of Equal Opportunity Officer

04/03/2023

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

March 23, 2023

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 mission of the UF CVM's graduate program is "to provide high-quality research training for graduate students in the biomedical sciences (UF SACSCOC Accreditation)", veterinary medicine and related disciplines.

The graduate program is designed to cultivate problem-solving abilities, critical thinking, team science, leadership, and science communication, as well as other professional skills essential for conducting research. This program is flexible and allows students to train in various areas of emphasis including infectious diseases and immunology, physiological sciences, forensic sciences, aquatic animals and ecosystem health, artificial intelligence, and other areas of emphasis presented below.

The graduate program aligns with the College of Veterinary Medicine's mission statement, which is "The College of Veterinary Medicine advances animal, human, and environmental health through education, research, and patient care." It also aligns with the University's mission "to lead and serve the state of Florida, the nation and the world by pursuing and disseminating new knowledge while building upon the experiences of the past."

Degree Program: PhD with a major in Comparative Biomedical Sciences

Level: PhD

Major: Comparative Biomedical Sciences

Areas of emphasis: UF CVM strengths and areas of emphasis in research graduate training include, but are not limited to discovery and translational solutions for (i) infectious diseases and immunology, (ii) physiological sciences, (iii) forensic sciences, (iv) microbiology, virology, and parasitology, (v) zoo medicine (vi) aquatic animals and ecosystem health, (vii) livestock and wildlife population health, (viii) equine gastroenterology; (ix) orthopedic bioengineering using animal models, (x) clinical and translational research in selected disciplines such as cardiology, dermatology, oncology, and ophthalmology, and (xi) novel diagnostic and therapeutic applications to improve human and animal health using artificial intelligence. UF CVM is uniquely situated to pursue these investigations with emphasis on non-human species, and in comparative medicine in animals and humans.

Total number of credit hours: 90. The PhD with a major in Comparative Biomedical Sciences is structured to be completed (in-residence) in four to five years. PhD students will take 90 credits of coursework, including 14 credits in required

courses: VME 6937L VMS Graduate Seminar Series or equivalent (6 credits), VME 6767 Responsible Conduct in Research or equivalent (1), Grant Writing (1), Statistics (3), Biochemistry or Molecular Biology (3). The Qualifying Exam will be completed within seven terms after enrollment. At the end of the graduating semester, the PhD candidate must successfully complete a final examination or defense.

Program Change
Because the required coursework (14 credits) is the same for the existing PhD degree in Veterinary Medical Sciences (VMS) and the new PhD degree with a major in Comparative Biomedical Sciences, VMS students may be eligible to change to the PhD degree in Comparative Biomedical Sciences.
When such transfer is desired, it should be approved before the Qualifying Exam is completed. (e.g., within first seven terms after enrollment).

Master's Option
A stand-alone master's with a major in Comparative Biomedical Sciences (thesis-based) is structured to be completed in-residence in two years, independently of the PhD. Master's students will take 30 credits of coursework, including 8 credits in required courses aligned with the requirements of the PhD: VME 6937L VMS Graduate Seminar Series or equivalent (1 credit), VME 6767 Responsible Conduct in Research or equivalent (1), Statistics (3), Biochemistry or Molecular Biology (3), as well as 22 credits in research and elective courses. PhD students who have met the master's degree requirements may be eligible to receive the Master of Science degree.

Career outcomes: UF CVM PhD graduates will join the biomedical research workforce in research-intensive positions in academia or in research-related positions in the private sector, government, NGOs, or non-profits in Florida, the United States, and internationally.

Employment of medical scientists is projected to grow 17% from 2021 to 2031, much faster than the average for all occupations (US Bureau of Labor Statistics). https://www.bls.gov/ooh/life-physical-and-social-science/medical-scientists.htm

Additional details on meeting workforce need are presented in Section III.

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 SUS goals focus on three critical points to realize its mission and its 2025 vision: *Excellence, Productivity, and Strategic Priorities for a Knowledge Economy*.

Goals for Teaching and Learning

Excellence

GOAL 1: Strengthen Quality and Reputation of the Universities

Improve the quality and relevance of the System's institutions with regard to state, national, and international preeminence.

Productivity

GOAL 2: Increase Degree Productivity and Program Efficiency-Increase access and efficient degree completion for students.

Strategic Priorities for a Knowledge-Based Economy

GOAL 3: Increase the Number of Degrees Awarded in STEM/Health and Other Programs of Strategic Emphasis.

Increase student access and success in degree programs in the STEM/health fields and other Programs of Strategic Emphasis that respond to existing, evolving, and emerging critical needs and opportunities.

UF CVM's PhD with a major in Comparative Biomedical Sciences will fulfill all three goals for teaching and learning by providing graduate education and training of the highest quality with emphasis in discovery and translational solutions for infectious diseases and immunology, physiological sciences, forensic sciences, and other areas of emphasis identified above, in Florida, USA, and internationally; therefore, it will support Goals 1 and 2. New graduates will acquire scientific knowledge and skills required to compete and collaborate in today's global society and market place. This will be a new STEM/Health degree; therefore, it will support Goal 3.

Information on the need and demand for the proposed PhD degree is presented in Section III.

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 UF's College of Veterinary Medicine is part of the UF Academic Health Center (the most comprehensive academic health center in the Southeast). The Academic Health Center includes the colleges of Dentistry, Medicine, Nursing, Pharmacy, Public Health and Health Professions, and Veterinary Medicine. https://ufhealth.org/academic-health-center/overview

UF CVM is the state's only veterinary college. It is ranked # 7 among veterinary medical colleges nationwide by the U.S. News & World Report. Our UF Small Animal Hospital caseload is the 2nd largest among academic veterinary hospitals in USA.

Established in 1977, UF CVM offers four degree programs: doctor in veterinary medicine (DVM), a Master's in Veterinary Medical Sciences (VMS), a PhD degree in VMS, and a Master of Preventive Veterinary Medicine approved effective Fall 2023. In addition, a CVM/MPH degree is offered jointly by the College of Public Health and Health Professions and the College of Veterinary Medicine.

Since 1993, nearly 400 students have completed the Master degree or PhD degree in VMS. In addition, more than 500 students have completed our Master's online program in VMS, with a concentration in shelter medicine, forensic toxicology, or veterinary forensic sciences.

UF CVM's professional and graduate education programs are supported by 190 faculty members from five CVM academic departments (Comparative, Diagnostic, and Population Medicine, Large Animal Clinical Sciences, Small Animal Clinical Sciences, Physiological Sciences, and Infectious Diseases and Immunology) and other academic units on campus. In year 2022, 42 of 190 CVM faculty members were engaged in graduate education and training; 21 of 42 faculty members were involved in didactive teaching (e.g., Graduate Seminars, Graduate Journal Club: mechanisms of microbial virulence, Responsible Conduct in Research, Advanced Toxicology, Ecotoxicology and Risk Assessment, Advanced Bioinformatics, other courses) and 35 of 42 faculty members served as major professors of one or more PhD students.

CVM faculty are accomplished professors and researchers with 5-60 years of experience in education, research, consulting, and human/institutional capacity development programs in Florida, nationally, and internationally. The faculty publish in high quality peer-review journals, offer training workshops to practicing veterinarians, graduate students, farmers and ranchers in Florida, the USA, and abroad. CVM faculty share education, research, and administration resources, and will support the PhD curriculum and transdisciplinary research relevant to Florida's

citizens.

UF CVM's PhD program with a major in Comparative Biomedical Sciences will maximize existing resources to address challenges and opportunities in Florida, such as pathogen discovery, rapid diagnostic tests, pathogen virulence factors and mechanisms used to evade animal/human's immune system and cause disease, vaccine development, neuroscience and neurophysiology, toxicology, organ systems physiology, early detection and risk management of diseases or unusual mortality events in aquatic animals and related ecosystems, horses, beef cattle, dairy cattle, white-tailed deer, fish, and zoo animals, as well as cure of chronic diseases and cancer in companion animals.

In its association with UF's Institute of Food and Agricultural Sciences, UF CVM provides Extension veterinary services to farmers and ranchers of commercial livestock or wildlife operations, and aquaculture farms throughout the state.

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 reviewed and approved by the CAVP Academic Coordinating Group on September 13, 2023, and 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.

The external consultant's report and UF CVM response is presented in Appendix B.

Planning Process

Date	Participants	Planning Activity Description

October 28, 2022	Dianne McFarlane, Professor and Chair, UF CVM Department of Large Animal Clinical Sciences and faculty (n = 30).	CVM LACS strategic plan meeting: faculty approved action to explore PhD degree STEM options.
February 2, 2023	Adam Biedrzycki, Ricardo Chebel, Klibs Galvao, Jorge Hernandez (UF CVM LACS PhD Biomedical Sciences Lead Faculty).	A draft pre-proposal for the creation of PhD in Biomedical Sciences (CIP 26-0102, STEM) was reviewed by UF CVM LACS Lead faculty.

Date	Participants	Planning Activity Description
February 8, 2023	Jorge Hernandez (CVM Director of Graduate Education), John Bowen, Ricardo Chebel, Aria Eshraghi, Domenico Santoro, Janet Yamamoto (CVM Graduate Studies Committee members).	CVM Director of Graduate Education informed CVM Graduate Studies Committee that CVM ORGS will present the draft pre-proposal to UF Graduate School and UF Office of Institutional Planning and Research reps for guidance.
February 13, 2023	Jorge Hernandez (CVM Director of Graduate Education), David Pascual, (CVM Associate Dean for Research & Graduate Studies), Stacy Wallace (UF Graduate School Associate Director), Tom Kelleher (UF Graduate School Associate Dean), Kathy Lebo (UF Assistant Provost and Director of Institutional Planning and Research).	Draft pre-proposal was discussed.
February 14, 2023	Dianne McFarlane (CVM LACS Department Chair) and David Pascual (CVM Associate Dean for Research & Graduate Studies).	Draft pre-proposal was reviewed and approved.

February 15, 2023	Dana Zimmel, CVM Dean.	The pre-proposal was sent to UF Provost for review and possible approval.

February 21, 2023	Iske Larkin, Mary Brown (CVM Department Graduate Coordinators), Elizabeth Brammer-Robbins, Ricardo Chebel, Aria Eshraghi (CVM Graduate Studies Committee members), Domenico Santoro and John Bowden (CVM Department Graduate Coordinators and CVM Graduate Studies Committee members), David Allred (faculty member in the Department of Infectious Diseases and Immunology), Adam Biedrzycki and Klibs Galvao (faculty members in the Department of Large Animal Clinical Sciences--LACS), Dianne McFarlane (Professor and Chair in LACS), Jorge Hernandez (CVM Director of Graduate Education), David Pascual, (CVM Associate Dean for Research & Graduate Studies), and Chris Adin (CVM Executive Associate Dean).	A draft full proposal was reviewed for feedback and input.

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
February 24, 2023	The full proposal was sent to CVM faculty members for review and comments.
March 7, 2023	LACS faculty voted in favor to continue exploring new degree in Biomedical Sciences at the College, University, and SUS levels. Response rate = 22/28 (79%); all in favor.
March 8, 2023	CVM Graduate Studies Committee (Elizabeth Brammer-Robbins, John Bowden, Ricardo Chebel, Aria Eshraghi, Domenico Santoro, Janet Yamamoto) unanimously approved to continue exploring the new PhD degree in Biomedical Sciences at the College, University, and SUS levels.
March 10, 2023	CVM Faculty Council sent revised draft full-proposal to CVM faculty for review in preparation for Faculty Assembly.
March 13, 2023	External Consultant's Review.
March 20, 2023	CVM Faculty Assembly. Motion to continue exploring PhD degree and Master's degree in Biomedical Sciences at the university and SUS levels was approved. In-person vote. Response rate: 22/22 (100%). Yes: 21/22. Abstain: 1/22. Via zoom: Response rate 28/33 (85%), all in favor.
September 13, 2023	Pre-proposal approved at CAVP ACG meeting
Fall 2023	Proposal submitted for review with UF internal approval process, including the following:
	GC. Approval from the UF Graduate Council.
	UCC. UF University Curriculum Committee is notified of the request.
	FSSC. Approval from UF Faculty Senate Steering Committee.
	Senate. Approval from UF Faculty Senate.
	AA. Approval from UF Academic Affairs.
Fall 2023/Spring 2024	BOT. Approval from the Board of Trustees.
Spring 2024	BOG. Approval from the Board of Governors.
Spring 2024	AA. UF Academic Affairs is notified of the request.
Spring 2024	GS. UF Graduate School is notified of the request.
Summer 2024	OUR. Approval from UF Office of the University Registrar.
Summer 2024	OIPR. UF Office of Institutional Planning and Research is notified of the request.
Summer 2024	College. UF CVM is notified on the request 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**

Employment of medical scientists is projected to grow 17% from 2021 to 2031, much faster than the average for all occupations (US Bureau of Labor Statistics). https://www.bls.gov/ooh/life-physical-and-social-science/medical-scientists.htm

There is a shortage of veterinarians to meet societal needs in biomedical sciences in different disciplines (Rosol et al. The Need for Veterinarians in Biomedical Research. J Vet Med Edu 2009; 36:70-75).

Since 1991, the existing UF CVM's PhD program in Veterinary Medical Sciences (VMS) has produced a total 195 PhD graduates who have entered the workforce in research or professional positions in academia, private sector, or government in Florida, the United States, and internationally.

Student interest. **UF CVM's PhD education and training is mainly in biomedical sciences in different disciplines**. In the last 10 years (2013-2022), most PhD graduates (48/53 or 91%) were engaged in biomedical research with emphasis in infectious diseases and immunology or physiological sciences (n = 17), or aquatic animals and ecosystem health, wildlife population health, or equine gastroenterology (n = 31). In addition, five of 53 (9%) PhD graduates were engaged in animal agriculture and veterinary clinical sciences with emphasis in cattle diseases (e.g., mastitis, metritis, tick-borne diseases). Overall, average time to graduation was 4.7 years. After graduation, 51 of 53 new graduates joined the research taskforce in academia (n = 30/51 or 59%), private sector (n = 12/51 or 23%), or government (n = 9/51 or 18%) in Florida, the United States, or abroad. Among the 30 PhD graduates in academia, 20 accepted postdoctoral research positions (including ten at UF) and 10 accepted faculty positions at public universities (including two as clinical assistant professors at UF CVM and one at Virginia Tech College of Veterinary Medicine, two as assistant professors at Washington State University and one at University of Toledo, and four more at public universities in Chile, Dominican Republic, Paraguay, or Thailand).

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

Enrollment projections are based on annual number of students enrolled in current PhD program in Veterinary Medical Sciences (VMS) in the last 10 years.

During 2013-2022, an average of seven new PhD students enrolled in the PhD program in VMS every year. In the last two years (2021 and 2022), PhD student annual enrollment went up to 10 and 11 students, respectively. We expect the annual enrollment of new PhD students will go up to 15 annually in the next five years.

We expect 20 of 30 existing PhD students in VMS will change major to enroll in the proposed PhD program with a major in Comparative Biomedical Sciences at UF CVM; most students (15/20) will be international students.

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 enrollment of new PhD students will go up from **7 students** in the last seven years (2013-2020) to **10 students** in 2021, and to **15 students** in 2025.

The projected enrollment of new students will produce a total population of about **60 PhD students** in 2025.

The projected increased enrollment in the next five years is associated with a strategic budget allocation at UF CVM to support graduate education; particularly the PhD program. The projected enrollment of 15 new students per year and a total population of 60 PhD students is aligned with the PhD program size of Top Five veterinary programs in the country.

We do not expect students from other UF academic units will change academic programs to enroll in the new PhD program with a major in Comparative Biomedical Sciences at UF CVM.

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.**

Quantitative benefits. The total Educational and General (E&G) cost of the proposed new UF CVM's PhD with a major in Comparative Biomedical Sciences program = $368,843 in Year 1 and $415,137 in Year 5 for faculty salaries. The amount in Year 1 is based on an expected reallocated base from the current PhD program in Veterinary Medical Sciences distributed across the three colleges. (Appendix 1, Table 3-A).

The budget does not require new UF CVM funding allocation for implementation of the new PhD degree with a major in Comparative Biomedical Sciences.

The PhD program will be supported by using current and projected funding allocations by UF CVM in the mission of graduate education from Year 1 to Year 5, as well as extramural grants by UF CVM faculty. Additional budget information in presented in Section VII below.

New PhD enrollment projections are described above.

Qualitative benefits. The mission of UF CVM's graduate program in Veterinary Medical Sciences (VMS) is to provide high-quality research training for graduate students in the **biomedical sciences** (UF SACSCOC Accreditation).

The CIP 26.0102 Comparative Biomedical Sciences, General, is appropriately aligned with UF CVM's mission in graduate education and the scope of PhD education and training in biomedical sciences in main areas of emphasis identified above.

The PhD with a major in Comparative Biomedical Sciences offered at UF CVM will be a STEM/Health degree; therefore, it will support SUS Goal 3 in its mission of Teaching and Learning for a Knowledge-Based Economy: *Increase the number of degrees awarded in STEM/Health and other programs of strategic emphasis that respond to existing, evolving, and emerging critical needs and opportunities*.

Since 1991, UF CVM's PhD program in VMS has been offered under the Classification of Instructional Program (CIP) 01.8101, which is justified for education and training in Agricultural Sciences, Veterinary Sciences/Vet Clinical Sciences, General. The CIP 01.8101 is non-STEM; a classification that has recently affected our capacity to recruit highly qualified PhD applicants with interest in biomedical science education and training. These applicants accepted other (STEM) options at UF PhD programs (e.g., Animal Molecular and Cellular Biology, UF IFAS Department of Animal Sciences, CIP 26.0406) while retaining UF CVM faculty as their major professors, or at other universities in the United States.

