



USF Board of Trustees

Tuesday, June 12, 2018

Gibbons Alumni Center – Traditions Hall

9:30 AM – 12:30 PM

A G E N D A

I. Call to Order and Comments Chair Brian Lamb

II. New Business – Action Items (Minutes and Consent)

a. FL 101 – Approval of Minutes Chair Lamb
March 6, 2018
April 19, 2018
May 22, 2018

b. Consent Agenda (FL 102 – FL 116) Chair Lamb

(BOT committee representatives may address approved items listed below. UFF representative may address any item that relates to terms and conditions of in-unit faculty employment.)

Board members should notify the Assistant Corporate Secretary of any items they wish to be pulled from the Consent Agenda 48 hours prior to the meeting. Items pulled will be discussed and voted on separately after the remainder of the consent agenda is approved.

Academics and Campus Environment Committee Approved Items

FL 102 – Approval of Faculty Nominations for Tenure, USF

FL 103 – Approval of Tenure as a Condition of Employment, USF

FL 104 – Approval of Faculty Nominations for Tenure, USFSP

FL 105 – Approval of Tenure as a Condition of Employment, USFSP

FL 106 – Approval of Faculty Nominations for Tenure, USFSM

FL 107 – Approval of Proposed B.A. Sustainability Studies, USFSP

FL 108 – Approval of Proposed B.S. Biomedical Engineering, USF

FL 109 – Approval of B.S. Biomedical Engineering Limited Access Request

FL 110 – Approval of B.S. Biomedical Engineering Exception to 120 Credit Hours Requirement Request

FL 111 – Approval of B.S. Risk Management Limited Access Request, USFSM

Strategic Initiatives Committee Approved Item

FL 112 – Approval of the Institute of Applied Engineering as a new Direct Support Organization

Audit & Compliance Committee Approved Item

FL 113 – Approval of University Audit Work Plan – FY 2019 and 2020

Finance Committee Approved Items

FL 114 – Approval of DSO 2018–2019 Annual Financial Plans

- a. Sun Dome, Inc.
- b. USF Health Professions Conferencing Corp.
- c. University Medical Services Assoc., Inc.
- d. USF Foundation, Inc.
- e. USF Alumni Association, Inc.
- f. USF Research Foundation, Inc.
- g. USF Financing Corp. & USF Property Corp.

FL 115 – Approval of 2018–2019 Continuation Operating Budget

FL 116 – Approval of 2018–2019 Preliminary Fixed Capital Outlay Budget

c. New Business – Action Items

FL 117 – Approval of USF System Five-Year Capital Improvement Plan (2019–2020/2023–2024) Vice President/CFO Nick Trivunovich

FL 118 – Approval of Naming Projects (6) Senior Vice President Joel Momberg

USF Tampa/USF Health

- a. Genshaft Greenbaum Plaza at the USF Football Center (\$1 million gift)
- b. Genshaft Greenbaum Student Center at the MCOM-HI Water Street building (\$1 million gift)
- c. Joseph A. Savage, Jr. and Jane G. Savage Field at the USF Football Center Indoor Practice Facility (\$1 million gift)
- d. David Vesely, M.D., PH.D. Lobby at the MCOM-HI Water Street building (\$350,000 gift)
- e. Fishman Family Foundation Equipment Room at USF Athletics (\$100,000 gift)
- f. Tas Mirza Varsity Tennis Court (\$50,000 gift)

FL 119 – Approval of Re-Designation of Byrd Alzheimer’s Center Dr. Harry Van Loveren

FL 120 - Elect USF Board of Trustees Chair and Vice Chair Chair Lamb

III. New Business – Informational Items

a. USF System Updates

1. USF System and USF
2. USF St. Petersburg
3. USF Sarasota-Manatee

President Genshaft
Interim Regional Chancellor Martin Tadlock
Regional Chancellor Karen Holbrook

IV. BOT Roundtable Discussion

Chair Lamb

a. Recognition of Service – Former Trustees

V. Adjournment

Chair Lamb

Unofficial Minutes
USF Board of Trustees Regular Meeting
Marshall Student Center Ballroom
Tuesday March 6, 2018

Chair Brian Lamb convened the regular meeting of the USF Board of Trustees at 9:35 a.m. Chair Lamb welcomed everyone to the regular spring meeting.

Chair Brian Lamb's opening comments:

Chair Lamb informed everyone that Assistant Vice President for Government Relations Mark Walsh will be calling in to provide an update of the legislative session in Tallahassee during the round table discussion of today's meeting.

Chair Lamb shared a report that was mentioned during the December Board of Trustees meeting: USF was named "Institution of the Year" by the Washington, DC-based publication Education Dive. Chair Lamb also congratulated the University of South Florida St. Petersburg College of Education, whose graduates consistently finish in the top five on the state exam among all four-year colleges and universities.

Chair Lamb highlighted the University of South Florida Sarasota-Manatee's Culinary Innovation Lab, whose students will be teaming up with chefs from the Ritz Carlton for their HospitaBull fundraising event. He also highlighted the over 2,000 students who participated in USF's largest community service project, Stampede for Service. Chair Lamb then congratulated Assistant Vice President for Supplier Diversity Terrie Daniel for being honored as one of *Onyx Magazine's* 2018 Woman on the Move for her work in enhancing supplier diversity throughout the USF System.

Chair Lamb asked President Judy Genshaft to call roll with the following trustees present:

Trustee Mike Carrere
Trustee Jim Garey
Trustee Stephanie Goforth
Trustee Oscar Horton
Trustee Moneer Kheireddine
Trustee Brian Lamb
Trustee Hal Mullis
Trustee Les Muma
Trustee John Ramil
Trustee Byron Shinn – not in attendance
Trustee Charles Tokarz
Trustee Nancy Watkins
Trustee Jordan Zimmerman

On behalf of the Board, Chair Lamb congratulated Trustee Moneer Kheireddine for his reelection as USF Student Body President, alongside running mate Shaquille Kent.

USF Sarasota-Manatee Faculty WOW! Presentation

Regional Chancellor Karen Holbrook introduced three USFSM students who gave a brief presentation on their research.

Ashley Wichern is a senior from Lakewood Ranch, Florida, who will graduate this spring with a degree in criminology. She has been engaged in two significant research projects during her time at USFSM. Last year, under the guidance of Dr. Murat Haner, she won first-place in a Social Sciences poster session for her work. Currently, she is conducting research under the tutelage of Dr. Jessica Grosholz on prison entrepreneurship at Hardee Correctional Institution. Her professional ambition is to bring more educational programming into jails and prisons to empower inmates to lead productive lives.

Alexander McClure is a senior from Sarasota who began his research endeavors with Dr. Michael Snipes in economics and is now conducting biological research with Dr. Aparna Telang and Dr. Edie Banner. He is submitting two projects for this year's Research Showcase at USFSM, one that analyzes water sources in two distinct Costa Rican rainforests, and the second, a study of mosquitos. He is also co-authoring a paper with Dr. Telang, once again demonstrating he has the drive to accomplish his goal of attending medical school and becoming a doctor after graduation this spring.

Carlos Moreira is a husband, father of a four-year-old boy, a United State Marine Corps veteran and reservist, an on-campus student leader, and in his spare time, he has earned a bachelor's degree in finance at USFSM. He is now working on his second undergraduate degree in risk management, AND his MBA. He serves as the president of the Student Veteran Society, president of the Latin America Student Association, and is a member of the Multi-cultural Affairs Committee. His resume also includes a Navy & Marine Corps. Commendation Medal and he dedicates his time to service with several organizations in the Sarasota area.

Vice Chair Jordan Zimmerman commented on the unfortunate tragedy that occurred at Marjory Stoneman Douglas High School on February 14, 2018. Vice Chair Zimmerman discussed doing whatever it takes to secure our schools by reaching out to our resources and raising money in every state and community for better security.

President Genshaft made comments pertaining to the tragedy at MSD High School and informed the Board that USF has 96 students who graduated from MSD. She then asked Saad Mandela to address the Board on behalf of these alumni.

Saad Mandela is a second year student majoring in biomedical sciences. Saad commented on the tragedy and great the loss of students and personal friends at his alma mater because of this unfortunate incident the community is coming together with plans

of making changes so that this does not ever occur again. Saad thanked the leadership at USF for giving resources to help cope with the devastation and for having a candle light vigil in memory of the students at MSD High School.

President Genshaft thanked Saad Mandela and Trustee Kheireddine for their leadership during this very difficult time.

Chair Lamb thanked everyone including the entire Board for their service and coming together to aid individuals whose lives were impacted directly or indirectly by this incident.

New Business – Actions Items

FL 101 – Approval of Minutes

December 14, 2017

February 13, 2018

February 27, 2018

Trustee Stephanie Goforth moved for approval of the December 14, 2017, February 13, 2018 and February 27, 2018 minutes, with a second from Trustee Jim Garey. The minutes were unanimously approved.

Consent Agenda (FL 102 – FL 111)

Academic and Campus Environment Committee Approved Items

FL 102 – Approval of Tenure as a Condition of Employment, USF

FL 103 – Approval of Tenure as a Condition of Employment, USFSP

FL 104 – Approval of Tenure as a Condition of Employment, USFSM

FL 105 – Approval of Proposed B.S. Mathematics: Computational & Applied, USFSP

FL 106 – Approval of Proposed M.S. Advertising, USF

FL 107 – Approval of Proposed B.S. Integrated Public Relations & Advertising, USF

FL 108 – Approval of Proposed M.S. Learning Design & Technology, USF

FL 109 – Approval of Proposed B.S. Risk Management, USFSM

Governance Committee Approved Items

FL 110 – Approval of DSO Regulations

FL 111 – Approval of BOT Operating Procedures

The UFF President did not have comments for the Board.