E. **If <u>other public or private institutions in Florida</u> have similar programs that exist at the four- or six-digit CIP Code or in other CIP Codes <u>where 60 percent of the coursework is comparable</u>, 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.**

Florida State University (FSU). Tallahassee, Florida. The Department of Biological Sciences offers PhD degree with a major in Biology in three tracks: Cell and Molecular Biology, Ecology and Evolution, and Neuroscience under CIP 26.0102 Biomedical Sciences, Other.

Florida International University (FIU). Miami, Florida. The Herbert Wertheim College of Medicine offers a PhD degree with a major in Biomedical Sciences under CIP 26.0102 Biomedical Sciences, Other.

University of Central Florida (UCF). Orlando Florida. under CIP 26.0102 Biomedical Sciences, Other.

Source: https://www.flbog.edu/resources/data-analytics/dashboards/degrees-awarded-by-classification-of-instructional-programs-cip-code/

Overall, required PhD coursework varies between UF CVM, FSU, FIU, and UCF; but most programs require education and instruction in graduate seminars, responsible conduct of research, and statistics.

FSU Cell & Molecular Biology[1]	FIU Biomedical Sciences[2]	UCF Biomedical Sciences[3]	UF CVM Comparative Biomedical Sciences[4]
CIP 26.0102	CIP 26.0102	CIP 26.0102	CIP 26.0102
Required Courses			
BSC 6921-Bio Sci Colloquium or Neuroscience equivalent; Seminars (3 credits); BSC 5900 (Directed Individual Study); BSC 5971 (Thesis Research); Responsible Conduct of Research; Teaching Requirement.	GMS 6103 Molecular Microbiology and Infectious Diseases GMS 6220 Molecular Genetics and Cellular Biology GMS 6605 Basic Structure of the Human Body GMS 6864 Principles of Clinical Epidemiology and Biostatistics GMS 6939 Graduate Seminar GMS 6942 Laboratory Rotations GMS 6962 Formation of Committee: Appointment of Dissertation Committee: Preliminary Proposal GMS 6979 Research Credits GMS 6481 Physiology and Immunology	BSC 6432 Biomedical Sciences I BSC 6431 Practice of Biomedical Sciences IDS 6694 Experimental Design and Analysis in Biomedical Sciences GMS 6860 Statistics for Biomedical Scientists PCB5815 Molecular Aspects of Obesity, Diabetes and Metabolism PCB5837 Cellular and Molecular Neuroscience PCB5236 Cancer Biology MCB 6273 Advanced Topics in Infectious Processes	VME 6937L VMS Graduate Seminar Series (or equivalent); VME 6767 Issues in Responsible Conduct of Research (or equivalent); PHC 6088 Statistical Analysis of Genetic Data (or equivalent); BCH 5413 Mammalian Molecular Biology and Genetics (or equivalent); GMS 6096 Intro NIH Grant Writing Biomedical Sciences (or equivalent).

[1]https://www.bio.fsu.edu/grad/handbook/
[2]https://medicine.fiu.edu/academics/phd-in-biomedical-sciences/curriculum/index.html
[3]https://www.ucf.edu/degree/biomedical-sciences-phd/
[4]https://research.vetmed.ufl.edu/studies/

In addition,

UF College of Medicine offers a PhD degree in Medical Sciences under CIP 26-9999 Biological and Biomedical Sciences, Other.

Overall, required PhD's core coursework varies between UF CVM, UF College of Medicine, and UF IFAS Animal Sciences; but all three programs require education and training in responsible conduct of research.

UF College of Medicine Medical Sciences[1]	UF IFAS Animal Sciences Animal Molecular and Cellular Biology[2]	UF CVM Comparative Biomedical Sciences[3]
CIP 26.0102	CIP 26.0102	CIP 26.0102
Required Courses		
Foundational/Core Curriculum Fall Semester GMS 6001 Fundamentals of Biomedical Sciences I (5 credits); GMS 6003 Essentials of Graduate Research & Professional Development (1) GMS 6090 Research Rotations (2) GMS 6895 Journal Club (1) Career Development/ Research Seminar Series Spring Semester Any combination of introductory or fundamental or advanced coursework (6) GMS 6090 Research Rotation (1) GMS 7877 Responsible Conduct in Biomedical Research (1) **Customized Concentration-Focused Curriculum** Fall Semester GMS 6003 Essentials of Graduate Research & Professional Development (1 credit) GMS 6090 Research Rotations (2) GMS 6895 Journal Club (1) Spring Semester	BCH 5413 Eukaryotic Molecular Biology (3 credits) GMS 6421 Advanced Cell Biology (4) VME 6767 Issues in Responsible Conduct of Research (or equivalent) (1)	VME 6937L VMS Graduate Seminar Series (or equivalent) (6 credits) VME 6767 Issues in Responsible Conduct of Research (or equivalent) (1) PHC 6088 Statistical Analysis of Genetic Data (or equivalent) (3) BCH 5413 Mammalian Molecular Biology and Genetics (or equivalent) (3) GMS 6096 Intro NIH Grant Writing Biomedical Sciences (or equivalent) (1)

GMS 6090 Research Rotation (1) GMS 7877 Responsible Conduct in Biomedical Research (1)		

[1]https://biomed.med.ufl.edu/wordpress/files/2022/08/BMS-Handbook_August2022-final.pdf
[2]https://programs.ifas.ufl.edu/animal-molecular-and-cellular-biology/admissions-requirements/
[3]https://research.vetmed.ufl.edu/studies/

What's in common or different between the new PhD degree with a major in Comparative Biomedical Sciences and the current PhD degree in Veterinary Medical Sciences at UF CVM?

The two degrees share the same required core coursework (**14 credits**). Specifically, graduate seminars (6 credits), responsible conduct of research (1), grant writing (1), statistics* (3) and biochemistry or molecular biology (3).

*Students enrolled in the PhD program with a major in Comparative Biomedical Sciences can select statistical courses more aligned with biomedical research such as: **PHC 6088 Statistical Analysis of Genetic Data**. The course covers the statistical theory behind methods for analyzing genetic data and its application using software tools. Equivalent courses can be suggested by the student's supervisory committee or the Department Graduate Coordinator.

*Students enrolled in the PhD program in Veterinary Medical Sciences can select statistical courses more aligned with clinical research such as: **PHC 6020 Clinical Trial Methods**. The course covers statistical concepts and methods used in clinical trials, as well as statistical principles and methods including phase I to IV clinical trials. Equivalent courses can be suggested by the student's supervisory committee or the Department Graduate Coordinator.

The main difference in education and training between the two degrees is the scope of research (biomedical vs. veterinary clinical) in selected PhD dissertations and related coursework (≥ 74 credits). The scope of dissertation for the new PhD program with a major in Comparative Biomedical Sciences is on biomedical research involving new discoveries and new translational solutions for diseases in animal and human populations. In contrast, the scope of dissertation in the current PhD Program in Veterinary Medical Sciences is on veterinary clinical research. It involves patient- oriented research in animal populations, clinical trials, epidemiologic studies, outcomes research, or health services research.

Table below shows an example of different courses taken by two UF CVM PhD graduates who were engaged in biomedical research or veterinary clinical research. After graduation, the first graduate accepted a postdoc position at UF CVM's Department of Infectious Diseases & Immunology and is now a faculty member in that Department. The second graduate returned to a clinical faculty position at the University of Mosul' College of Veterinary Medicine in Iraq, and recently accepted a

postdoc position at Cornell University's Department of Population Medicine & Diagnostic Sciences. The scope of research education and training (under VME 6910 Supervised Research; VME 7979 Advanced Research, before admission to candidacy or passing the Qualifying Exam; and VME 7980 Doctoral Research, after admission to candidacy) was different between the two graduates.

	Biomedical research	Clinical research
Dissertation	Nicotine Modulation of the Maternal-Fetal Host Response to Infection Nicotine & Tobacco Research (2021) 1763–1770	Pregnancy Loss Attributable to Mastitis in Dairy Cows J Dairy Sci (2018) 100:8322-8329
VME 6910 Supervised Research	5 credits (Biomedical)	5 credits (Clinical)
VME 7979 Advanced Research	20 credits (Biomedical)	20 credits (Clinical)
VME 7980 Doctoral Research	74 credits (Biomedical)	36 credits (Clinical)
VME 6905 Prob Vet Med Sci	9 credits (Biomedical)	3 credits (Clinical)
VME 6930s Graduate Seminars	8 (Infectious Diseases)	8 (Vet Med Sci or Anim Sci)
VME 6464 Molecular Pathogenesis	3 credits	
GMS 6140 Principles Immunology	4 credits	
STA 6167 Stats Methods Research 1	3 credits	
STA 6167 Stats Methods Research 2	3 credits	
PHC 5503 Categorical Data Methods		3 credits
PHC 6053 Regression Methods		3 credits
VME 6771 Vet Epidemiol Research		3 credits
ANS 5312C Applied Rumi Repro Manag		3 credits
ANS 6702 Lactation Physiology		1 credit
ANS 6704 Mammal Endocrinology		2 credits
PHA 5267 Principles PharmaEconomics		1 credit

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 UF CVM is committed to recruitment and retention activities and to the success of individual programs. The CVM Office for Community Engagement & Diversity Outreach (OCEDO) will enhance and strengthen already successful individual efforts by providing activities for potential URM students in the PhD program with a major in Comparative Biomedical Sciences. Dr. Michael Bowie (Assistant Dean, OCEDO) will work with affinity organizations, like the Multicultural Veterinary Medical Association, National Association for Black Veterinarians, Black DVM Network, Latinx Veterinary Medical Association, and Association of Asian Veterinary Medical Professionals, to recruit underrepresented students into the PhD program with a major in Comparative Biomedical Sciences.

By gathering the research success stories of our outstanding URM students across the individual graduate programs, the UF CVM Office of Research and Graduate Studies (ORGS) in conjunction with CVM OCEDO will be in a position to develop

materials that highlight the strength and breadth of URM scholars at UF. The PhD program with a major in Comparative Biomedical Sciences will work with CVM ORGS, CVM OCEDO, and the CVM marketing team to develop display and advertising materials that highlight the scientific success of our URM trainees and use recruiting funds to cost- effectively target diverse populations at national meetings of affinity organizations. Ads will be placed on the websites of these affinity organizations. Prospective URM scholars will be introduced to the program via a UF webpage, which is continually being improved, to outline our program, our faculty and research, and potential career opportunities that arise from being a successful graduate of the program. We hope that incoming participants consider these unique opportunities when making their decisions about PhD graduate programs.

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

[i] Bachelor's degree, veterinary degree (DVM or equivalent), or Master's degree.
[ii] An upper division undergraduate GPA of 3.2 or the equivalent.
[iii] Three appropriate letters of recommendation.
[iv] Non-U.S. citizens whose native language is not English must submit a score of at least 80 on the internet TOEFL (Test of English as a Foreign Language) (iBT & Home Edition), 550 TOEFL PBT, or 6.0 IELTS Academic. Established special exceptions for missing language scores are at the purview of the graduate school.
[v] In UF CVM, GRE score is not required

Graduation requirements

In order to obtain the PhD degree with a major in Comparative Biomedical Sciences, the student must complete required coursework (14 credits) in biochemistry or molecular biology (3 credits), statistics (3), responsible conduct in research (1), grant writing (1), graduate seminars (6), a Qualifying Examination (within first seven terms/semesters after enrollment), a Final Examination, and a PhD dissertation on main area(s) of emphasis identified above (i.e., infectious diseases and immunology, physiological sciences, forensic sciences, other). UF CVM academic departments may include additional requirements. PhD students must have a truncated 3.00 minimum Overall and Major GPA to be eligible for a degree award.

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 Outcome 1 Knowledge in Specialization

Students identify, describe, explain and apply the literature, research, and practices relevant to their area of specialization. Assessment method: students are assessed through satisfactory performance of their final defense of their dissertation.

Student Learning Outcome 2 Evaluate Information
Students analyze and critically evaluate new information and ideas contained in books and journal articles, as well as information and ideas presented at scientific meetings, seminars and/or informal discussions with other scientists. Assessment method: Students will successfully complete one or more seminar course or journal club course that requires reading, presentation and critical evaluation of scientific papers.

Student Learning Outcome 3 Presentation, Speaking Skills
Students apply speaking skills needed to communicate orally in formal and informal settings. Assessment method: students produce a research report judged worthy of presentation at local, national and/or international scientific meetings and/or continuing education presentations by their faculty mentor.

Student Learning Outcome 4 Effective Writing Skills
Students write effectively in a manner appropriate to veterinary medical sciences. Assessment method: students write a paper that is judged publishable by the faculty.

Student Learning Outcome 5 Professional Behavior
Students exhibit ethical and professional behavior throughout their studies and research. Assessment method: students successfully complete a formal course on the responsible and ethical conduct of research.

Source: UF CVM Annual Report submitted to UF Provost Office and SACSCOC for accreditation purposes.

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**

Total numbers of semester credit hours for the degree. Ninety credits.
Number of credit hours for each course. Number of credits hours per course is variable. In general, Graduate Seminar courses are 1 credit per course, per semester. Responsible Conduct in Research (1 credit). Statistics (3 credits). Grant Writing (1 credit). Biochemistry/Molecular Biology (3 credits). Supervised Research (1-5 credits per semester, 5 credits maximum count toward the degree). Supervised Teaching (1-5 credits per semester, 5 credits maximum count toward the degree).

Advanced Research (1-9 credits per semester, no limit toward the degree, before admission to candidacy or completion or Qualifying Examination). Research for Doctoral Dissertation (1-9 credits per semester, no limit, after admission to candidacy).

Required courses. Fourteen graduate-level course credits: Graduate Seminars (6 credits). Responsible Conduct in Research (1 credit). Statistics (3 credits). Biochemistry/Molecular Biology (3 credits). Grant Writing (1 credit). Elective courses are selected and justified by the student in consultation with the PhD Student Supervisory Committee, and in coordination with a Department Graduate Coordinator. Elective courses should support key elements of critical thinking and capacity to conduct independent and team research by the student.

Sequence of course of study for the major. In general, required courses should be completed during the first two years of PhD education and training (including 4 of 6 required graduate seminar credits). A PhD program goal is for student to successfully complete their Qualifying Examination within the first seven semesters after enrollment. In addition, PhD candidates (after completion of the Qualifying Examination) are expected to successfully complete all requirements of the PhD degree (including a Final Defense of their dissertation) and graduate after 4-5 years of education and training.

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

Required Courses

VME 6937L VMS Graduate Seminar Series (1 credit; grading scheme: letter grade). This course is a forum for CVM graduate students and faculty to exchange information that can advance animal health, human health, and environmental health.

VME 6767 Issues in the Responsible Conduct of Research (1 credit; grading scheme: satisfactory/unsatisfactory). Presentation and discussion of issues; guiding principles and potential pitfalls.

PHC 6088 Statistical Analysis of Genetic Data or equivalent (3 credits; grading scheme: letter grade). An introduction to statistical procedures for genetic studies.

BCH 5413 Mammalian Molecular Biology and Genetics (3 credits; grading scheme: letter grade). Biochemical and genetic approaches to understanding vertebrate and particularly mammalian molecular biology, moving from basic processes of replication, transcription, and protein synthesis to signal transduction, cell cycle, cancer, genomics, and developmental genetics.

GMS 6096 Intro NIH Grant Writing Biomedical Sciences (1 credit; grading scheme: letter grade). An introduction to NIG grant applications. Instruction include, but are not limited to, study aims, research plan biosketch, budget, other topics).

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.**

The PhD with a major in Comparative Biomedical Sciences does not require teacher preparation programs as outlined in Section 100.04 Florida Statutes.

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.

The potential impact on related academic programs or departments is negligible.

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 new degree will be offered and administered at the UF College of Veterinary Medicine (CVM) in Gainesville, Florida. UF CVM is the state's only College of Veterinary Medicine. In addition, UF CVM is part of the UF Academic Health Center (the most comprehensive academic health center in the Southeast). The Academic Health Center includes the colleges of Dentistry, Medicine, Nursing, Pharmacy, Public Health and Health Professions, and Veterinary Medicine. https://ufhealth.org/academic-health-center/overview

G. 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 anticipated mode of delivery for the new PhD program with a major in Comparative Biomedical Sciences will be face-to-face. The delivery system will be traditional, in-residence, on main campus (UF College of Veterinary Medicine). The program will not require specialized services or additional support. All required and additional courses are available at the UF College of Veterinary Medicine or other academic units on main campus in Gainesville, Florida. When necessary, UF CVM faculty will reach out to faculty in other universities for collaboration.

H. 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.

All required and additional courses are available at the UF College of Veterinary

Medicine or other academic units on main campus in Gainesville, Florida. When necessary, UF CVM faculty will reach out to faculty in other universities for collaboration.

I. 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.

The program will be accredited as part of the institution's accreditor, SACSCOC. If necessary, the program will seek to find a specialized accreditor, but is not seeking that at this time.

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.

UF CVM offers a PhD program in Veterinary Medical Sciences (VMS). The PhD in VMS is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

Annual reports with requested data and information (e.g., program goals, student learning outcomes) are prepared and submitted to UF Provost's Office and SACSCOC for evaluation/approval.