Trustee Goforth recommended approval on behalf of the ACE Committee for all their items and then moved for approval. Vice Chair Zimmerman seconded the motion. The ACE Committee items were approved unanimously. Vice Chair Jordan Zimmerman commented on the Governance Committee items and spoke about FL 110 – Approval of DSO Regulation and FL 111 – Approval of BOT Operating Procedures. He informed the

Board that should the legislature make changes that will cause conflict with these items the committee will meet again to address these changes.

Trustee John Ramil commented on the operating procedure changes and the makeup of today's Board of Trustees. He stated that the first Board 17 years ago, of which he was a trustee, gave thoughtful consideration to the operating procedures with hopes that it would always work and not need changing. Trustee Ramil does not agree with the changes. Chair Lamb commented on the great respect for Trustee Ramil's ideas and insight that he has brought before the Board and noted that his comments today will be reflected in the minutes.

A motion was made by Vice Chair Zimmerman and seconded by Trustee Nancy Watkins. The Governance Committee items were approved unanimously.

New Action Items

FL 112 Approval President's 2018-2019 Contract

Vice Chair Zimmerman commended President Genshaft on her successful, inspirational leadership at USF for the past 17 years. He thanked all the Trustees for being engaged in discussing the issues surrounding the President's contract.

A PowerPoint presentation was presented on behalf of the Governance Committee on the July 1, 2018 – June 30, 2019 Employment Agreement.

Vice Chair Zimmerman reported that the Governance Committee recommends the President's contract be extended by one year, July 1, 2018 – June 30, 2019, with no changes made to the terms of the agreement including salary and annual performance stipend. He pointed out that this is in line with the President's wishes as she has not asked for an increase in her compensation, and that a significant portion of her compensation is in the form of the performance stipend, placing it at risk.

Please refer to the Board of Trustees website for the President's complete exemplary performance evaluation and goals.

Vice Chair Zimmerman then discussed a few of the achievements accomplished under President Genshaft, including:

- The USF Foundation surpassing its \$1 billion Unstoppable fundraising campaign goal
- USF meeting the required 11 of 12 metrics to qualify as a preeminent state research university
- Surpassing research expenditure goals
- Finished in the top tier for the state university performance based funding
- USF has eliminated the achievement gap between students based on race or family income

- Morsani College of Medicine students have the highest average score on the medical college admissions test in the state
- USF ranked number one for student job placement within one year of graduation
- President Genshaft was recognized by national peers receiving the American Council on Education 2017 Donna Shavlik Award

Vice Chair Zimmerman moved to approve extending the President's contract one year beginning July 1, 2018 through June 30, 2019, authorizing Chair Lamb to make any technical changes needed upon Board of Governors' ratification to complete the negotiation. The motion was seconded by Trustee Ramil and approved unanimously by the Board.

Trustee Ramil discussed the comparison in compensation between other state universities and praised the Board's decision to have more of the President's pay at risk for performance. Trustee Garey acknowledged what a great pleasure it has been to serve as a Board member under the leadership and dedication of President Genshaft. Trustee Hal Mullis commented on having the best President in the state.

President Genshaft thanked the trustees for their support and then requested all vice presidents and deans stand to thank them for their support.

Chair Brian Lamb discussed how fortunate it is for him to work side by side with a great President and witness first hand all of the many achievements under her excellent leadership.

FL 113 – Approval of USFSP Campus Board Member

Chair Lamb announced that USFSP Campus Board member Bob Churuti's term will soon end and spoke to his dedication over all the years he has served USFSP and the community.

President Genshaft recommended Susan Hamilton Churuti, director of Beach Drive Retail Inc., an affiliate of Hamilton Partnership LTD, of which Mrs. Churuti is partner.

Trustee Stephanie Goforth was pleased to comment that Mrs. Churuti is continuing the legacy of the Churuti family by representing the USFSP campus.

Trustee Goforth moved for approval with a second by Trustee Mullis, which was unanimously approved by the Board.

FL 114 – Approval of Donor Request

Senior Vice President of Advancement and Alumni Relations Joel Momberg introduced the item and spoke of Mr. William Kidd and his reputation as a long-time donor to the College of The Arts and WUSF.

A planned gift totaling \$296,377.28 was realized from the William Kidd Trust. One-half (1/2) thereof to USF Foundation, Inc., for the use and benefit of the University of South Florida, to be used within the College of Visual and Performing Arts as the Board of Trustees or other governing body of said University shall deem proper.

Trustee Mullis moved for approval with a second by Trustee Goforth, which was unanimously approved by the Board.

New Business – Information Items.

President Genshaft acknowledged the Board members and expressed heartfelt appreciation for their support. The President then provided an update on the USF System and the Tampa campus.

- Standard and Poor Global ratings has revised its outlook from stable to positive on several of USF's bonds
- Introduction of David Lechner, new senior vice president for business and financial strategy
- Announcement of Dr. Haywood Brown as the USF System's new vice president for Diversity, Inclusion and Equal Opportunity and Title IX administrator. Dr. Brown will also serve as the chief diversity officer for USF Health and associate dean of diversity of the Morsani College of Medicine. Dr. Brown's term starts July 1, 2018 and he will be tasked with the implementation of the USF System Diversity Strategic Plan
- The Morsani College of Medicine's Match Day ceremony will be held on March 16, 2018 at the Ulele

Trustee Ramil commended the President and members of the Business and Finance team on their achievements.

Chair Lamb complimented the Board members on their foresight in maintaining the President's performance assessments, fiscal responsibilities, goals and reaching the outstanding status in ratings as a result.

President Genshaft gave recognition to Mr. Cecil Howard who is currently serving as the Interim Diversity Officer on the USF Tampa campus. Mr. Howard is also the Campus Diversity Officer at USFSP. President Genshaft thanked him for his continued service to the USF System.

Update on the USF Systems Strategic Plan:

The initial plan for the USF System Mission and Vision – The focus will be on -Defining Metrics around reputation community engagement.

The upcoming USF Spring Commencement Ceremonies. There will be ten commencement exercises throughout the USF System starting on May 3, 2018.

Morsani College of Medicine will have a commencement ceremony on May 11, 2018. System wide there are 6237 degree candidates. President Genshaft encouraged all Trustee members to participate.

For the first time in the United States, *Times Higher Education* has asked the University of South Florida to host the Young Universities Summit. Approximately 300 Presidents, Chancellors along with their leadership staff from around the world are expected to attend on June 5th – June 7th.

USF Tampa Update

The information was previously reviewed by the Trustees at the December 14, 2017 meeting.

Trustee Hal Mullis proudly announced that the USF Women's Basketball team is now nationally ranked. They will play the University of Connecticut this afternoon at 5:00 pm., for the 3rd time this season. Coach Jose Fernandez was named Coach of the Year. University of Connecticut Women's Basketball Coach Geno Auriemma and his team received Academic Achievement Award.

Chair Lamb commented that he attended a USF Women's Basketball game in Cincinnati where USF was the winner.

Trustee Les Muma reported that Connecticut Women's Basketball Coach Geno Auriemma reported to the press that he voted for Coach Jose Fernandez for Coach of the Year.

USF St. Petersburg Campus

Interim Regional Chancellor Martin Tadlock provided an update. A power point presentation was provided which highlighted the follow issues:

- Student Success
- Student Recruitment Strategy
- Emerging Scholars Program
- Developing a Regional Chancellor Council
- Developing a Pathways Program with St. Petersburg College
- Points of Pride
- Academic Programs and Progress of New Programs
- Archive System
- Program Reviews and Accreditation
- Kate Tiedemann College of Business completed the external accreditation
- SACS 5th Year Report
- Research Funding
- General
- Fundraising

Facilities

Awards

Trustee Stephanie Goforth thanked Interim Regional Chancellor Martin Tadlock and his team on their leadership as well as overcoming recent challenges.

Chair Brian Lamb also thanked Dr. Tadlock for his leadership and recent visibility in the community. The chair commented on the positive feedback that he's received about the USFSP campus.

President Genshaft thanked both Regional Chancellor Tadlock and Trustee Stephanie Goforth for their advocacy.

Chair Lamb made comments concerning the USFSP Housing, a shared priority, which will be discussed in further detail at the next committee meeting.

USP Sarasota-Manatee Campus Update

Regional Chancellor Holbrook made comments concerning a 7ft. alligator that had to be carefully removed from the USFSM campus.

Regional Chancellor Karen Holbrook provided an update. A power point was presented which highlighted the following issues:

Student Access

Student Success

Academic Programs

Research – Faculty Research

Research Workshops

Faculty Research

Internships

Leadership Series

Persistence Committees

Academic Programs

Fundraising

Facilities – Approved Construction

Infrastructure

Leadership Talent – Critical Hires and Searches

General – P3 planning for a new Residence Hall

Cuba and the Caribbean – What Now Workshop

Trustee Mike Carrere commended both Regional Chancellors Dr.'s Holbrook and Tadlock on their presentations, energy and leadership at the USF campuses. Trustee Carrere encourages support and would like to consider having a full Board meeting at the USFSM campus.

Trustee Mullis congratulated both Regional Chancellors for their impactful consistency in their presentations and also Chair Brian Lamb for his structure and leadership.

Chair Brian Lamb expressed his appreciation for the positive feedback and thanked Dr. Cynthia Visot for her support in organizing the format for the Board of Trustee meetings.

Round Table Discussion

Executive Director for Governmental Relations Mark Walsh provided an update on the legislative session in Tallahassee Florida.

The incident at Stoneman Douglas High School on February 14, 2018 has had a huge effect and has dominated the legislative session this season.