In Fall 2019, the curriculum of the PhD in VMS was reviewed/revised by the UF CVM Graduate Studies Committee, where all PhD students in-residence are now required to received education and training in responsible conduct in research and grant writing. The new requirements were successfully implemented in all five CVM academic departments (Comparative Diagnostic and Population Medicine; Infectious Diseases and Immunology; Physiological Sciences; Large Animal Clinical Sciences; Small Animal Clinical Sciences) in Fall 2020.

In Fall 2022, UF CVM Graduate Studies Committee approved a revised PhD Final Exam Submission Form to comply with new evaluation methods for Student Learning Outcome. In the reviewed Form, the student's supervisory committee members are required to assess and rate the PhD candidate's ability to apply appropriate research

methods vis-à-vis problems presented during the exam, ability to apply critical reflection to the knowledge gained from the academic program, and ability to effectively respond to scholarly questions—as Satisfactory or unsatisfactory. In addition, committee members are required to provide written feedback about the PhD candidate's performance (i.e., overall strengths and areas for growth). The revised Form was implemented in Spring 2023.

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.

In the last 10 years (2013-2023), six of every 10 new UF CVM PhD graduates joined the research taskforce in academia. In addition, two of every 10 joined the private sector, and two of every ten accepted research-related positions in government.

UF PhD program competencies are more aligned intensive-research positions in academia. All UF CVM PhD students are required to receive education and training in science communication, responsible conduct in research, statistics, biochemistry or molecular biology, and grant writing. In addition, PhD students are expected to participate in professional development activities (leadership, communication, management, team science, other) offered by UF Graduate School and UF Health Office of Biomedical Research Career Development.

An industry or employer advisory council is not in place. UF CVM Office of Research and Graduate Studies will facilitate a process to establish an advisory council in Fall 2023 for implementation by Fall 2024.

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.

Appendix A, Table 2 includes requested data and information. For budget estimations only, the list of faculty includes 41 UF CVM faculty members who were engaged in didactive teaching in the graduate program or as PhD major professors in Year 2022. The list of faculty will vary in subsequent years, as more faculty engage in didactive teaching or supervised research (as designated major professors of new PhD students).

Selected courses were those offered at UF CVM and mostly attended by PhD students in 2022.

The estimated Faculty (person-years) is 2.49 in Year 1 and 3.39 in Year 5.

Appendix E includes the curriculum vitae of UF CVM faculty members.

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).

Teaching workload. The number of UF CVM faculty members increased by 53% from 124 in 2015 to 190 in 2022.

In 2022, about 50 CVM faculty members were engaged in didactive teaching in the graduate program (in-residence or online). Fifteen of the 50 faculty members offered education and training through independent studies, in-residence (i.e., VME 6915 Problems in Veterinary Medicine, selected topics).

Twenty four or more faculty members were engaged in didactive teaching in the graduate program, in-residence, https://research.vetmed.ufl.edu/studies/courses/in-residence-courses/ in the following courses:

VME 6767 Issues in the Responsible Conduct of Research (1 credit)
VME 6907 Microbial Virulence Journal Club (1)
VME 6932 Physiological Sciences Seminar Series (1)
VME 6933 Seminars in Infectious Diseases & Immunology (1)
VME 6934 Interdisciplinary Seminars in Reproduction and Prod Med (1)
VME 6937L VMS Graduate Seminar Series (1)
VME 6938 Topics in Aquatic Animal Health (1)
VME 5244 Physiology: Organ Systems (4 credits)
VME 6010 Aquatic Animal Conservation Issues (3)
VME 6070 Systemic Review and Meta-Analysis for Biomedical Res (2)
VME 6195 Wildlife Virology: Emerging Wildlife Viruses (3)
VME 6200 Fundamentals of Respiratory Physiology (3)
VME 6200L Lab Assessments for Fundamentals of Resp Physiology (2)
VME 6464 Molecular Pathogenesis (3)
VME 6505 Auto Immunity (1)
VME 6508 Veterinary Virology: Molecular and Evolutionary Biology (3)
VME 6603 Advanced Toxicology (3)
VME 6651 Seminars in Anesthesia and Analgesia (3)
VME 6710C Advanced Small Animal Airway/Thoracic Surgery

VME 6714C Small Animal Orthopedic Minimally Invasive Surgery (1)
VME 6771 Veterinary Epidemiologic Research (3)
VME 6934 Ecotoxicology/Risk Assessment (3)
VME 6934 Advanced Small Animal Arthrology (1)
VME 6934 Small Animal, Soft Tissue, Minimally Invasive Surgery (1)

New courses in preparation include:

Comparative Immunology
Animal Models of Infectious Diseases and Immunology
Advanced Topics in Nutrition, Metabolism and Immunology

Currently (Spring 2023), 34 UF CVM faculty members serve as major professors of 42 CVM PhD students. Major professors are engaged in graduate education and training through supervised research, as well as guidance, emotional support, and life-balance mentor-mentee best practices (2.5% to 5% effort for program per year).

Student enrollment. In the last 10 years (2013-2022), an average of seven new PhD students enrolled in the UF CVM's PhD program in Veterinary Medical Sciences. In the last two years (2021 and 2022), PhD student enrollment went up to 10 and 11 new PhD students, respectively. We expect the annual enrollment will increase to 15 new PhD students in the next five years (if projected CVM funding for PhD education and training continues). On average, PhD students take 24 credits in graduate-level courses per year (9 credits in Fall, 9 in Spring, and 6 in Summer) in addition to their research workload and professional development activities.

Research extramural support. UF CVM extramurally sponsored federal grants funding increased 2.7 times from $8.4 million in FY 2017 to $22.8 million in FY 2021.

Indicator of excellence. During 2015, UF CVM was ranked No. 14 among veterinary medical colleges nationwide by the US News & World Report. In 2019 and 2023, UF CVM national ranking improved to No. 7 and 9, respectively. UF CVM is Florida's only College of Veterinary Medicine.

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.

Reallocated base amounts in Year 1 and Year 5 are $368,843 and $415,137, respectively. Funding source is the UF College of Veterinary Medicine.

Projected costs do not require additional funding for program implementation.

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.

In Year 1, base funding amount before reallocation = $409,826. Expected amount to be re-allocated from the existing PhD program in Veterinary Clinical Sciences into the new PhD degree in Veterinary Clinical Sciences = 368,843 or 90%. The re-allocated amount (90%) is based in the projected number of new students who will enroll in the new PhD program with a major in Comparative Biomedical Sciences (9/10 or 90%) or in the existing program in Veterinary Medical Sciences (1/10 or 10%).

At UF CVM, the expected impact of the reallocation of financial resources on existing programs is negligible.

In Year 1, faculty effort is expected to remain the same.

The number of PhD students appointed as Graduate Assistants with teaching assistant task responsibilities increased from five in 2020 to **15 in 2022**. In the DVM (professional) program, the number of courses supported by PhD Graduate Assistants increased from seven in 2021 to 18 courses in 2022. In the graduate program, the number of courses supported by PhD Graduate Assistants increased from one in 2021 to six courses in 2022. The sources of funding were the UF CVM and extramural grants by UF CVM faculty.

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.**

Resident: $530.69 per credit (2021-2022 academic year).
Non-Resident: $1,255.41 per credit
Source: https://www.fa.ufl.edu/directives/2021-22-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.

In general, the PhD program will not use external resources of funding.

The PhD program will be supported by using current and projected funding allocations by UF CVM in the mission of graduate education, as well as extramural grants by UF CVM faculty.

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 UF Health Science Center Library provides free access to physical and/or electronic information resources that include approximately 16,500 journal subscriptions, 147,700 books, and 96 databases. A free interlibrary loan service allows faculty, students, and staff to access external resources that are not included in the library's on-site and electronic collections. The UF College of Veterinary Medicine has an Education Center which includes 24-seat quiet room, UF-secure wireless internet access in all areas, standalone computer stations, collaborative work computer stations with large display monitors, printer/copier stations, group study rooms with computers and large screen displays, a limited selection of frequently-used texts and journals, and high-speed connectivity with HSC Library information systems.

Ms. Hannah Norton, MS in Information Studies, Chair, HSC Library Campus Gainesville, is the HSC Liaison Librarian for the UF College of Veterinary Medicine. While Ms.

Norton's principal location is at the HSC Library. She can meet in person at the CVM Education Center for consultations with college faculty, students, and staff, as well as assistance via e-mail, phone, or zoom. Ms. Norton presents guest lectures on finding and selecting appropriate information for research and clinical care in other curricular programs of the CVM, and is available to do so for this program as well.

Major journals available to UF CVM graduate students include: Science, Nature, Lancet, Preventive Veterinary Medicine, Journal of Dairy Science, Theriogenology, Journal of Zoo and Wildlife Medicine, Journal of the American Veterinary Medical Association, American Journal of Veterinary Medicine, PLOS One, One Health, American Journal of Tropical Medicine & Hygiene, among others.

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.

Specialized equipment for research includes: UF CVM faculty members have access to specialized equipment to support the implementation of research studies associated with PhD dissertations. Specialized equipment includes:

Aquatic Mammal & Wildlife Medicine: The Aquatic Animal Health program (AAH) incorporates faculty from the CVM and IFAS College of Agriculture and Life Sciences, and maintains close collaborative ties with SeaWorld Adventure Parks, the U.S. Navy Marine Mammal Program, the National Marine Fisheries Service and the Florida Fish and Wildlife Conservation Commission. Investigators focus on providing state-of-the art training for graduate students, as well as, post-graduates in education, clinical, diagnostic, and research support for aquatic animals, both wild and under human care, and to combat infectious diseases afflicting aquatic animals.

Translational Medicine: CVM faculty members participate in collaborative multi-college (Medicine, Dentistry and Pharmacy) research programs that include translational research on, e.g., atopic dermatitis, cardiomyopathy, glycogen storage disease, glaucoma, osteosarcoma, degenerative joint diseases, and Sjögren's Syndrome. They evaluate other interventional strategies using gene or stem cell therapies.

Center for Environmental & Human Toxicology (CEHT): The CEHT brings together a multi-disciplinary group of scientists from CVM and the UF campus who study the effects of chemicals on animal, human, and environmental health. The research and teaching activities of the center provide a resource for the State of Florida to identify and reduce risks associated with environmental pollution, food contamination, and workplace hazards. The center also provides risk assessment support to environmental state regulatory agencies. Investigators have access to the latest instrumentation in Inductively Coupled Plasma mass spectrometry (ICP-MS) and liquid chromatography mass spectrometry (LC MS/MS).

Center for Inflammation & Mucosal Immunology (CIMI): CIMI investigators are recognized leaders in host-gut microbial interactions, autoimmune diseases, and targeted intervention therapies for immunopathophysiology of pain, Crohn's disease, nephrolithiasis, Sjögren's Syndrome, allergy, cancer, and mucosal infectious diseases including COVID-19, brucellosis, and noroviruses. These programs currently attract a diverse group of graduate students. CIMI and CVM investigators have access to state-of-the-art analytical and cell-sorting flow cytometry.

Interdisciplinary Center for Biotechnology Research (ICBR): UF ICBR provides world-class services to a wide range of life science researchers. UF ICBR also offers learning opportunities for scientists and their students through training to use equipment, seminar series and hosted workshops. Most of the core service laboratories are located centrally, in the Cancer and Genetics Research Complex – a space constructed with support from the National Institutes of Health (NIH.) There are, on average, 58 ICBR staff members, with 22% faculty, 45% full-time staff and 33% postdoctoral associates and temporary or part-time positions.
https://biotech.ufl.edu/about-icbr/

HiPerGator: The University of Florida supercomputer is a cluster that includes the latest generation of processors and offers nodes for memory-intensive computation. HiPerGator's high-performance storage systems can be accessed from diverse interfaces, including Globus, UFApps for Research, and other tools.

https://www.rc.ufl.edu/about/hipergator/

Classroom. Graduate courses will be delivered in selected UF CVM classroom facilities: (i) Lecture Hall A (capacity 133 students), (ii) Lecture Hall B (capacity 103 students), (iii) Deriso Hall conference/teaching room (capacity 20 students), or (iv) the Education Center's computer lab (capacity 132 students).

Research lab space. UF CVM faculty members have access to research laboratory space to support the implementation of research studies associated with PhD dissertations. UF CVM has more than 79,000 square feet of dedicated research space.

Faculty office space. UF CVM faculty members have own office space at the UF's CVM. Faculty offices are equipped with modern computer hardware/software systems, phone/email/zoom/WIFI internet connection (all appropriate to support the PhD program).

Student office space. All UF CVM graduate students in-residence have access to office space in one of five assigned academic departments (Comparative Diagnostic and Population Medicine; Infectious Diseases and Immunology; Large Animal Clinical Sciences; Physiological Sciences; Small Animal Clinical Sciences).

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.

As a part of a strategic plan to grow the UF CVM PhD program, the CVM Administration has plans to increase the number of CVM Dean Four-Year Block Grant Awards from four in 2020 to 10 in 2025. These Awards are not reflected in Appendix A (Table 3A or 3B) as they are part of the UF CVM strategic plan in the mission of graduate education.

Overall, when combined with the number of PhD students funded by CVM Dean Four-Year Block Grant Awards or CVM faculty (extramural grants), the number of PhD students appointed as Graduate Assistants with teaching assistant task responsibilities is expected to increase from 15 in 2022 to 25 in the next five years.

The projected growth of UF CVM's PhD program is expected to match the level of PhD student enrollment in Top Five veterinary colleges or schools in the USA.

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

Appendix	Appendix Title	Description

STATE UNIVERSITY SYSTEM OF FLORIDA

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	Fall 2024
Institution Submitting Proposal	**Proposed Implementation Term**
College of Veterinary Medicine	College of Veterinary Medicine
Name of College(s) or School(s)	**Name of Department(s)/Division(s)**
Comparative Biomedical Sciences	Master of Science with a major in Comparative Biomedical Sciences
Academic Specialty or Field	**Complete Name of Degree**
26.0102	
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**	**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	3	2.25	$11,880	$26,731			$26,731
Year 2	4	3					
Year 3	4	3					
Year 4	5	3.75					
Year 5	6	4.5	$13,372	$60,173			$60,173

Additional Required Signatures

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

Melissa Slurry

Signature of Equal Opportunity Officer

04/03/2023

Date

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

Judith C. Russell

Signature of Library Dean/Director

March 23, 2023

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 mission of the UF CVM's graduate program is "to provide high-quality research training for graduate students in the comparative biomedical sciences (UF SACSCOC Accreditation)", veterinary medicine and related disciplines.

The graduate program is designed to cultivate problem-solving abilities, critical thinking, team science, leadership, and science communication, as well as other professional skills essential for conducting research. This program is flexible and allows students to train in various areas of emphasis including infectious diseases and immunology, physiological sciences, forensic sciences, aquatic animals and ecosystem health, artificial intelligence, and other areas of emphasis presented below.

The graduate program aligns with the College of Veterinary Medicine's mission statement, which is "The College of Veterinary Medicine advances animal, human, and environmental health through education, research, and patient care." It also aligns with the University's mission "to lead and serve the state of Florida, the nation and the world by pursuing and disseminating new knowledge while building upon the experiences of the past."

Degree Program: Master of Science with a major in Comparative Biomedical Sciences

Level: Master of Science

Major: Comparative Biomedical Sciences.

Areas of emphasis: UF CVM strengths and areas of emphasis in research graduate training include, but are not limited to discovery and translational solutions for (i) infectious diseases and immunology, (ii) physiological sciences, (iii) forensic sciences, (iv) microbiology, virology, and parasitology, (v) zoo medicine (vi) aquatic animals and ecosystem health, (vii) livestock and wildlife population health, (viii) equine gastroenterology; (ix) orthopedic bioengineering using animal models, (x) clinical and translational research in selected disciplines such as cardiology, dermatology, oncology, and ophthalmology, and (xi) novel diagnostic and therapeutic applications to improve human and animal health using artificial intelligence. UF CVM is uniquely situated to pursue these investigations with emphasis on non-human species, and in comparative medicine in animals and humans.

Total number of credit hours: 30. The Master of Science with a major in Comparative Biomedical Sciences is structured to be completed (in-residence) in two years.

Master's students will take 30 credits of coursework. At least 12 of the 30 credits must be in the major, including 8 credits in required courses: VME 6937L VMS Graduate Seminar Series or equivalent (1 credit), VME 6767 Responsible Conduct in Research or equivalent (1), Statistics (3), and Biochemistry or Molecular Biology (3). At the end of the graduating semester, the student must successfully complete a final defense of the thesis.

Career outcomes: UF CVM master's graduates will join the biomedical research workforce in the private sector, government, NGOs, non-profits, or continue their graduate education and training at the PhD level in Florida, the United States, and internationally. Additional details on meeting workforce need are presented in Section III below.

Employment of medical scientists is projected to grow 17% from 2021 to 2031, much faster than the average for all occupations (US Bureau of Labor Statistics). https://www.bls.gov/ooh/life-physical-and-social-science/medical-scientists.htm

Additional details on meeting workforce need are presented in Section III below.

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 SUS goals focus on three critical points to realize its mission and its 2025 vision: *Excellence, Productivity, and Strategic Priorities for a Knowledge Economy*.

Goals for Teaching and Learning

Excellence

GOAL 1: Strengthen Quality and Reputation of the Universities

Improve the quality and relevance of the System's institutions with regard to state, national, and international preeminence.

Productivity

GOAL 2: Increase Degree Productivity and Program Efficiency-Increase access and efficient degree completion for students.