The Higher Education package

House and Senate Bills

Appropriations

Accreditations

Increase in Financial Aid

Bright Futures Funding at all levels

Scholarships Programs

Affordability

Performance Base Funding

Four and six year graduation rates

Petitions

Access Rates

Direct Support Organizations

Tuition and Fees

Preeminence Metrics

Graduation Rate Metrics

Consolidation and Accreditation of the USF System

An appointed Task Force – Staffed by USF Personnel and Deadlines

Recommendations on:

-Preserving the Campus Boards and increasing memberships

-How to preserve the campuses identities

-How to preserve Faculty input

-The Higher Education Budget - Budget transparency issues

Approving the campus plan and operating budget

Publish a Regional Impact Report- showing additional investments and opportunities for the regional campuses.

The BOT will need to set up a process by which faculty and students at the regional campuses will be equitably represented.

Replacing Statutes

Senate Recommendation of \$30 Million for 2 Programs: World Class Scholars and Graduate of Excellence

The House Recommendation of: An increase of \$20 Million for the emerging preeminent institutions.

A \$12 Million increase in unfunded plant operations and maintenance.

Health care Budget and Published Budget deadline

STEM Program and Operational Support for the Regional Campuses

PECO Funds

Capital Outlay

The Downtown College of Medicine

Trustee Nancy Watkins questioned the added, expired and permanent language relating to the Task Force. She commented on the allocation of funding as it relates to the campuses and the unique requirements. There is a difference between the USF campus governance oversight structures and Trustee Watkins suggests that this point is addressed during the Task Force process.

Chair Brian Lamb commented on reporting requirements.

Trustee Jordan Zimmerman had questions concerning the legislation \$400 million and the perimeter of safety set up for the schools.

Trustee Hal Mullis announced that the University of South Florida Tampa is on the verge of being awarded a Phi Beta Kappa Chapter.

The Honors College Dean Charles Adams reported that there is one final vote before the announcement in August 2018. This has been a three year process. A Chapter will be formed fall 2018.

Chair Brian Lamb reported that another vision is to become an AAU University. The Chair questioned if the AAU Universities have a Phi Beta Kappa Charter. The answer is yes.

Trustee Hal Mullis commended Dean Charles Adams for pursuing the process of getting a Phi Beta Kappa Chapter to the University of South Florida.

Trustee James Garey reported that the Faculty Senate has recently changed the way Senators are selected. The Departments will be more involved. This was positively received. Trustee Garey also commented on the three senates have agreed to look at models of faculty governance in a distributive system.

Trustee Moneer Kheireddine reported that the elections just ended. There was a huge turnout by the student body. Trustee Kheireddine commented on positive talks of consolidation by the student body and have also met with regional student body leaders to discuss the possibilities of it happening and is looking forward to another exciting year.

Having no further items to discuss, Chair Lamb adjourned the meeting at 12:02 p.m.

University of South Florida
Board of Trustees
Special Conference Call
Thursday, April 19, 2018
Unofficial Minutes

Chair Brian Lamb convened the USF Board of Trustees special conference call at 4:30 p.m.

Chair Lamb thanked everyone for joining this conference call of the Board of Trustees to provide an update on the USF Consolidation efforts.

Chair Lamb asked President Genshaft to call the roll.

President Judy Genshaft called roll with the following Trustees present:

Trustee Mike Carrere
Trustee Stephanie Goforth
Trustee Brian Lamb
Trustee Hal Mullis
Trustee Leslie Muma
Trustee John Ramil
Trustee Byron Shinn
Trustee Charlie Tokarz
Trustee Nancy Watkins
Trustee Jordan Zimmerman

New Business – Information Item

Task Force Committee. The Chair provided an update on the task force appointments excluding the Speaker of the House (which is expected any day).

Chair: Dr. Jonathan Ellen, CEO JHACH and BOG appointment.
Members include: Alison Barlow, St. Petersburg Innovation District/Senate appt.
Anddrikk Frazier, President & CEO Integral Energy (BOT Chair appt.)
Michael Griffin, Sr. Managing Director for Savills Studley (BOT Chair appt.)
Rick Piccolo, President & CEO Sarasota Bradenton airport (USFSM CB Chair appt.)
Kayla Rykiel, USF Honors College student (Alumni Association appt.)
Melissa Seixas, VP Gov't & Community Relations Duke Energy (USFSP CB Chair appt.)
Byron Shinn, Partner-in-charge Carr, Riggs & Ingram (Senate appt.)
USF President Judy Genshaft
USFSP Interim RC Martin Tadlock
USF S-M RC Karen Holbrook

The Chair shared that the first meeting of the task force is April 25th at 4 p.m. at USFSP. It will be an orientation meeting to review the scope of their responsibilities, overview of the current USF System, sunshine laws and the BOT Chair's charter to the task force. The task force will submit recommendations for the Board to consider. The Chair shared that he expects the task force to keep two things in mind while doing their work and considering recommendations: how does this affect accreditation and how does this affect preeminence. He shared that he will work with Dr. Ellen to keep members educated.

The Chair shared that Dr. Visot has pulled together a USF System staff team to assist the task force with its work. The Chair asked if there were any questions about the task force. None.