Strategic Priorities for a Knowledge-Based Economy

GOAL 3: Increase the Number of Degrees Awarded in STEM/Health and Other Programs of Strategic Emphasis.

Increase student access and success in degree programs in the STEM/health fields and other Programs of Strategic Emphasis that respond to existing, evolving, and emerging critical needs and opportunities.

UF CVM Master of Science with a major in Comparative Biomedical Sciences will fulfill all three goals for teaching and learning by providing graduate education and training of the highest quality with emphasis in discovery and translational solutions for infectious diseases and immunology, physiological sciences, forensic sciences, and other areas of emphasis identified above, in Florida, USA, and internationally; therefore, it will support Goals 1 and 2. New graduates will acquire scientific knowledge and skills required to compete and collaborate in today's global society and market place. This will be a new STEM/Health degree; therefore, it will support Goal 3.

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 UF's College of Veterinary Medicine is part of the UF Academic Health Center (the most comprehensive academic health center in the Southeast). The Academic Health Center includes the colleges of Dentistry, Medicine, Nursing, Pharmacy, Public Health and Health Professions, and Veterinary Medicine.

UF CVM is the state's only veterinary college. It is ranked # 7 among veterinary medical colleges nationwide by the U.S. News & World Report. Our UF Small Animal Hospital caseload is the 2nd largest among academic veterinary hospitals in USA.

Established in 1977, UF CVM offers four degree programs: Doctor of Veterinary Medicine (DVM), a Master of Science with a major in Veterinary Medical Sciences (VMS), a PhD degree in VMS, and a Master of Preventive Veterinary Medicine

approved effective Fall 2023. In addition, a DVM/MPH degree is offered jointly by the College of Public Health and Health Professions and the College of Veterinary Medicine

Since 1993, nearly 400 students have completed the Master degree or PhD degree in VMS. In addition, more than 500 students have completed our master's online program in VMS, with a concentration in shelter medicine, forensic toxicology, or veterinary forensic sciences.

UF CVM's professional and graduate education programs are supported by 190 faculty members from five CVM academic departments (Comparative, Diagnostic, and Population Medicine, Large Animal Clinical Sciences, Small Animal Clinical Sciences, Physiological Sciences, and Infectious Diseases and Immunology) and other academic units on campus. In year 2022, 42 of 190 CVM faculty members were engaged in graduate education and training; 21 of 42 faculty members were involved in didactive teaching (e.g., Graduate Seminars, Graduate Journal Club: mechanisms of microbial virulence, Responsible Conduct in Research, Advanced Toxicology, Ecotoxicology and Risk Assessment, Advanced Bioinformatics, other courses) and 3 of 42 faculty members served as major professors of master's students.

CVM faculty are accomplished professors and researchers with 5-60 years of experience in education, research, consulting, and human/institutional capacity development programs in Florida, nationally, and internationally. The faculty publish in high quality peer-review journals, offer training workshops to practicing veterinarians, graduate students, farmers and ranchers in Florida, the USA, and abroad. CVM faculty share education, research, and administration resources, and will support the master's curriculum and transdisciplinary research relevant to Florida's citizens.

UF CVM master's program with a major in Comparative Biomedical Sciences will maximize existing resources to address challenges and opportunities in Florida, such as pathogen discovery, rapid diagnostic tests, pathogen virulence factors and mechanisms used to evade animal/human's immune system and cause disease, vaccine development, neuroscience and neurophysiology, toxicology, organ systems physiology, early detection and risk management of diseases or unusual mortality events in aquatic animals and related ecosystems, horses, beef cattle, dairy cattle, white-tailed deer, fish, and zoo animals, as well as cure of chronic diseases and cancer in companion animals.

In its association with UF's Institute of Food and Agricultural Sciences, UF CVM provides Extension veterinary services to farmers and ranchers of commercial livestock or wildlife operations, and aquaculture farms throughout the state.

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 reviewed and approved by the CAVP Academic Coordinating Group

on September 13, 2023, and 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.**

The external consultant's report and UF CVM response is presented in Appendix B.

Planning Process

Date	Participants	Planning Activity Description
October 28, 2022	Dianne McFarlane, Professor and Chair, UF CVM Department of Large Animal Clinical Sciences and faculty (n = 30).	CVM LACS strategic plan meeting: faculty approved action to explore PhD degree STEM options.
February 2, 2023	Adam Biedrzycki, Ricardo Chebel, Klibs Galvao, Jorge Hernandez (UF CVM LACS PhD Biomedical Sciences Lead Faculty).	A draft pre-proposal for the creation of PhD in Biomedical Sciences (CIP 26-0102, STEM) was reviewed by UF CVM LACS Lead faculty.

Date	Participants	Planning Activity Description
February 8, 2023	Jorge Hernandez (CVM Director of Graduate Education), John Bowen, Ricardo Chebel, Aria Eshraghi, Domenico Santoro, Janet Yamamoto (CVM Graduate Studies Committee members).	CVM Director of Graduate Education informed CVM Graduate Studies Committee that CVM ORGS will present the draft pre-proposal to UF Graduate School and UF Office of Institutional Planning and Research reps for guidance.
February 13, 2023	Jorge Hernandez (CVM Director of Graduate Education), David Pascual, (CVM Associate Dean for Research & Graduate Studies), Stacy Wallace (UF Graduate School Associate Director), Tom Kelleher (UF Graduate School Associate Dean), Kathy Lebo (UF Assistant Provost and Director of Institutional Planning and Research).	Draft pre-proposal was discussed.
February 14, 2023	Dianne McFarlane (CVM LACS Department Chair) and David Pascual (CVM Associate Dean for Research & Graduate Studies).	Draft pre-proposal was reviewed and approved.
February 15, 2023	Dana Zimmel, CVM Dean.	The pre-proposal was sent to UF Provost for review and possible approval.

February 21, 2023	Iske Larkin, Mary Brown (CVM Department Graduate Coordinators), Elizabeth Brammer-Robbins, Ricardo Chebel, Aria Eshraghi (CVM Graduate Studies Committee members), Domenico Santoro and John Bowden (CVM Department Graduate Coordinators and CVM Graduate Studies Committee members), David Allred (faculty member in the Department of Infectious Diseases and Immunology), Adam Biedrzycki and Klibs Galvao (faculty members in the Department of Large Animal Clinical Sciences--LACS), Dianne McFarlane (Professor and Chair in LACS), Jorge Hernandez (CVM Director of Graduate Education), David Pascual, (CVM Associate Dean for Research & Graduate Studies), and Chris Adin (CVM Executive Associate Dean).	A draft full proposal was reviewed for feedback and input.

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 (tentative)

Date	Implementation Activity
Week of Feb 24, 2023	The full proposal (PhD) was sent to CVM faculty members for review and comments.
March 7, 2023	LACS faculty voted in favor to continue exploring new degree in Biomedical Sciences at the College, University, and SUS levels. Response rate = 22/28 (79%); all in favor.
March 8, 2023	CVM Graduate Studies Committee (Elizabeth Brammer-Robbins, John Bowden, Ricardo Chebel, Aria Eshraghi, Domenico Santoro, Janet Yamamoto) approved to continue exploring the new PhD degree in Biomedical Sciences at the College, University, and SUS levels.
March 10, 2023	CVM Faculty Council sent revised draft full-proposal to CVM faculty for review in preparation for Faculty Assembly.
March 13, 2023	External Consultant's Review.
March 20, 2023	CVM Faculty Assembly. CVM Faculty Assembly. Motion to continue exploring PhD degree and master's degree in Biomedical Sciences at the university and SUS levels was approved. In-person vote. Response rate: 22/22 (100%). Yes: 21/22. Abstain: 1/22. Via zoom: Response rate 28/33 (85%), all in favor.
	OIPR. Approval of CIP code by UF Office of Institutional Planning and Research.
	APAF. Approval from the UF Associate Provost for Academic and Faculty Affairs.
	GC. Approval from the UF Graduate Council.
	UCC. UF University Curriculum Committee is notified of the request.
	FSSC. Approval from UF Faculty Senate Steering Committee.
	Senate. Approval from UF Faculty Senate.
	AA. Approval from UF Academic Affairs.
	BOT. Approval from the Board of Trustees.
	BOG. Approval from the Board of Governors.
	AA. UF Academic Affairs is notified of the request.
	GS. UF Graduate School is notified of the request.
	OUR. Approval from UF Office of the University Registrar.
	OIPR. UF Office of Institutional Planning and Research is notified of the request.
	College. UF CVM is notified on the request 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**

Employment of medical scientists is projected to grow 17% from 2021 to 2031, much faster than the average for all occupations (US Bureau of Labor Statistics). https://www.bls.gov/ooh/life-physical-and-social-science/medical-scientists.htm

There is a shortage of veterinarians to meet societal needs in biomedical sciences in different disciplines (Rosol et al. The Need for Veterinarians in Biomedical Research. J Vet Med Edu 2009; 36:70-75).

Since 1991, the current UF CVM's master's program with a major in Veterinary Medical Sciences (VMS) has produced about 200 master's graduates (trained in-residence) who have entered the workforce in research or professional positions in the private sector, academia, or government in Florida, the United States, and internationally.

Student interest. In 2022, 30 students were enrolled in the Master of Science program with a major in Veterinary Medical Sciences at UF CVM.

Nineteen of 30 (63%) students were enrolled in the Master's:Residency 1+2 or 1+3-year training program in selected disciplines (e.g., anesthesiology, dermatology, food animal medicine & reproduction, oncology, ophthalmology, small animal surgery, or large animal surgery). After completion of the Master's:Residency program, most graduates (70%) go to multispecialty group practices in the private sector; others join the teaching/research taskforce in academia or continue their graduate education at the PhD level.

Eight students (27%) were enrolled in the traditional two-year master's program in Veterinary Medical Sciences and were engaged in veterinary clinical research in companion animals, food animals, or aquatic animals. After completion of the master's program, most graduates (about 50%) go to multispecialty group practices in the private sector or continue their graduate education at the PhD level (50%).

Three (10%) students were enrolled in the traditional two-year master's program in Veterinary Medical Sciences and were **engaged in biomedical research** with emphasis in infectious diseases and immunology or physiological sciences. After completion of the master's program, most graduates continue their graduate education at the PhD level at UF or at other institutions of higher education in USA.

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

Enrollment projections are based on annual number of students enrolled in current master's program in with a major in Veterinary Medical Sciences (VMS) in-residence in 2022. In that year, three of 30 students were engaged in biomedical research. Although, the new degree is structured as a stand-alone master's with a major in Comparative Biomedical Sciences (thesis- based), PhD students who have met the

master's degree requirements may be eligible to obtain such a degree as fall back to the PhD degree.

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.

We expect the annual enrollment of new master's students with a major in Comparative Biomedical Sciences will go up from three students in Year 1 to six students in Year 5.

We do not expect students from other UF academic units will change academic programs to enroll in the new master's program with a major in Comparative Biomedical Sciences at UF CVM.

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.**

Quantitative benefits. The estimated total Educational and General (E&G) cost of the proposed new UF CVM Master of Science with a major in Comparative Biomedical Sciences program is similar to that of existing UF CVM master's degree with a major in Veterinary Medical Sciences ($26,731 in Year 1 and $60,173 in Year 5). The amount in Year 1 is based on an expected 100% reallocated base from the current master's program in Veterinary Medical Sciences, and specific for faculty members (n = 3) engaged in supervised research as major professors (Appendix 1, Table 3-A).

The budget does not require new UF CVM funding allocation for implementation of the new master's degree with a major in Comparative Biomedical Sciences.

New master's enrollment projections are described above.

Qualitative benefits. The mission of UF CVM's graduate program in Veterinary Medical Sciences (VMS) is to provide high-quality research training for graduate students in the biomedical sciences (UF SACSCOC Accreditation).

The new master's degree with a major in Comparative Biomedical Sciences offers a second option for graduate education and training in biomedical research (in addition to the current Master of Science degree with a major in Veterinary Medical Sciences with emphasis in veterinary clinical research).

The **CIP 26-0102** Biomedical Sciences, General, is appropriately aligned with UF CVM's mission in graduate education and the scope of master's education and training in comparative biomedical sciences in main areas of emphasis identified

above.

The Master of Science with a major in Comparative Biomedical Sciences offered at UF CVM will be a STEM/Health degree; therefore, it will support SUS Goal 3 in its mission of Teaching and Learning for a Knowledge-Based Economy: *Increase the number of degrees awarded in STEM/Health and other programs of strategic emphasis that respond to existing, evolving, and emerging critical needs and opportunities*.

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.

Florida State University (FSU). Tallahassee, Florida. The Department of Biological Sciences offers a Master of Science degree with a major in Biology under CIP 26-0102 Biomedical Sciences, Other.

Florida Atlantic University (FAU). Boca Raton, Florida. The Charles E. Schmidt College of Medicine offers a Master of Science degree with a main Biomedical Science under CIP 26- 0102 Biomedical Sciences, Other.

University of Central Florida (UCF). Orlando Florida. The College of Medicine offers a non-thesis Master of Science with a major in Biomedical Sciences under CIP 26-0102 Biomedical Sciences, Other.

Source: https://www.flbog.edu/resources/data-analytics/dashboards/degrees-awarded-by-classification-of-instructional-programs-cip-code/

Overall, required master's coursework varies between UF CVM, FSU, FAU, and UCF; but the programs at UF CVM and FSU require education and instruction in graduate seminars.

FSU Cell & Molecular Biology[1]	**FAU Biomedical Sciences[2]**	**UCF Biomedical Sciences[3]**	**UF CVM Biomedical Sciences[4]**
CIP 26-0102	**CIP 26-0102**	**CIP 26-0102**	**CIP 26-0102**
Required Courses			
BSC 691 Bio Sci Colloquium; Seminar (one department seminar); Teaching (one course).	Human Genetics; Advanced Molecular and Cellular Biology; Biomedical Writing.	The Master of Science with a major in Biomedical Sciences is a non-thesis program.	VME 6937L VMS Graduate Seminar Series (or equivalent); VME 6767 Issues in Responsible Conduct of Research (or equivalent); PHC 6088 Statistical Analysis of Genetic Data (or equivalent) (3);

			BCH 5413 Mammalian Molecular Biology and Genetics (or equivalent);

[1]https://www.bio.fsu.edu/grad/handbook/
[2]https://www.fau.edu/medicine/documents/ms-biomedical-program-student-guide.pdf
[3]https://www.ucf.edu/degree/biomedical-sciences-ms/
[4]https://research.vetmed.ufl.edu/studies/

In addition,

UF College of Medicine offers a Master of Science with major in Medical Sciences under CIP 26- 9999 Biological and Biomedical Sciences, Other.

Overall, required master's core coursework varies between UF CVM, UF College of Medicine, and UF IFAS Animal Sciences. The programs as UF CVM and IFAS Animal Sciences require education and instruction in responsible conduct of research.

UF College of Medicine Medical Sciences[1]	UF IFAS Animal Sciences Animal Molecular and Cellular Biology[2]	UF CVM Biomedical Sciences[3]
CIP 26-0102	CIP 26-0102	CIP 26-0102
Required Courses		
GMS 6003 Essentials of Graduate Research & Professional Development (1 credit); GMS 7194 Biotechnology Seminar (1).	VME 6767 Issues in Responsible Conduct of Research (or equivalent) (1).	VME 6937L VMS Graduate Seminar Series (or equivalent) (1 credit); VME 6767 Issues in Responsible Conduct of Research (or equivalent) (1); PHC 6088 Statistical Analysis of Genetic Data (or equivalent) (3); BCH 5413 Mammalian Molecular Biology and Genetics (or equivalent) (3).

[1]https://mgm.ufl.edu/academics/programs/masters-of-science-programs/masters-in-medical-science/
[2]https://programs.ifas.ufl.edu/animal-molecular-and-cellular-biology/admissions-requirements/
[3] https://research.vetmed.ufl.edu/studies/

What's in common or different between the new Master of Science degree with a major in Comparative Biomedical Sciences and the current Master of Science

degree with a major in Veterinary Medical Sciences at UF CVM?

The two degrees share the same required core coursework (8 credits). Specifically, graduate seminars (1 credit), responsible conduct of research (1), statistics* (3) and biochemistry or molecular biology (3).

*Students enrolled in the master's program with a major in Comparative Biomedical Sciences can select statistical courses more aligned with biomedical research such as: PHC 6088 Statistical Analysis of Genetic Data (An introduction to statistical procedures for genetic studies. This class will emphasize the statistical theory behind methods for analyzing genetic data and its application in useful software tools) or equivalent as suggested by the student's supervisory committee or the Department Graduate Coordinator.

*Students enrolled in the master's program in Veterinary Medical Sciences can select statistical courses more aligned with clinical research such as: PHC 6020 Clinical Trial Methods (Basic statistical concepts and methods used in clinical trials and the statistical principles and methods including phase I to IV clinical trials) or equivalent as suggested by the student's supervisory committee or the Department Graduate Coordinator.

The main difference in education and training between the two degrees is the scope of research (biomedical vs. veterinary clinical) in selected master's thesis and related coursework (15-18 credits). The scope of thesis for the new master's program in Comparative Biomedical Sciences is on biomedical research involving new discoveries and new translational solutions for diseases in animal and human populations. In contrast, the scope of thesis in the existing master's program with a major in Veterinary Medical Sciences is on veterinary clinical research. It involves patient-oriented research in animal populations, clinical trials, epidemiologic studies, outcomes research, or health services research.