BOT Committee. The Chair shared that he is establishing a Board committee to work with a USF System committee which will be appointed by the President, and has asked Trustee Mullis to serve as the chair so that he can oversee the process through his strategic initiatives authority. He shared that the Campus Board Chairs, Trustees Goforth and Shinn and former Chair Ramil who understands the complexity of this task due to his longevity on the Board will form the committee. He shared that he expects the President and her team to work with the BOT committee as they put a plan together. Trustee Mullis will update the Board periodically.

The Chair asked GC Solis to review the document specific to the Board committee. GC Solis shared that the committee will work to Submit a plan to the Florida BOG by March 15, 2019 that: a. establishes a timeline to implement a single accreditation no later than June 30, 2020 and that permits no lapse in accreditation in the process; b. reinforces the ability of USF students to pursue their degrees and graduate in 4 years from date of first attendance; and c. maintains Preeminence based on reporting as a single accredited institution by the first regular reporting date after July 1, 2020. He also recommended that the BOT committee adopt and communicate principles to guide the task force in its functions and to inform the BOT committee's own actions to carry out its statutory priorities; and task the USF System President to carry out the actions required of the Board in sec. 1004.34, including retaining external subject matter experts. The President's actions should also be consistent with guiding principles established by the BOT committee. As normal, the President will update the BOT committee regularly; the BOT committee will be the primary liaison between the Board and the task force; and the BOT committee will not replace the Board's established structure and processes (i.e., new programs and initiatives will still come to the Strategic Initiatives Committee; academic programs will still come to ACE).

Trustee Mullis addressed the need for external experts to assist the Board and university with the consolidation and that he had an opportunity to talk with a prospective group with the President. He also mentioned that he will set up an organizational meeting very soon to address these issues.

President Genshaft mentioned that she has engaged SACS as soon as she saw the legislative language and will be going to visit their team in a couple weeks along with the regional

chancellors. She stated that the SACS experts will be assisting the team to produce quality results.

At this time, the Chair opened for questions/comments. Trustee Muma asked whether preeminence status would be affected. The Chair explained the process and timeline and the President and Provost shared that plans are already underway to address the metrics and action we can take to move the regional institutions forward. The Chair requested that the Provost spend time with Trustee Muma reviewing the process. Trustee Shinn reported his campus board had established ad hoc committees to aid with their community. No other questions.

The Chair thanked the members for joining the call.

Having no further business Chair Lamb adjourned the meeting at 4:55 p.m.

University of South Florida
Board of Trustees Meeting
Marshall Student Center – Room 3707
Tuesday, May 22, 2018
Unofficial Minutes

Chair Brian Lamb convened the USF Board of Trustees meeting at 10:08am.

The Chair asked President Genshaft to call the roll.

President Judy Genshaft called roll with the following Trustees Present:

Trustee Mike Carrere
Trustee Stephanie Goforth
Trustee Oscar Horton
Trustee Moneer Kheireddine
Trustee Brian Lamb
Trustee Deanna Michael
Trustee Hal Mullis
Trustee Leslie Muma
Trustee John Ramil
Trustee Byron Shinn – not in attendance
Trustee Charles Tokarz
Trustee Nancy Watkins
Trustee Jordan Zimmerman – not in attendance

The Chair thanked everyone for their flexibility in attending this Board meeting between committee meetings. He informed the Board that the reason for the brief meeting was to allow them to approve the USF System Four-Year Graduation Plan and the USF System Accountability Plans that were previously presented to the Academic and Campus Environment Committee. These plans need to be submitted to the Florida Board of Governors before the next Board meeting on June 12.

Consent Agenda (FL 101 – FL 102)

Academic and Campus Environment Committee Approved Items

FL 101 – Approval of USF System Four-Year Graduation Plan

FL 102 – Approval of USF System Accountability Plans

Committee Chair Goforth made a motion for approval of the ACE Committee item FL 101 with a second by Trustee Watkins; the motion was approved unanimously by the Board.

Committee Chair Goforth made a motion for approval of the ACE Committee item FL 102 to include approval of all four accountability plans (i.e. USFT, USFSP, USFSM and USF System) with a second by Trustee Carrere; the motion was approved unanimously by the Board.

Trustee Ramil congratulated Vice President of Student Affairs and Student Success Paul Dosal, Provost Ralph Wilcox, USFSP Interim Regional Chancellor Martin Tadlock and USFSM Regional Chancellor Karen Holbrook and their teams for their presentations and hard work for elevating the level of performance of their respective campuses and always being transparent with the Board.

Chair Lamb acknowledged that President Judy Genshaft will be honored as the Tampa Bay Lightning's Community Hero at tonight's game versus the Washington Capitals of the NHL Eastern Conference Finals. President Genshaft acknowledged the hard work of everyone with the USF System and said she was thrilled to have the Lightning make a donation in her honor to USF.

Having no further business Chair Lamb adjourned the meeting at 10:22am.