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 UF CVM is committed to recruitment and retention activities and to the success of individual programs. The CVM Office for Community Engagement & Diversity Outreach (OCEDO) will enhance and strengthen already successful individual efforts by providing activities for potential URM students in the PhD program with a major in Comparative Biomedical Sciences. Dr. Michael Bowie (Assistant Dean, OCEDO) will work with affinity organizations, like the Multicultural Veterinary Medical Association, National Association for Black Veterinarians, Black DVM Network, Latinx Veterinary Medical Association, and Association of Asian Veterinary Medical Professionals, to recruit underrepresented students into the PhD program with a major in Comparative Biomedical Sciences.

By gathering the research success stories of our outstanding URM students across the individual graduate programs, the UF CVM Office of Research and Graduate Studies (ORGS) in conjunction with CVM OCEDO will be in a position to develop materials that highlight the strength and breadth of URM scholars at UF. The PhD program with a major in Comparative Biomedical Sciences will work with CVM ORGS, CVM OCEDO, and the CVM marketing team to develop display and advertising materials that highlight the scientific success of our URM trainees and use recruiting funds to cost- effectively target diverse populations at national meetings of affinity organizations. Ads will be placed on the websites of these affinity organizations. Prospective URM scholars will be introduced to the program via a UF webpage, which is continually being improved, to outline our program, our faculty and research, and potential career opportunities that arise from being a successful graduate of the program. We hope that incoming participants consider these unique opportunities when making their decisions about PhD graduate programs.

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

[i] Bachelor's degree, veterinary degree (DVM or equivalent), or Master's degree.
[ii] An upper division undergraduate GPA of 3.2 or the equivalent.
[iii] Three appropriate letters of recommendation.
[iv] Non-U.S. citizens whose native language is not English must submit a score of at least 80 on the internet TOEFL (Test of English as a Foreign Language), (iBT & Home Edition), 550 TOEFL PBT, or 6.0 IELTS Academic. Established special exceptions for missing language scores are at the purview f the graduate school. .
[v] In UF CVM, GRE score is not required

Graduation requirements

In order to obtain the Master of Science degree with a major in Comparative Biomedical Sciences, the student must complete required coursework (8 credits) in biochemistry or molecular biology (3 credits), statistics (3), responsible conduct in research (1), graduate seminars (1), a Final Examination, and a Master's thesis on main area(s) of emphasis identified above (i.e., infectious diseases and immunology, physiological sciences, forensic sciences, other). The thesis degree requires a minimum of 12 credits in the major. . Overall and major credits must satisfy the associated 3.00 truncated minimum GPA requirement. In addition, all other Graduate Council policies governing master's degree requirements must be satisfied.

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 Outcome 1 Scientific Methods (Knowledge)
Students demonstrate competence in the sue of scientific methods to advance animal, human, and/or environmental health. Assessment method: students will pass a general knowledge-based examination and successfully complete a master's thesis.

Student Learning Outcome 2 Evaluate Research Methods (Skills)
Students critically evaluate research methods, data, and information published in scientific journals and books. Assessment method: Students will successfully complete one seminar course that requires reading, presentation and critical evaluation of the student's own research reports published in scientific journals.

Student Learning Outcome 3 Speaking (Skills)
Students apply speaking skills needed to communicate orally in formal and informal settings. Assessment method: Oral thesis defense.

Student Learning Outcome 4 Writing (Skills)
Students write effectively in a manner appropriate to biomedical sciences. Assessment method: Successful completion of a master's thesis.

Student Learning Outcome 5 Professional Behavior
Students exhibit ethical and professional behavior throughout their studies and research. Assessment method: students successfully complete a formal course on the responsible and ethical conduct of research.

Source: UF CVM Annual Report submitted to UF Provost Office and SACSCOC for accreditation purposes.

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**

Total numbers of semester credit hours for the degree. Thirty credits. At least 12 of the 30 credits must be in the major. VME 6971 master's thesis does not count toward major credit requirements.

Number of credit hours for each course. Number of credits hours per course is variable. In general, Graduate Seminar courses are 1 credit per course, per semester. Responsible Conduct in Research (1 credit). Statistics (3 credits). Biochemistry/Molecular Biology (3 credits). Supervised Research (1-5 credits per semester, 5 credits maximum count toward the degree). Supervised Teaching (1-5 credits per semester, 5 credits maximum count toward the degree). Master's thesis (1-6 credits per semester; 6 credits maximum count towards the degree).

Required courses. Eight graduate-level course credits: Graduate Seminars (1 credits). Responsible Conduct in Research (1 credit). Statistics (3 credits). Biochemistry/Molecular Biology (3 credits). Elective courses are selected and justified by the student in consultation with the Master's Student Supervisory Committee, and in coordination with a Department Graduate Coordinator. Elective courses should support key elements of critical thinking and capacity to conduct independent and team research by the student.

Sequence of course of study for the major. In general, required courses should be completed during the first-year of the master's education and training. Students are expected to successfully complete all requirements of the master's degree (including a final defense of their thesis) and graduate after two-years of education and training.

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

Required Courses

VME 6937L VMS Graduate Seminar Series (1 credit; grading scheme: letter grade). This course is a forum for CVM graduate students and faculty to exchange information that can advance animal health, human health, and environmental health.

VME 6767 Issues in the Responsible Conduct of Research (1 credit; grading scheme: satisfactory/unsatisfactory). Presentation and discussion of issues; guiding principles and potential pitfalls.

PHC 6088 Statistical Analysis of Genetic Data or equivalent (3 credits; grading scheme: letter grade). An introduction to statistical procedures for genetic studies.

BCH 5413 Mammalian Molecular Biology and Genetics (3 credits; grading scheme: letter grade). Biochemical and genetic approaches to understanding vertebrate and particularly mammalian molecular biology, moving from basic processes of replication, transcription, and protein synthesis to signal transduction, cell cycle, cancer, genomics, and developmental genetics.

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.

The Master of Science with a major in Comparative Biomedical Sciences does not require teacher preparation programs as outlined in Section 100.04 Florida Statutes.

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.

The potential impact on related academic programs or departments is negligible.

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 new degree will be offered and administered at the UF College of Veterinary Medicine (CVM) in Gainesville, Florida. UF CVM is the state's only College of Veterinary Medicine. In addition, UF CVM is part of the UF Academic Health Center (the most comprehensive academic health center in the Southeast). The Academic Health Center includes the colleges of Dentistry, Medicine, Nursing, Pharmacy, Public Health and Health Professions, and Veterinary Medicine.
https://ufhealth.org/academic-health-center/overview

G. 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 anticipated mode of delivery for the new master's program with a major in Comparative Biomedical Sciences will be face-to-face. The delivery system will be traditional, in-residence, on main campus (UF College of Veterinary Medicine). The program will not require specialized services or additional support. All required and additional courses are available at the UF College of Veterinary Medicine or other academic units on main campus in Gainesville, Florida. When necessary, UF CVM faculty will reach out to faculty in other universities for collaboration.

H. 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.

All required and additional courses are available at the UF College of Veterinary Medicine or other academic units on main campus in Gainesville, Florida. When necessary, UF CVM faculty will reach out to faculty in other universities for collaboration.

I. 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.

In consultation with UF Graduate School and UF Office of Institutional Planning and Research, the UF College of Veterinary Medicine will seek accreditation of the new master's program with a major in Comparative Biomedical Sciences through the Southern Association of Colleges and Schools Commission on Colleges as soon as the proposed program is approved.

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.

UF CVM offers a Master of Science program with a major in Veterinary Medical Sciences (VMS). The master's with a major in VMS is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

Annual reports with requested data and information (e.g., program goals, student learning outcomes) are prepared and submitted to UF Provost Office and SACSCOC for evaluation/approval.

In Fall 2019, the curriculum of the master's with a major in VMS was reviewed/revised by the UF CVM Graduate Studies Committee, where all master's students in-residence are now required to receive education and training in responsible conduct in research. The new requirement was successfully implemented in all five CVM academic departments (Comparative Diagnostic and Population Medicine; Infectious Diseases and Immunology; Physiological Sciences; Large Animal Clinical Sciences; Small Animal Clinical Sciences) in Fall 2020.

In Spring 2023, UF CVM Graduate Studies Committee approved a revised master's Final Exam Submission Form to comply with new evaluation methods for Student Learning Outcome. In the reviewed Form, the student's supervisory committee members are required to assess and rate the master's student ability to apply appropriate research methods vis-à-vis problems presented during the exam, ability to apply critical reflection to the knowledge gained from the academic program, and ability to effectively respond to scholarly questions—as Satisfactory or unsatisfactory. In addition, committee members are required to provide written

feedback about the student's performance (i.e., overall strengths and areas for growth). The revised Form was implemented in Spring 2023.

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.

In the last 10 years (2013-2022) 11 of 73 (15%) new graduates in the master's program with a major in Veterinary Medical Sciences were engaged in biomedical research with emphasis in infectious diseases and immunology or physiological sciences. After completion of the master's program, five of 11 graduates continued their graduate education at the PhD level at UF, four accepted research-related positions in the private sector or in academia, one accepted a faculty position at UF, and one was accepted in UF DVM program.

UF master's program competencies are more aligned for research positions in academia. All UF CVM master's students are required to receive education and training in science communication, responsible conduct in research, statistics, and biochemistry or molecular biology. In addition, master's students are expected to participate in professional development activities (leadership, communication, management, team science, other) offered by UF Graduate School and UF Health Office of Biomedical Research Career Development.

An industry or employer advisory council is not in place. UF CVM Office of Research and Graduate Studies will facilitate a process to establish an advisory council in Fall 2023 for implementation by Fall 2024.

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.

Appendix A, Table 2 includes requested data and information. For budget estimations only, the list of faculty includes three UF CVM faculty members who were engaged in the master's program with a major in Veterinary Medical Sciences (in the area of biomedical sciences) as major professors in Year 2022. The estimated Faculty (person-years) =
0.15 in Year 1 and 0.30 in Year 5.

In this proposal (Master of Science with a major in Comparative Biomedical Sciences), the budget does not include Faculty (person-years) specific for didactive teaching because that parameter is already captured in the full proposal for the Ph.D. with a major in Comparative Biomedical Sciences.

Appendix E includes the curriculum vitae of UF CVM faculty members engaged in didactive teaching in UF CVM graduate program (in-residence).

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).

Teaching workload. The number of UF CVM faculty members increased by 53% from 124 in 2015 to 190 in 2022.

In 2022, about 50 CVM faculty members were engaged in didactive teaching in the graduate program (in-residence or online). Fifteen of the 50 faculty members offered education and training through independent studies, in-residence (i.e., VME 6915 Problems in Veterinary Medicine, selected topics).

Twenty four or more faculty members were engaged in didactive teaching in the graduate program, in-residence, https://research.vetmed.ufl.edu/studies/courses/in-residence-courses/ in the following courses:

VME 6767 Issues in the Responsible Conduct of Research (1 credit, S/U)
VME 6907 Mechanisms of Microbial Virulence Journal Club (1credit, Letter-Graded)
VME 6932 Seminar in Physiological Sciences (1 credit, S/U)
VME 6933 Seminar in Infectious Diseases and Experimental Pathology (1 credit, S/U)
VME 6934 Interdisciplinary Seminars in Reproduction and Prod Med (Rotating Topic) (1 credit, Letter-Graded)
VME 6937L VMS Graduate Seminar Series (1 credit, Letter-Graded)
VME 6938 Topics in Aquatic Animal Health (1 credit, Letter-Graded)
VME 5244 Physiology: Organ Systems (4 credits, Letter-Graded)
VME 6010 Aquatic Animal Conservation Issues (3 credits, Letter-Graded)
VME 6070 Systemic Review and Meta-Analysis for Biomedical Res (2 credits, Letter-Graded)
VME 6195 Wildlife Virology: Emerging Wildlife Viruses (3 credits, Letter-Graded)
VME 6200 Fundamentals of Respiratory Physiology (3 credits, Letter-Graded)
VME 6200L Lab Assessments for Fundamentals of Respiratory Physiology (2 credits, Letter-Graded)

VME 6464 Molecular Pathogenesis (3 credits, Letter-Graded)
VME 6505 Auto Immunity (1 credit, Letter-Graded
VME 6508 Veterinary Virology: Molecular and Evolutionary Biology (3 credits, Letter-Graded)
VME 6603 Advanced Toxicology (3 credits, Letter-Graded)
VME 6651 Seminars in Veterinary Anesthesia and Analgesia (2 credits, S/U)
VME 6710C Advanced Small Animal Airway and Thoracic Surgery (1 credit, Letter-Graded)
VME 6714C Small Animal Orthopedic Minimally Invasive Surgery (1 credit, Letter-Graded)
VME 6771 Veterinary Epidemiologic Research (3 credits, Letter-Graded)
VME 6934 Ecotoxicology/Risk Assessment (Rotating Topic) (3 credits, Letter-Graded)
VME 6934 Advanced Small Animal Arthrology (Rotating Topic) (1 credit, Letter-Graded)
VME 6934 Small Animal, Soft Tissue, Minimally Invasive Surgery (Rotating Topic) (1 credit, Letter-Graded)

New courses in preparation include:

Comparative Immunology
Animal Models of Infectious Diseases and Immunology
Advanced Topics in Nutrition, Metabolism and Immunology

Student enrollment. We expect the annual enrollment of new master's students in Comparative Biomedical Sciences will increase from three in Year 1 to six in Year 5. On average, master's students take 24 credits in graduate-level courses per year (9 credits in Fall, 9 in Spring, and 6 in Summer) in addition to their research workload and professional development activities.

Research extramural support. UF CVM extramurally sponsored federal grants funding increased 2.7 times from $8.4 million in FY 2017 to $22.8 million in FY 2021.

Indicator of excellence. During 2015, UF CVM was ranked No. 14 among veterinary medical colleges nationwide by the US News & World Report. In 2019 and 2022, UF CVM national ranking improved to No. 9. UF CVM is Florida's only College of Veterinary Medicine.

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.

Reallocated base amounts specific for the master's with a major in Comparative Biomedical Sciences are
$26,731 in Year 1 and $60,173 in Year 5. Funding source is the UF College of Veterinary Medicine.

Projected costs do not require additional funding for program implementation.

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.**

At UF CVM, the expected impact of the reallocation of financial resources on existing programs is negligible.

In Year 1, base funding amount before reallocation = $26,731. Expected amount to be re-allocated from the existing master's program with a major in Veterinary Clinical Sciences into the new master's degree with a major in Veterinary Clinical Sciences = 26,731 or 100%. The re-allocated amount (100%) is based in the projected number of new students who will enroll in the new master's program with a major in Comparative Biomedical Sciences (n = 3) instead of the current master's program with a major in Veterinary Medical Sciences.

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.**

Resident: $530.69 per credit (2021-2022 academic year).
Non-Resident: $1,255.41 per credit
Source: https://www.fa.ufl.edu/directives/2021-22-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.

In general, the master's program with a major in Comparative Biomedical Sciences will not use external resources of funding. The master's program will be supported by extramural grants by UF CVM faculty.

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 UF Health Science Center Library provides free access to physical and/or electronic information resources that include approximately 16,500 journal subscriptions, 147,700 books, and 96 databases. A free interlibrary loan service allows faculty, students, and staff to access external resources that are not included in the library's on-site and electronic collections. The UF College of Veterinary Medicine has an Education Center which includes 24-seat quiet room, UF-secure wireless internet access in all areas, standalone computer stations, collaborative work computer stations with large display monitors, printer/copier stations, group study rooms with computers and large screen displays, a limited selection of frequently-used texts and journals, and high-speed connectivity with HSC Library information systems.

Ms. Hannah Norton, MS in Information Studies, Chair, HSC Library Campus Gainesville, is the HSC Liaison Librarian for the UF College of Veterinary Medicine. While Ms.

Norton's principal location is at the HSC Library. She can meet in person at the CVM Education Center for consultations with college faculty, students, and staff, as well as assistance via e-mail, phone, or zoom. Ms. Norton presents guest lectures on finding and selecting appropriate information for research and clinical care in other curricular programs of the CVM, and is available to do so for this program as well.

Major journals available to UF CVM graduate students include: Science, Nature, Lancet, Preventive Veterinary Medicine, Journal of Dairy Science, Theriogenology, Journal of Zoo and Wildlife Medicine, Journal of the American Veterinary Medical Association, American Journal of Veterinary Medicine, PLOS One, One Health, American Journal of Tropical Medicine & Hygiene, among others.

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.

Specialized equipment for research includes: UF CVM faculty members have access to specialized equipment to support the implementation of research studies associated with master's thesis. Specialized equipment includes:

Aquatic Mammal & Wildlife Medicine: The Aquatic Animal Health program (AAH) incorporates faculty from the CVM and IFAS College of Agriculture and Life Sciences, and maintains close collaborative ties with SeaWorld Adventure Parks, the U.S. Navy Marine Mammal Program, the National Marine Fisheries Service and the Florida Fish

and Wildlife Conservation Commission. Investigators focus on providing state-of-the art training for graduate students, as well as, post-graduates in education, clinical, diagnostic, and research support for aquatic animals, both wild and under human care, and to combat infectious diseases afflicting aquatic animals.

Translational Medicine: CVM faculty members participate in collaborative multi-college (Medicine, Dentistry and Pharmacy) research programs that include translational research on, e.g., atopic dermatitis, cardiomyopathy, glycogen storage disease, glaucoma, osteosarcoma, degenerative joint diseases, and Sjögren's Syndrome. They evaluate other interventional strategies using gene or stem cell therapies.