Agenda Item: FL 102

USF Board of Trustees
June 12, 2018

Issue: Faculty Nominations for Tenure

Proposed action: Approve Faculty Nominees for Tenure, USF Tampa

Executive Summary:

Attached is the USF Tampa's list of faculty nominees for tenure for review and approval by the USF Board of Trustees. President Judy Genshaft has certified that the nominations for tenure have met the requirements and conditions contained in USF Regulations, Policies, and Procedures. She is satisfied that the nominees will make a significant professional contribution to USF and the academic community in general. If approved, tenure will be awarded effective August 7, 2018.

Financial Impact:

USF Tampa faculty granted tenure and promotion will receive a 9% salary increase and \$5000 to Associate Professor and \$7000 to Professor in special achievement. Faculty granted tenure only will not receive a monetary award.

Strategic Goal(s) Item Supports:

USF Strategic Plan 2013-2018, Goal II

BOT Committee Review Date:

Academics and Campus Environment Committee – May 22, 2018

Supporting Documentation Online (please circle): Yes No

USF System or Institution specific: USF Tampa

Prepared by: Dwayne Smith, Senior Vice Provost & Dean, Office of Graduate Studies,
813-974-2267



MEMORANDUM

DATE: June 12, 2018
TO: Brian Lamb, Chair
FROM: Judy Genshaft
President
SUBJECT: Faculty Nominations for Tenure, USF Tampa

I am requesting approval by the USF Board of Trustees of the enclosed Faculty Nominations for Tenure at USF Tampa. In nominating these faculty members for tenure, I certify that the requirements and conditions contained in USF Regulations, Policies, and Procedures for the granting of tenure have been met. I am satisfied that the nominees will make a significant professional contribution to USF Tampa and the academic community.

Enclosures

Faculty Nominations for Tenure, USF Tampa - 2017-18 Effective 2018-19
USF Board of Trustees Meeting – June 12, 2018

<u>College</u>	<u>Name</u>	<u>Rank Upon Tenure</u>	<u>Department/ School</u>	<u>Degree of Effort*</u>
Arts & Sciences	Juan Del Valle	Associate Professor	Chemistry	1.0
Arts & Sciences	Scott Ferguson	Associate Professor	Humanities & Cultural Studies	1.0
Arts & Sciences	Darcie Fontaine	Associate Professor	History	1.0
Arts & Sciences	James Leahy	Professor	Chemistry	1.0
Arts & Sciences	Christopher McRae	Associate Professor	Communication	1.0
Arts & Sciences	Elizabeth Miller	Associate Professor	Anthropology	1.0
Arts & Sciences	Xizhen Qin	Associate Professor	World Languages	1.0
Arts & Sciences	Ghanim Ullah	Associate Professor	Physics	1.0
Arts & Sciences	Jiangfeng Zhou	Associate Professor	Physics	1.0
Behavioral & Community Sciences	Manisha Joshi	Associate Professor	School of Social Work	1.0
Education	Rebecca Burns	Associate Professor	Teaching & Learning	1.0
Education	Ruthmae Sears	Associate Professor	Teaching & Learning	1.0
Education	Jennifer Wolgemuth	Associate Professor	Educational and Psychological Engineering	1.0
Engineering	Selçuk Köse	Associate Professor	Electrical Engineering	1.0
Engineering	Xiaopeng Li	Associate Professor	Civil and Environmental Engineering	1.0
Engineering	Yao Liu	Associate Professor	Computer Science and Engineering	1.0
Engineering	Anna Pyayt	Associate Professor	Chemical and Biomedical Engineering	1.0
Marine Science	Kristen Buck	Associate Professor		1.0
Muma College of Business	Robert Hooker	Associate Professor	Marketing	1.0
Muma College of Business	Lei Zhang	Associate Professor	Marketing	1.0
The Arts	McArthur Freeman	Associate Professor	School of Art and Art History	1.0
The Arts	Bliss Kohlmyer	Associate Professor	School of Theatre and Dance	1.0
Medicine	Umit Kayisli	Professor	Obstetrics and Gynecology	1.0

Board of Trustees Meeting - New Business - Consent agenda

Medicine	Sami Noujaim	Associate Professor	Molecular Pharmacology & Physiology	1.0
Medicine	Douglas Haladay	Associate Professor	School of Physical Therapy & Rehabilitation Sciences	1.0
Public Health	Amy C. Alaman	Associate Professor	Epidemiology and Biostatistics	1.0
Pharmacy	Feng Chang	Associate Professor	Pharmaceutical Sciences	1.0
Pharmacy	Diane Allen-Gipson	Associate Professor	Pharmaceutical Sciences	1.0

* If Less than 1.0 FTE

University of South Florida
FACULTY NOMINATIONS FOR TENURE

2017-18 effective 2018-19

Prepared by:	Rosie Lopez
Title:	Executive Administrative Assistant
Phone Number:	(813) 974-2267
Date:	5/1/18