Center for Environmental & Human Toxicology (CEHT): The CEHT brings together a multi-disciplinary group of scientists from CVM and the UF campus who study the effects of chemicals on animal, human, and environmental health. The research and teaching activities of the center provide a resource for the State of Florida to identify and reduce risks associated with environmental pollution, food contamination, and workplace hazards. The center also provides risk assessment support to environmental state regulatory agencies. Investigators have access to the latest instrumentation in Inductively Coupled Plasma mass spectrometry (ICP-MS) and liquid chromatography mass spectrometry (LC MS/MS).

Center for Inflammation & Mucosal Immunology (CIMI): CIMI investigators are recognized leaders in host-gut microbial interactions, autoimmune diseases, and targeted intervention therapies for immunopathophysiology of pain, Crohn's disease, nephrolithiasis, Sjögren's Syndrome, allergy, cancer, and mucosal infectious diseases including COVID-19, brucellosis, and noroviruses. These programs currently attract a diverse group of graduate students. CIMI and CVM investigators have access to state-of-the-art analytical and cell-sorting flow cytometry.

Interdisciplinary Center for Biotechnology Research (ICBR): UF ICBR provides world-class services to a wide range of life science researchers. UF ICBR also offers learning opportunities for scientists and their students through training to use equipment, seminar series and hosted workshops. Most of the core service laboratories are located centrally, in the Cancer and Genetics Research Complex – a space constructed with support from the National Institutes of Health (NIH.) There are, on average, 58 ICBR staff members, with 22% faculty, 45% full-time staff and 33% postdoctoral associates and temporary or part-time positions. https://biotech.ufl.edu/about-icbr/

HiPerGator: The University of Florida supercomputer is a cluster that includes the latest generation of processors and offers nodes for memory-intensive computation. HiPerGator's high-performance storage systems can be accessed from diverse interfaces, including Globus, UFApps for Research, and other tools. https://www.rc.ufl.edu/about/hipergator/

Classroom. Graduate courses will be delivered in selected UF CVM classroom facilities: (i) Lecture Hall A (capacity 133 students), (ii) Lecture Hall B (capacity 103 students), (iii) Deriso Hall conference/teaching room (capacity 20 students), or (iv) the Education Center's computer lab (capacity 132 students).

Research lab space. UF CVM faculty members have access to research laboratory

space to support the implementation of research studies associated with master's theses. UF CVM has more than 79,000 square feet of dedicated research space.

Faculty office space. UF CVM faculty members have own office space at the UF's CVM. Faculty offices are equipped with modern computer hardware/software systems, phone/email/zoom/WIFI internet connection (all appropriate to support the master's program).

Student office space. All UF CVM graduate students in-residence have access to office space in one of five assigned academic departments (Comparative Diagnostic and Population Medicine; Infectious Diseases and Immunology; Large Animal Clinical Sciences; Physiological Sciences; Small Animal Clinical Sciences).

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.

At UF CVM, graduate assistantships are limited to graduate students enrolled in the PhD program or in the Master's:Residency program.

In certain cases, graduate assistantships can be requested and justified when a major professor has funding to cover the cost of stipend for selected graduate student(s) enrolled in the master's program

***

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

Appendix	Appendix Title	Description

Form 1

Format and Guidelines for Institutes/Centers

Sample Cover Sheet for a State of Florida or University Institute/Center Proposal

Space Mission Institute

January 5, 2024

The submission and signing of a proposal to initiate a State of Florida institute/center or the establishment of a University institute/center constitutes a commitment by the university(ies) to ensure that the institute/center's activities support the stated mission(s) and goals of the institution(s).

University of Florida

University Submitting Proposal

Ben Sasse 2/26/24

President Date

Ben Sasse, Ph.D.

2/12/2024 | 12:25 PM EST

Provost Date

Scott Angle, Ph.D.

University Institute

Type of Institute/Center

Senior Vice President Date

January 5, 2024

Proposed Implementation Date

David Norton 2/8/2024 | 5:22 PM EST

Vice President for Research Date

David Norton, Ph.D.

30

Associated Discipline (2-digit CIP)

Dean of School or College Date

Robert J Ferl

Proposed Institute/Center Director Robert J. Ferl, Ph.D. Date

George C Kolb, Jr. 2/21/2024 | 8:29 AM EST

Vice President and Chief Financial Officer (as appropriate) Date

Other President(s)/ Administrator(s) (as appropriate) Date

Form Ia **For UF Internal Use Only**
Indirect Cost Return for Proposed Center

The indirect cost return for a center in a college is subtracted from that received by the college. This is because all indirect costs are now returned to the colleges, minus costs of running central programs. This form is to establish what percentage (7.5% maximum), if any, the proposed center or institute will receive in indirect cost return.

INDIRECT COST ASSIGNMENT

Date: January 31, 2024

Institute or Center Name: Space Mission Institute

College: Institute of Food and Agricultural Sciences

Indirect Cost Return: YES__X___% Return (max 7.5%)___7.5___%
NO_____

Dean's Agreement:
(Use separate form for each college)

Robert Gilbert
Dean's signature

EDC/cl

Form Ia **For UF Internal Use Only**
Indirect Cost Return for Proposed Center

The indirect cost return for a center in a college is subtracted from that received by the college. This is because all indirect costs are now returned to the colleges, minus costs of running central programs. This form is to establish what percentage (7.5% maximum), if any, the proposed center or institute will receive in indirect cost return.

INDIRECT COST ASSIGNMENT

Date: January 31, 2024

Institute or Center Name: Space Mission Institute

College: College of Liberal Arts and Sciences

Indirect Cost Return: YES__X___% Return (max 7.5%)___7.5___%
NO_____

Dean's Agreement:
(Use separate form for each college)

Dean's signature

EDC/cl

Form Ia **For UF Internal Use Only**
Indirect Cost Return for Proposed Center

The indirect cost return for a center in a college is subtracted from that received by the college. This is because all indirect costs are now returned to the colleges, minus costs of running central programs. This form is to establish what percentage (7.5% maximum), if any, the proposed center or institute will receive in indirect cost return.

INDIRECT COST ASSIGNMENT

Date: January 31, 2024

Institute or Center Name: Space Mission Institute

College: College of Pharmacy

Indirect Cost Return: YES__X___% Return (max 7.5%)___7.5___%
NO_____

Dean's Agreement:
(Use separate form for each college)

Peter Swaan
Dean's signature

EDC/cl

UF Space Mission Institute (UF-SMI)

I. Mission & Goals

The mission of the UF Space Mission Institute (referred to herein as the SMI or simply the Institute) is to connect and grow Florida's diverse community of space scientists and technologists to support interdisciplinary research, education, and workforce development in the exploration and commercialization of space. The SMI is dedicated to creating an environment that fosters inclusive, interdisciplinary, and productive research in the exploration of space that benefits the people of Earth.

The goals of the SMI are as to:

- Generate high-impact, transformative research that facilitates the exploration and commercialization of space as well as the protection of space assets.
- Render the University of Florida as the premier academic institution in space sciences, exploration, and the development of key technologies for upcoming Earth Observation and Beyond Earth missions.
- Increase the number and disciplines of faculty, staff, students, and stakeholders engaged in the Space Mission Institute across the many UF campuses statewide.
- Develop new curriculums, degree programs, certifications, and internship programs to train the future workforce in this dynamic and rapidly expanding field.
- Serve as a nexus for launch providers, implementation partners and the broader aerospace industry to increase UF researchers' accessibility to the space environment and expand public/private space exploration interfaces in Florida.
- Leverage the expansive UF Artificial Intelligence capabilities to support space research, imaging, and mission analyses.
- Promote the transfer of innovative space technologies to both space and terrestrial applications that benefit the State of Florida and national space economies.
- Secure federal, corporate, or private funding to secure the long-term sustainability of the SMI.

II. Activities

The space economy is undergoing a paradigm shift with rapid growth in the exploration and application of space-based research. The rapid increase in private sector investment and competition has enhanced the demand for space-related data, products, and services. Additionally, with ongoing commercial space station development to replace the International Space Station (ISS), coupled with the expansion of sub-orbital providers, and lunar exploration companies, numerous platforms have emerged for the exploration of space. As a result of this rapid expansion, there is increased accessibility to space coupled with an increased demand for trained and experienced space scientists to assist new academic researchers and commercial companies conducting science in space.

The formation of SMI will address outstanding and unmet needs of the booming space economy, which is expected to exceed $1 trillion before the end of the decade. First, although there are more than 150 researchers at UF that work in the areas of space sciences and technology research, there is no formalized network or hub at UF that supports these researchers, fosters new collaborations, or helps synergize their expertise. Such cross disciplinary connections are required for success in this complex and dynamically evolving field. Second, as most US space launches occur in the State of Florida (i.e., 72 orbital vehicles were launched from the Florida Spaceport in 2023) there is a unique opportunity for the SMI to serve as a critical liaison between the rapidly emerging commercial space sector, government agencies and researchers working in the areas of space exploration. By creating a coordinated network of researchers, the SMI can create an innovative and transdisciplinary environment that will render the University of Florida as the premier space university in the nation.

A. Potential Activities

1. Building a network infrastructure for increasing collaborations amongst SMI members. One of the first actions of SMI will be to create an online searchable portal for UF researchers and their expertise to connect internal members with each other and with external commercial space companies. For example, a member could be partnered with an educator, engineer, implementation partner, or launch organization to provide mentoring, experiment, and flight hardware design,

and assist in communicating their science to the public. Additionally, this networking portal will provide a mechanism for UF to gather data on productivity of researchers, grant funding and collaborations to help identify, support, and pivot to new frontiers in space exploration sciences.

2. Facilitate the creation of the Star Lab Design Core, an in-house mission and payload design and operation core process for hardware development and generation of preliminary data. Although launch costs to low Earth orbit have dropped significantly in the past decade, there is a need for rapid, low-cost testing and fabrication facilities to engineer flight hardware and generate preliminary data under simulated spaceflight conditions. The Star Lab will enable all aspects of conducting space research and engineering in house at UF. The Star Lab will facilitate a pipeline where Institute members and students can go from *Idea to Flight* by coming into an Innovative Maker Space and work with engineers to start building hardware for their flight experiment concept. The facility would enable access to tools, such as 3D printers, nanosatellite design materials as well as clinostats and other flight simulation equipment, to test hypotheses and hardware. The Star Lab would enable an iterative science process, counselled by experienced UF flight PIs and using UF core facilities, to improve technical readiness of technologies and space flight experimentation.

3. Facilitate the creation and support of specialized laboratories across campus for the development of focused technologies. To complement the concept of the Star Lab Design Core, the institute proposes to create new and partner with existing UF laboratories that would support space research goals unique to a given unit and relevant to specific instrument/mission/payload goals. For example, the Astronomy department would develop spectrographs for space observations of molecular hydrogen that could require the development and use of specialized high resolution diffraction gratings. These focused laboratories would be open to all institute members.

4. Workforce development pipeline to support the growing space economy in Florida - As the space economy continues to flourish, almost every US business sector will likely be impacted by the space industry from the expansion of companies directly providing space-based products and services to space-enabled companies that benefit from the data or products made in space. As a result of this transformation, the workforce needed to power this growth and innovation needs to be prepared for this rapidly changing space ecosystem. Therefore, the institute will develop targeted strategies to remove potential barriers and render workforce development equitable and inclusive to maintain US competitiveness in the global space economy. The desired outcomes of the institute workforce development program are centered around several key outcomes: a) building career awareness; b) creating educational pathways for certification and training; c) improving skills; and d) job creation and placement. To develop this pipeline, the institute will spearhead several new degree programs for undergraduate and graduate students, as well as create internship and upskilling certification opportunities for the current workforce to expand their skill sets in space sciences and technologies.

B. Opportunities for Synergy Amongst Members and other UF Institutes – There will be extensive opportunities to collaborate within the SMI within other Institutes at UF as well as with the external space launch and implementation partners. There will be several key hubs of space science and technology research areas created within the institute. By developing a strong networking and resource infrastructure for the members, the institute will create a team culture that will be aligned with the overarching mission and goals of the Institute.

Additionally, as the sustainability of space exploration requires highly interdisciplinary research efforts, it is anticipated that SMI will work with other existing institutes at UF to leverage the intellectual and physical resources available at the following Institutes:

- Florida Climate Institute
- Institute for High Energy Physics and Astrophysics
- Herbert Wertheim UF Scripps Institute for Biomedical Innovation and Technology
- Thompson Earth Science Institute
- University of Florida Biodiversity Institute
- University of Florida Engineering Innovation Institute
- University of Florida Genetics Institute

To maintain a highly engaged and collaborative culture within the institute, such that the strategic plan and milestones are achieved, several activities will be sponsored that will have both short-term goals of increasing awareness of the new Institute and long-term goals to enhance stability and growth of the institute.

C. Selected short-term activities to build connections and awareness of the Institute:

1. *Generate a seminar series of high-profile speakers* (i.e., internationally known scientists and technologists) that will bring interest across the institute and university. The seminars can be simulcasted to K-12 schools and made available to the public.

2. *Offer pilot grants that support new, cross disciplinary projects*. These seed funds can support collection of preliminary data, brainstorming, networking, and grant writing. For example, funds can travel to interact with researchers at other institutions, government agencies, and the private sector. Also, the establishment of monthly dinner events, hackathons or focused journal clubs can help promote engagement amongst members. These events will also foster new collaborations and faculty grant submissions.

3. *Summer Scholars Program* - Collaborate with the Florida Space Grant Consortium (FSGC) to initiate a summer research program that links talented undergraduate and graduate students into research labs within the space sciences at UF and beyond (e.g., NASA/KSC, Blue Origins). The FSGC maintains a robust network of commercial space providers to help coordinate students with commercial internship opportunities.

D. Proposed longer term activities to enhance synergy and sustainability of the Institute

1. *Build an Industry-in-Residency and Exchange program* – Provide industry members the opportunity to work with UF researchers and students on targeted projects for spaceflight with the goal that there would be information exchanges regarding the key needs to support space exploration and workforce development. Additionally, UF students can complete internships with key industrial partners to gain experience working in a professional space research environment.

2. *Hold an annual Space Sciences Conference on the main UF campus.* UF faculty and students will present ongoing research efforts, and industry, government, and academic entities will be invited to attend. The purpose of the conference would be to showcase UF achievements and expertise, as well as to foster new connections and collaborations campus wide.

3. *Development of Mission Operation Center at UF.* The SMI will build a satellite control/operations center located in the Astronomy Department to support UF-led space missions using small satellites. The MOC will also serve as the Science Operations Center (SOC) at UF where post-mission images will be processed and analyzed using the HiPerGator AI supercomputer. The MOC will also serve as a valuable training center for undergraduate and graduate students learning about space satellite operations.

4. *Creation of an Industrial – University Partnership Hub in Space Manufacturing - Center for Science Technology and Advanced Research in Space (C-STARS)* – C-STARS would be a multidisciplinary research hub within the SMI to support and serve the growing space sector in space manufacturing and train the next generation of workers in space technologies, sciences, and exploration. C-STARS would bring together universities, industries, and the Florida Spaceport to transform access to the space environment and facilitate development of innovative on-demand, *in situ* space manufacturing capabilities in biopharma, microelectronics, photonics, and payload hardware solutions.

F. Plans for External Funding –
The initial revenue for SMI is expected to result from derived from federal, commercial and private foundation sources. Selected examples of external funding opportunities that will be targeted by SMI members will include:

NASA Funding Opportunities Examples:
1. NASA PIONEER, iSIM Explorer Mission, $20M, 2024.
2. NASA PICASSO Targeting Agnostic Chiral Bio-signatures of Extraterrestrial Life with IMPS Polarimeter, $2M, 2024.
3. NASA APRA, Germanium Immersion Grating Spectrograph, $3M, 2024.
4. NASA PIONEER, Paschen Alpha Survey of Hydrogen IONS, $20M, 2025/2026.
5. NASA PIONEER, Germanium Immersion Grating Spectrograph, $20M, 2027
6. NASA ICAR – Interdisciplinary Consortia for Astrobiology Research - $2M, 2024
7. NASA Space Biology – *June* 2024 – ($300K – 3 years)
8. NASA Game Changing Development Program – Phase I ($175K, 9 months), Proposals due in July; Phase II ($600K, 2 years); Phase III ($2 million, 2 years);

NSF Funding Opportunities Examples:

1. NSF Industry University Collaborative Research Centers -C-STARS Phase I, $2M, 2024
2. NSF/CASIS Collaboration on Tissue Engineering on the International Space Station, <$1M, 2024

DOD – DARPA Opportunities Examples:
1. Biomanufacturing: Survival, Utility, and Reliability beyond Earth (B-SURE) 2 program – Anticipated late in 2024 ($2 million/2 years).

NIH Opportunities Examples:
1. National Center for Advancing Translational Sciences – Tissue Chips in Space - $2M

III. Reporting Structure

The Director of the Space Mission Institute will report to the Vice President for Research. The institute will also be responsive to a UF Faculty Council and an external Industry- Government Advisory Board (See Figure 1).

IV. Administrative Structure

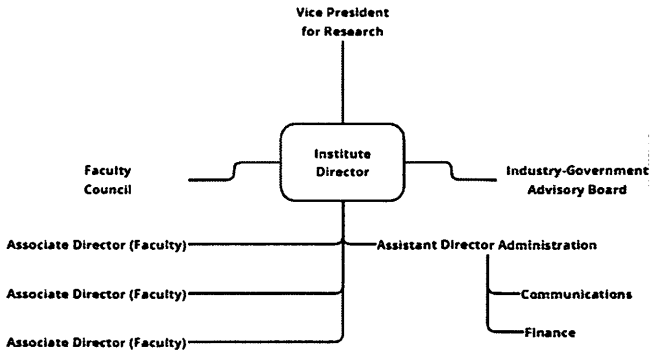


Figure 1. An overview chart of the proposed organization of SMI.

A. Administrative and Organizational Structure: SMI will utilize an organizational structure as depicted in Figure 1. It will have a Faculty Council to advise on strategic operations and research initiatives, as well as an external Advisory Board. Initially the Institute will have an Assistant Director for Administration who will oversee operations and manage communications and financial.

B. Operation Procedures: Much of the detail regarding specific operational procedures and processes necessary to establish specific Research Initiatives, Membership Processes and Financial Planning will be formulated and refined in the first year. Some of the procedures will focus on project pitches, review, and selection; decision-making about funding allocations; reporting and dissemination rules and methods; and longitudinal tracking of external funding and student participation.

C. Financial Plan: In addition to ongoing support from UFResearch, a comprehensive financial plan will be created to support the administration and operations of SMI. This plan will encompass research funding, grants, and collaboration agreements. Additionally, SMI will establish procedures for budgeting, regular financial reporting, and audits to ensure transparency and accountability to its members, academic partners, and stakeholders.

D. Risk Management: SMI will conduct regular risk assessments to identify potential challenges. Risks associated with research, financial management, and external partnerships will be evaluated. Mitigation strategies will include diversifying funding sources, establishing contingency plans for research projects, and fostering a culture of transparency and accountability.

V. Institute Membership

See appendix for a list of potential members of the institute, their academic affiliations, and areas of expertise. These members have received past external funding to conduct research in the space sciences and/or technology.

To recruit new members that may not currently work in the space sciences but have critical expertise for the exploration and commercialization of space, SMI will hold a series of open house meetings to discuss key research needs in space exploration. SMI will also ask current members to bring a guest from an outside field, including, but not limited to law, psychology, journalism, and the arts.

Additionally, efforts to work on the branding of SMI through the creation of a searchable member portal and curated social media campaigns to new members gain access to current members and discover ways that their own research can help solve critical issues in space exploration.

Form 2

Institute/Center Data

Directory Information

I/C Name:	Space Mission Institute				
I/C Code:		**University:**	University of Florida	**I/C Type:**	Uni. Institute
I/C Director:	Robert J Ferl, Ph.D.			**Discipline(s) (2-Digit CIPs):**	30
I/C Address:	207 Grinter Hall 1523 Union Rd Gainesville, FL 32611				
I/C Telephone:	352-294-3971	**I/C E-Mail Address:**	space@research.ufl.edu		
I/C SUNCOM:	N/A	**I/C Web Site Address:**			
I/C FAX:	N/A	**Affiliated Universities:**	N/A		

Mission and Areas of Focus

Mission Statement: (No more than 120 words)	The UF space institute is a front door for people who have shared curiosity and skills to help humans thrive as we explore our vast universe. The institute is a hub that brings together UF scholars from a vast range of disciplines for collaborative research that supports humanity's ability to explore the universe and curates new partnerships across the various sectors that are essential to space exploration.
Key Terms:	Space, Astro, Microgravity

Form 3

I/C Code:		I/C Name:	Space Mission Institute	
Prepared By:	J. Callaham, Assistant Director	**Date:** 1/5/2024	**Telephone:**	352-294-3971

Estimated Expenditures for the Institute/Center		**FISCAL YEAR:** 2024-2025				
		Budgetary Unit:* University E & G				
		SUS Appropriated Funds	**Contracts and Grants**	**Fees for Services**	**Private & Other (Specify)**	**Total**
Salaries & Benefits	**Faculty, TEAMS, & USPS**	$ 493,356				$ 493,356
Other Personal Services	**Housestaff**					
	Graduate Assistants					
	Other					
Expenses		$ 655,000	$ 35,000			$ 690,000
Operating Capital Outlay		$ 560,000				$ 560,000
Total Expenditures		$ 1,708,356	$ 35,000			$ 1,743,356

Positions and Rate	**SUS Appropriated Funds**	**Contracts and Grants**	**Fees for Services**	**Private & Other (Specify)**	**Total**
Faculty Positions (FTE in Personyears)	1.0 FTE				1.0 FTE
TEAMS and USPS Positions (FTE in Personyears)	2.5 FTE				2.5 FTE
Total Positions (FTE in Personyears)	3.5 FTE				3.5 FTE
Sum of Salary Rates* for These Faculty Positions	$ 217,686				$ 217,686
Sum of Salary Rates for These TEAMS and USPS Positions	$ 152,000				$ 152,000
Sum of Salary Rates for Faculty, TEAMS, and USPS Positions	$ 369,686				$ 369,686

Operating Expenses:

Other Operating Expenses	Amount	Recurring/Non-recurring	Fund	Note
Renovations	$ 470,000	N	101	SMI startup one time cost (based on the Informatics Institute renovation costs)
Furniture and equipment (capital outlay)	$ 90,000	N	101	SMI startup one time cost
Computer, Software & Office Setup (not Capitalized)	$ 30,000	N	101	SMI startup one time cost
Website and Story Development	$ 60,000	N	101	SMI startup one-time cost/Website maintenance cost will be lower going forward
Faculty Support- start-up/seed/equip/travel grants	$ 500,000	R	101	Faculty startup/seed funds (Recurring for the SMI)
Consulting/Advertising Costs	$ 10,000	R	101	101 in Yr 1, 211 from Yr 2
Computer/Data/Office Supplies	$ 15,000	R	101	101 in Yr 1, 211 from Yr 2
Travel (center related travel including speakers)	$ 30,000	R	101	101 in Yr 1, 211 from Yr 2
Workshops (food & rooms)	$ 10,000	R	211	Rooms in 101, Food in 211
Honorarium	$ 20,000	R	211	
Memberships & Dues	$ 5,000	R	211	
Other	$ 10,000	R	101	101 in Yr 1, 211 from Yr 2
	$ 1,250,000			

	Recurring	Nonrecurring	
Fund 101	$ 565,000	$ 650,000	$ 1,215,000
Fund 211	$ 35,000		$ 35,000
	$ 600,000	$ 650,000	$ 1,250,000

Payroll	$ 493,356
	$ 1,093,356

Current E&G Funding

- Can be used for projects that must be less than $1,000,000 in total project costs; maintenance, repair, renovation, remodeling, and demolition of existing educational facilities and general site improvement OR campus infrastructure to improve compliance.
- Can NOT be used for New Space.

Salary Breakout:

Dept ID	ID	Name	Pos	Sal Pla	Descr	FTE	Comp Rate	Annualized Earning	Fringe Benefit Rate	Projected Pool Fringe Benefit	Projected Salary	Additional Pay/ Allowance	Projected Total	Other Distribution	Other Total	OR Distribution	OR Total
11xxxxxx	TBD	Director		FA12		0.40	6,041.61	157,686.00	0.293	46,202.00	203,888.00		203,888.00	0	-	1	203,888.00
11xxxxxx	TBD	Associate Director		FA12		0.20	766.28	20,000.00	0.293	5,860.00	25,860.00		25,860.00	0	-	1	25,860.00
11xxxxxx	TBD	Associate Director		FA12		0.20	766.28	20,000.00	0.293	5,860.00	25,860.00		25,860.00	0	-	1	25,860.00
11xxxxxx	TBD	Associate Director		FA12		0.20	766.28	20,000.00	0.293	5,860.00	25,860.00		25,860.00	0	-	1	25,860.00
11xxxxxx	TBD	Assistant Director (Jordan)		TA12		0.50	1,724.14	45,000.00	0.394	17,730.00	62,730.00		62,730.00	0	-	1	62,730.00
11xxxxxx	TBD	Communication Specialist		TA12		1.00	2,375.48	62,000.00	0.394	24,428.00	86,428.00		86,428.00	0	-	1	86,428.00
11xxxxxx	TBD	Fiscal/Admin Assistant		TA12		1.00	1,724.14	45,000.00	0.394	17,730.00	62,730.00		62,730.00	0	-	1	62,730.00
																	493,356.00

Projected Space Requirements (in square feet)

Projected Space Required by Source	Office	Laboratory	Conference Rooms	Other
From Existing Inventory	**1000**		**500**	
Rented				
New Construction				

Although the SMI will be primarily a virtual institute, a formal headquarters will be housed on the main campus within space designated by the Vice President for Research. However, a satellite location of SMI will be at the Space Life Sciences Lab (i.e., adjacent to the Kennedy Space Center (KSC), FL), where members will get rapid access to the Florida Spaceport for flight readiness testing and payload processing.

The institute will establish a Mission Operations Center on the UF campus to enable broad participation and training for UF personnel, especially students. Such a facility will act as the Mission Operations Center (MOC) for UF-led space missions. It can also double as the Science Operations Center (SOC) at UF where mission images will be processed and analyzed using the HiPerGator AI supercomputer. It would also serve as a key link between campus and broader activities at KSC.

UF UNIVERSITY of FLORIDA

UF Research
Office of the Vice President for Research

223 Grinter Hall
PO Box 115500
Gainesville, FL 32611-0000
352-392-9271

January 31, 2024

David P. Norton, Ph.D.
Vice President for Research
P.O. Box 115500, Grinter Hall
Gainesville, FL 32611-5500

Dear David,

We are requesting approval for University Institute status for the Space Mission Institute. Enclosed is the information regarding this request and supporting documentation for the institute. President Ben Sasse announced a Space Mission Institute with "The goal of this initiative is to create a hub in which experts across UF's colleges can work together to answer the most demanding questions related to space exploration, development, and commercialization."

With that as our founding goal, we submit the following documents for review and submission to the Board of Governors. I am requesting that this center be included on the list of Centers and Institutes.

Robert J. Ferl

Assistant Vice President of Research for Strategic Projects
Distinguished Professor of Horticultural Sciences

Elevating Excellence: Proposal to Restructure the UF College of Pharmacy's Department of Pharmacotherapy and Translational Research into Two Distinct Departments

September 2023

Table of Contents

Overview

For a century, the University of Florida (UF) College of Pharmacy has been training future leaders in pharmacy practice and science, while supporting world-class research programs and advancing pharmacy practice to improve the health and wellness of others. The college's footprint in Florida includes campuses in Gainesville, Jacksonville, and Orlando, with 898 Pharm.D., 131 Ph.D. and 10 master's students enrolled in its residential programs, and nearly 1,000 pursuing a degree online.

In recent years, the college has experienced robust growth, strengthened its position as a national leader in pharmacy education and research, and significantly impacted pharmacy and the pharmaceutical sciences. In particular, the Department of Pharmacotherapy and Translational Research (PTR) in the College of Pharmacy has witnessed remarkable growth. Adding 30+ faculty members since 2003, PTR has expanded significantly and is now comprised of over 60 faculty members in clinical, instructional, and tenure-track roles.

As PTR's growth and impact have continued to soar, an overwhelming majority of faculty, through anonymous voting, have expressed their shared vision for the department's future. In light of this consensus, this proposal to divide PTR into two distinct departments has been developed. The two proposed departments are:

1) The Department of Pharmacotherapy and Translational Research, which will remain home to tenure-track research and other research-focused faculty driving groundbreaking scientific discoveries and training graduate students in clinical translational research.
2) The Department of Pharmacy Education and Practice, which will house faculty dedicated to enhancing clinical practice and education, empowering the next generation of pharmacists, and advancing pharmacy practice across the state.

By embracing this internal reorganization, the College of Pharmacy would welcome a sixth department, signaling a strategic move towards achieving an even more focused and impactful approach to research, clinical practice, and education.

Background and Rationale

UF College of Pharmacy

For a century, the UF College of Pharmacy has been training future leaders in pharmacy practice and science, while supporting world-class research programs and advancing pharmacy practice to improve the health and wellness of others. The college's footprint in Florida includes campuses in Gainesville, Jacksonville, and Orlando, with 898 Pharm.D., 131 Ph.D. and 10 master's students enrolled in its residential programs, and nearly 1,000 pursuing a degree online. In the third year of a five-year strategic plan, the college's vision is to demonstrate preeminence in education, pharmaceutical sciences research, and patient care that optimizes the health and wellness of individuals and communities. Five strategic goals are featured in the plan and revolve around

excellence in professional education, research and graduate education, clinical practice, lifelong learning, and accessibility, belonging and community health.

In recent years, the college has experienced robust growth, strengthened its position as a national leader in pharmacy education and research, and significantly impacted pharmacy and the pharmaceutical sciences. The college currently ranks No. 5 nationally in U.S. News & World Report's rankings of the best pharmacy colleges. In addition, the college has led the nation in graduates matching into pharmacy residency programs for five of the last six years. With the recruitment of many world-renowned clinicians, educators, and researchers, the faculty has nearly doubled since 2013, from 72 to 128, which along with reductions in class size have led to a fall in the student-to-faculty ratio from 16.8:1 to 7.0:1. The Blue Ridge Institute for Medical Research ranks the college No. 2 nationally in National Institutes of Health, or NIH, award funding, and the American Association of Colleges of Pharmacy, or AACP, ranks the college No. 3 in NIH and federal research funding.

The College of Pharmacy is currently organized into five departments:

- Medicinal Chemistry
- Pharmaceutical Outcomes and Policy
- Pharmaceutics
- Pharmacodynamics
- Pharmacotherapy and Translational Research

Department of Pharmacotherapy and Translational Research

The mission of PTR is to improve patient outcomes by maximizing efficacy and minimizing toxicity of drug therapy through research, teaching and service focused on evidence-based drug therapy decision-making, drug discovery, and drug development. As evident from its remarkable growth over the last decade, PTR has expanded significantly, currently comprising over 60 faculty members in clinical, instructional, and research-track roles (tenured and non-tenured tracked). To maximize its impact and expertise, **PTR operates through three divisions:** Division of Community-Based Pharmacotherapy, Division of Health-System Based Pharmacotherapy, and Division of Translation Research. These divisions were established to address the challenges posed by PTR's expanding faculty size, allowing for better management of diverse specialties and expertise within the department.

Despite these achievements, the rapid growth and diversification experienced by PTR have brought certain challenges. Approximately one-third of the faculty in the Division of Translational Research does not have a pharmacy degree or clinical background, distinguishing them from the majority of the department. While diversity in perspectives and expertise is valued, this difference has made evaluating clinical colleagues with high levels of clinical service effort and minimal to no research effort for promotion and tenure complex. Some faculty members feel unfamiliar with the evaluation criteria in this area and choose to abstain from voting, impacting the fairness and inclusivity of the college's promotion processes. Furthermore, the recent departure of Dr. Reggie Frye, the former chair of PTR, has heightened the collective awareness of both the faculty and college leadership regarding the challenge of finding a suitable replacement who possesses Dr.

Frye's unique qualities. Confronted by these intricate circumstances, the PTR faculty and College of Pharmacy leadership have united in a shared vision for the department's future. In light of this shared vision, this proposal to divide PTR into two distinct departments has been developed.

This essential step aims to enhance the college's ability to manage faculty growth effectively and achieve even greater positive impact on research and patient outcomes. The creation of two specialized departments, each with focused leadership, will streamline decision-making processes, develop targeted expertise, and foster even stronger collaborative efforts.

The proposed split will lead to the formation of two departments, each with its unique identity and mission, closely aligned with the College of Pharmacy's core values. Retaining the title of the Department of Pharmacotherapy and Translational Research (PTR), the first department will continue to focus on driving groundbreaking scientific discoveries and training the graduate students in clinical translational research. The new Department of Pharmacy Education and Practice (PEP) will dedicate itself to clinical practice and education, empowering the next generation of pharmacists, and advancing pharmacist practice across the state.

This division will enable the provision of specialized support and training to faculty in both departments, ensuring a fair and thorough evaluation process for all. Furthermore, promoting focused leadership will enhance the departments' capacity to effectively address the administrative intricacies stemming from the management of diverse faculty.

Moreover, the division of PTR into two distinct departments represents a strategic move aimed at positioning the College of Pharmacy for sustained growth and success. The concentration of efforts, streamlining processes, and cultivation of leadership will empower a more substantial influence on patient outcomes, the advancement of pharmaceutical research, and contributions to the betterment of healthcare.

Proposed Split into Two Departments

The Department of Pharmacotherapy and Translational Research

This department will remain home to tenure-track and other research-focused faculty, driving groundbreaking scientific discoveries and training the graduate students in clinical translational research. Faculty members under this department are listed in Table 1. Dr. Larisa Cavallari will serve as the interim chair for this department. Dr. Cavallari is a Professor and Debbie DeSantis Term Professor. Dr. Cavallari also serves as Co-director of the Center for Pharmacogenomics and Precision Medicine and as Director of the CTSI Health Precision Medicine Program.

The Department of Pharmacy Education and Practice

This department will house faculty dedicated to enhancing clinical practice and education, empowering the next generation of pharmacists with essential skills and knowledge. Faculty members under this department are listed in Table 2. The Divisions of Community-Based Pharmacotherapy, led by Dr. Eric Dietrich, and Health-Systems Based Pharmacotherapy, led by Dr. Kalen Manasco will be part of this new department. Dr. Michelle Farland will serve as the interim chair for this department. Dr. Farland is a Clinical Professor and was previously the Division Head of Community-Based Pharmacotherapy. Dr. Farland is a past president of the

Team-Based Learning Collaborative and is an active member of the American Association of Colleges of Pharmacy, and American College of Clinical Pharmacy.

Anticipated Impacts

During the discussions surrounding the division of PTR, both faculty and UF campus administration raised various questions about the potential impacts and consequences of the split. These questions notably coalesced around five areas: human resources/faculty distribution, budget, courses, post-graduate trainees, and service/faculty governance.

In response to these inquiries, a faculty meeting was held on July 10, 2023, where the Dean was present to provide necessary clarifications and gather feedback. After extensive discussion, all major questions raised by the faculty were successfully addressed, ensuring a transparent and well-informed decision-making process. Specifically, the following questions were discussed and addressed:

1) Human Resources/Faculty Distribution: Clarifications were provided on any potential changes to positions, reporting structures, and opportunities for growth and development. The categorization of faculty into the two departments was determined by pre-existing divisions that were originally shaped by the unique emphases of their respective scholarly pursuits. A comprehensive review process has been initiated, allowing all faculty members the opportunity to reevaluate and potentially realign their departmental affiliations. Refer to Tables 1 and 2 for an overview of how the existing faculty will be allocated.

Pending the approval of the proposed division of the current PTR into two distinct departments, each faculty member will be afforded a six-month window for transitioning between departments. Following the conclusion of this grace period, any faculty member seeking to change departments will be required to obtain dean approval before the proposed switch can be considered. Subsequently, a formal voting procedure within the target department will be conducted to finalize the decision followed by receiving the appropriate UF campus approvals. With the approval of this proposal, the Dean will initiate the process of finding new department chairs. Each interim chair will be invited to apply for the department chair position.

Given its size, PTR already benefits from the support of two administrative assistants. With the impending split, each department will inherit one of the existing administrative assistants. This approach ensures that administrative functions continue seamlessly. To maintain the continuity of research endeavors, research staff will remain under the PTR umbrella. This decision is rooted in the importance of fostering a consistent research environment, allowing ongoing projects to proceed smoothly. Importantly, the pivotal services that underpin our academic and administrative landscape – including human resources, research administration, IT support, and fiscal management – will continue to function as shared resources across the college. Both departments will have equal access to these essential services, ensuring equitable support and streamlined operations.

In addition, each department will be supported by the college in matters of growth and development. For instance, the college's PROSPER faculty development program offers a college-

wide avenue for faculty enrichment, regardless of department affiliation. This commitment underscores the college's dedication to nurturing a vibrant and thriving academic community.

2) Budgetary: Re-appointment of current faculty into the two proposed departments, along with re-assignment of general revenue fund that provide salaries and operational support (maintenance, office supplies, etc.) will only require reapportionment of the current PTR budget. A new department ID will be created for the operational budget to be used by PEP. In addition, a new IDC account for PEP will be created. Since PEP is comprised of primarily practicing pharmacists, the College of Pharmacy will allocate unrestricted funds for the department to use on a yearly basis. These funds will support PEP faculty development and their national presence in the absence of external funding income to the department. Foundation accounts will be split between the two departments by historic usage and fund purpose. For foundation accounts that have shared usage and purpose, the account will be allocated based on the total number of faculty in each proposed department.

3) Courses: There are numerous degree offerings within the College of Pharmacy. Our primary degree is the Doctor of Pharmacy degree, which enrolls ~240 students per cohort annually. The courses in this degree program are team taught by faculty from multiple departments in the college, so no change to the organization of the courses for this program will be needed. The college also offers masters and PhD degrees, and the courses currently offered for these degree programs will remain with PTR, as all graduate students will be housed within that department.

4) Post-graduate Trainees: PTR currently has a mixture of clinical residency programs, clinical/research fellowships, and post-doctoral fellows. These programs will continue to reside with the faculty who serve as program directors.

5) Service/Faculty Governance: Participation in college-level service and faculty governance is of vital importance to the success of the college. With the installation of a new Association Dean for Faculty Affairs, Dr. Chris McCurdy, the faculty governance structure within the college is under review and revision. Conversations with Dr. McCurdy have included the potential to update bylaws for committees to include faculty from both PTR and PEP departments to appropriately represent the perspectives of faculty from all departments.

Faculty Review Process

The concept of forming two departments from the existing department emerged under the leadership of the Dean of the College of Pharmacy, particularly in response to Dr. Frye's impending departure from UF (See Table 3 for detailed timeline). Dean Peter Swaan spearheaded a comprehensive review of PTR, engaging with stakeholders such as former Dean, Dr. Julie Johnson, department chairs from other College of Pharmacy departments, and each division head within PTR. During these meetings, the Dean facilitated in-depth discussions regarding the potential division of PTR, presenting a balanced assessment of his analysis findings, and outlining the advantages and disadvantages inherent in the creation of two separate departments. This process led to a comprehensive understanding of the ramifications of such a structural shift.

Subsequently, Dr. Cavallari and Dr. Farland were appointed co-interim department chairs with Dr. Cavallari leading the research faculty and Dr. Farland leading the clinical practice and education faculty, to allow for PTR and the college to pilot the new organizational structure.

Individual division heads, then presented this proposed split to the faculty members within their respective divisions. These conversations occurred during the divisional meetings convened on June 6, 2023, and June 15, 2023. This platform enabled a direct and transparent exchange of insights, paving the way for a collective exploration of the feasibility and potential benefits of this proposed evolution.

Following the initial presentation, numerous discussions and questions were generated over the course of several months. In July 2023, the PTR faculty gathered for a comprehensive meeting to further deliberate the implications of the department split. During this meeting, they also had the opportunity to engage with the Dean and a formal vote on the proposed process took place shortly after. The decision to divide faculty into two distinct departments was reached and passed in July 2023.

With the direction established, the faculty collectively tasked the Dean and co-interim department chairs of PTR with the responsibility of developing a formal proposal. This proposal would then be subject to approval through the college and university channels. In August 2023, a planning group was formed to construct the proposal.

Faculty Voting Results

From July 13, 2023 to July 20, 2023, the PTR faculty participated in the formal vote through an anonymous online voting system. The Dean charged the faculty to consider two options:

Option 1: Yes, to divide the faculty into two distinct departments: (a) The Department of Pharmacotherapy and Translational Research, and (b) The Department of Pharmacy Education and Practice with a national search for permanent chairs.
Option 2: No, to remain unified as the Department of Pharmacotherapy and Translational Research and initiate a national search for a permanent chair.

The results of the voting were overwhelmingly in favor of Option 1. The final tally revealed 46 votes in favor of Option 1, 7 votes in favor of Option 2, and 3 faculty members abstained (Figure 1). Seven faculty members did not vote for either of the options. With this decisive outcome, it was decided to move the proposal to divide PTR into two separate departments forward through the university approval process.

In the process of selecting an appropriate name for the newly envisioned department, Dr. Farland orchestrated a series of meetings with faculty members who were slated to become integral components of the emerging department. These gatherings were specifically aimed at devising a strategic name that supported the mission of the new department. Engaging in thorough deliberations, the faculty members collectively navigated the terrain of potential names, seeking to identify the most fitting option.

Following these discussions, the faculty members aligned with the nascent department undertook a vote to finalize the name. The chosen "Department of Pharmacy Education and Practice" (PEP), was presented for consideration. Faculty members were granted the choices – "Yes", "No", or "Abstain" – as they participated in vote. The final tally of this anonymous vote included 26 faculty in favor of department title of PEP, 5 faculty opposed, 3 abstained, 8 did not respond.

Appendices

Table 1. Department of Pharmacotherapy and Translation Research Faculty

Professors:	Dr. Larisa Cavallari Dr. Jurgen Bulitta Dr. Jatinder Lamba Dr. John Markowitz Dr. Charles Peloquin
Clinical Professor:	Dr. David DeRemer
Research Professor:	Dr. Taimour Langaee
Associate Professors:	Dr. Rhonda Cooper-DeHoff Dr. Julio Duarte Dr. Yang Gong Dr. Luisel Ricks-Santi Dr. Danxin Wang
Clinical Associate Professor	Dr. John Allen Dr. Emily Cicalli
Assistant Professor:	Dr. Caitrin McDonough
Clinical Assistant Professor:	Dr. Nathan Seligson Dr. Khoa Nguyen
Research Assistant Professors:	Dr. Joseph Collins Dr. Yinzhi Lang Dr. Alaa R M Sayed Dr. Marwa Tantawy

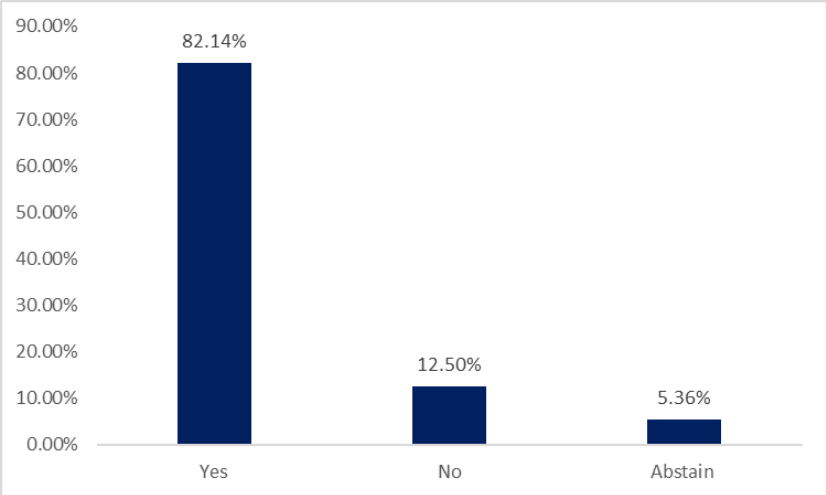
Table 2. Department of Pharmacy Education and Practice Faculty

Division of Health-System Based Pharmacotherapy	Clinical Professors:	Dr. Kalen Manasco
	Clinical Associate Professors:	Dr. Kaitlin Alexander Dr. Shauna Buring Dr. Anthony Casapao Dr. Lindsey Childs-Kean Dr. Randell Doty Dr. Carinda Feild Dr. Adonice Khoury Dr. Priti Patel Dr. Bethany Shoulders Dr. Veena Venugopalan
	Clinical Assistant Professors:	Dr. Kayihura Manigaba Dr. Barbara Santevecchi
	Instructional Assistant Professor:	Dr. Lisa Vandervoort
Division of Community-Based Pharmacotherapy	Clinical Professors:	Dr. Lakesha Butler Dr. Michelle Farland Dr. John Gums Dr. Lisa Miller Dr. Carol Motycka Dr. James Taylor Dr. Karen Whalen
	Clinical Associate Professors:	Dr. Teresa Cavanaugh Dr. Stacey Curtis Dr. Eric Dietrich Dr. Eric Egelund Dr. Robin Moorman Li Dr. Teresa Roane Dr. Erin St. Onge Dr. Katie Vogel Anderson
	Clinical Assistant Professors:	Dr. Kelsey Cook Dr. Jessica Huston Dr. Bradley Phillips Dr. Jason Powell Dr. Casey Rowe Dr. Angelina Vascimini Dr. Chardae Whitner
	Instructional Assistant Professors:	Dr. Tracy Leonard Dr. Janet Schmittgen Dr. Janel Soucie

Table 3. Timeline for the departmental division

	Feb 2023	March 2023	April 2023	May 2023	June 2023	July 2023	Aug 2023	Sept 2023	Oct 2023	Jan 2024
Dr. Reginald Frye Announces departure from UF	■									
Dr. Peter Swaan meets with key stakeholders regarding PTR's faculty size	■	■	■							
Dr. Larissa Cavallari & Dr. Michelle Farland are appointed co-interim chairs of PTR				■						
Dr. Swaan and Dr. Farland meet with Dr. Hass to discuss split and obtain his approval				■						
Faculty meetings to discuss PTR split				■	■					
Dr. Swaan meets with division of PTR to answer faculty question					■					
Faculty vote to split PTR into two departments						■				
Proposal planning group formed							■			
New department votes on new name							■			
Faculty council and college leadership review and approve proposal								■		
Proposal sent to Faculty Senate requesting consideration of the department split									■	
New departmental structure operational for spring semester										■

Figure 1. The outcome of the faculty vote regarding the division of the current Department of Pharmacotherapy and Translation Research into two distinct departments



College of Pharmacy
Department of Pharmacotherapy and Translational Research

PO Box 100484
Gainesville, FL 32610-0486
352-273-8245 Phone
352-273-6485 Fax

September 12, 2023

Peter W. Swaan, PhD, MPharm
Dean and Professor
College of Pharmacy
University of Florida
Peter.swaan@ufl.edu

Re: Support of Proposal to Restructure the Department of Pharmacotherapy and Translational Research

Dear Dean Swaan,

We are pleased to extend our support for the attached reorganization plan, which has been developed by a college appointed committee and has endorsement from the faculty within the Department of Pharmacotherapy and Translational Research (PTR).

We can confirm that the faculty of PTR have overwhelmingly voted in favor of both the departmental division and the proposed name for the new department. Furthermore, we can attest that every faculty member has approved their designated department placements. We have full confidence that this impending departmental split and faculty realignment will usher in significant advantages and ignite a renewed sense of enthusiasm, harmoniously aligning with the strategic objectives of both the College of Pharmacy and the University of Florida.

Thank you,

Larisa Cavallari, PharmD, BCPS
Interim Chair and Professor
Department of Pharmacotherapy & Translational Research
University of Florida

Michelle Z. Farland, PharmD, CDCES
Interim Chair and Clinical Professor
Department of Pharmacotherapy & Translational Research
University of Florida

September 12, 2023

1515 SW Archer Road, Suite 23C1
Gainesville, FL 32608
P.O. Box 100014
Gainesville, FL 32610-0014
Phone: 352.733.1700
Fax: 352.733.1701
UFHealth.org

Peter W. Swaan, PhD, MPharm
Dean and Professor
College of Pharmacy
University of Florida
Peter.swaan@ufl.edu

Re: Endorsement of Proposal to Restructure the Department of Pharmacotherapy and Translational Research

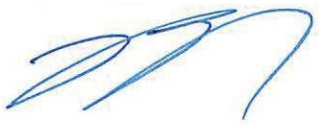
Dear Peter,

I have reviewed the proposal put forth by you and the College of Pharmacy, outlining your intention to divide the current Department of Pharmacotherapy and Translational Research into two distinct and specialized departments. I am pleased to express my full support for this proposal.

The deliberate division of the existing Department of Pharmacotherapy and Translational Research into two distinct entities is poised to significantly enhance the clarity and precision of their individual missions. As you clearly outline in your proposal the first department, retaining the title of the Department of Pharmacotherapy and Translational Research, will remain devoted to advancing research and graduate education. While the newly formed Department of Pharmacy Education and Practice will take the lead in clinical practice, pharmacy education, and the advancement of pharmacy practice across our state.

Please consider my endorsement as a testament to the merit and potential of this proposal. I look forward to witnessing the positive outcomes that will undoubtedly result from this division, as well as the continued excellence of the University of Florida College of Pharmacy.

Thank you,



David R. Nelson, MD
Senior Vice President for Health Affairs, UF
President, UF Health

UF UNIVERSITY of FLORIDA

College of Pharmacy
Office of the Dean

HPNP Bldg., Room 4332
1225 Center Drive
PO Box 100484
Gainesville, FL 32610-0484
Phone: 352-273-6309
Fax: 352-273-6306

September 12, 2023

Dr. J. Scott Angle
Interim Provost and Senior Vice President for Academic Affairs
Office of the Provost
University of Florida

Re: Strong Support for Proposal to Split the Department of Pharmacotherapy and Translational Research at UF College of Pharmacy

Dr. Angel:

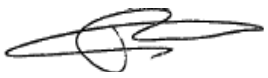
I am writing to express my strong endorsement of the enclosed proposal, which requests the reorganization of the existing Department of Pharmacotherapy and Translation Research at the University of Florida College of Pharmacy. Specifically, it proposes the creation of two distinct and specialized departments: The Department of Pharmacotherapy and Translational Research and the Department of Pharmacy Education and Practice.

Over the past decade, the UF College of Pharmacy has witnessed remarkable growth, particularly in the current Department of Pharmacotherapy and Translational Research (PTR). Since 2003, PTR has undergone exceptional expansion, welcoming more than 30 distinguished faculty members to its ranks. Presently, PTR stands as a department with over 60 faculty members encompassing clinical, instructional, and research focused positions. This expansion, along with the challenges it has presented, has generated a consensus among PTR faculty members, as demonstrated by anonymous voting, that the time has come to establish two specialized departments. These departments, each with a defined leadership and a sharper focus, will streamline decision-making processes, cultivate targeted expertise, and foster even stronger collaborative endeavors.

This reorganization will have no adverse impact on the mission of the College of Pharmacy or adverse impact on faculty, staff or students. There is no change to current curricula and/or degree programs resulting from the proposed departmental restructuring. The curriculum and degrees of the College of Pharmacy are not departmentally-based and will remain so: faculty members teach across programs and graduate specialties. In consultation with the interim department chairs, all faculty members will be assigned to the Department of Pharmacotherapy and Translational Research or the Department of Pharmacy Education and Practice based on their teaching and record of scholarship.

As Dean of the College of Pharmacy, I approve of the attached proposal as written and can attest that the College of Pharmacy is ready to implement this new structure once all required approvals are obtained. Please do not hesitate to contact me if you have questions or need additional information.

Thank you,



Peter W. Swaan, PhD, MPham
Dean and Professor