Tampa & HSC Included

Sex, Race/Ethnicity	Applied	Deferred	Withdrawn	Denied	Nominated
MALES					
American Indian or Alaskan Native	0	0	0	0	0
Asian or Pacific Islander	4	0	0	0	4
Black, Not Hispanic	1	0	0	0	1
Hispanic	1	0	0	0	1
White, not Hispanic	11	0	1	2	8
Other	0	0	0	0	0
Total Male	17	0	1	2	14
FEMALES					
American Indian or Alaskan Native	0	0	0	0	0
Asian or Pacific Islander	4	0	0	0	4
Black, not Hispanic	2	0	0	0	2
Hispanic	0	0	0	0	0
White, not Hispanic	10	0	1	1	8
Other	0	0	0	0	0
Total Female	16	0	1	1	14
GRAND TOTAL	33	0	2	3	28

**Eligible: Data is only from departments that have applicants applying during the current process.*

- APPLIED= Faculty whose names have been submitted for tenure review.
- DEFERRED= Faculty for whom tenure was deferred during the review process.
- WITHDRAWN= Faculty who withdrew from tenure consideration after applying for review.
- DENIED= Faculty for whom tenure was denied during the review process.
- NOMINATED= Faculty for whom tenure is being recommended by the University.

For out-of-unit faculty, pursuant to Rule 6C-5.940(1)(e), the decision to recommend an employee for tenure shall be made no later than the sixth year of continuous full-time service or equivalent part-time service in a tenure-earning position.

For in-unit faculty, pursuant to Article 15 of the BOR-UFF Agreement, an employee shall normally be considered for tenure during the sixth year of continuous service in a tenure-earning position including any prior service credit granted at the time of initial employment. An employee's written request for early tenure consideration is subject to the university written agreement.

Notes: The numbers provided should not include tenure nominations as a condition of employment.
Once having applied for tenure review, faculty may generally only be withdrawn from, denied, or nominated for tenure.
The sums of those withdrawn, denied, or nominated for tenure should equal the number of those who applied for tenure review. (Please explain any discrepancies.)

Tenure Attachment B rev.

Agenda Item: FL 103

USF Board of Trustees

June 12, 2018

Issue: Tenure Nomination as a Condition of Employment

Proposed action: Approve Tenure as a Condition of Employment, USF Tampa

Executive Summary:

Administrators such as the President, Provost, Deans, Chairs, and senior faculty who are recruited to USF Tampa are normally awarded tenure as a condition of employment. These highly qualified individuals usually have earned tenure at their previous institutions, which makes them attractive candidates to USF. In order to attract them, USF must provide a package that is competitive with other nationally and internationally ranked institutions. Tenure upon appointment for qualified candidates, among other things, is a term and condition of the employment package that makes USF an institution of choice.

Financial Impact:

Strategic Goal(s) Item Supports:

USF Strategic Plan 2013-2018, Goal II

Workgroup Review Date:

Academic and Campus Environment Work Group – May 22, 2018

Supporting Documentation Online (please circle): Yes No

USF System or Institution specific: USF Tampa

Prepared by: Dwayne Smith, Senior Vice Provost & Dean, Graduate Studies, 813-974-2267



MEMORANDUM

DATE: June 12, 2018
TO: Brian D. Lamb, Chair
FROM: Judy Genshaft, President
SUBJECT: Tenure as a Condition of Employment Nominations, USF Tampa

I am requesting approval by the USF Board of Trustees of the enclosed Tenure as a Condition of Employment Nominations at USF Tampa. In nominating these faculty members for tenure, I certify that the requirements and conditions contained in USF Regulations, Policies, and Procedures for the granting of tenure have been met. I am satisfied that the nominees will make a significant professional contribution to USF Tampa and the academic community.

Enclosures

Faculty Nominations for Tenure as a Condition of Employment, USF-Tampa
USF Board of Trustees Meeting – June 12, 2018

<u>College</u>	<u>Name</u>	<u>Rank</u>	<u>Department/ School</u>	<u>Degree of Effort*</u>	<u>Previous Institution</u>	<u>Tenure at Previous Institution</u>
Muma College of Business	Sunil Mithas	World Class Scholar Professor	Information Systems & Decision Sciences	1.0	University of Maryland – College Park, MD	Yes
Engineering	Ramon Gonzalez	World Class Scholar Professor	Chemical & Biomedical Engineering	1.0	Rice University – Houston, TX	Yes
Engineering	David Simmons	Associate Professor	Chemical & Biomedical Engineering	1.0	The University of Akron – Akron, OH	No (Approved by University, awaiting state approval)
Morsani College of Medicine	Matthias Majetschak	Professor	Surgery	1.0	Loyola University – Chicago, IL	Yes
Morsani College of Medicine	Hayward Brown	Professor	Obstetrics & Gynecology	1.0	Duke University – Durham, NC	Yes
Morsani College of Medicine	Ramesh Ayyala	Professor	Ophthalmology	1.0	Tulane University – New Orleans, LA	Yes

*If less than 1.0 FTE

University of South Florida
Tenure Nominations as a Condition of Employment

1

Muma College of Business

Sunil Mithas, PhD

Dr. Sunil Mithas is being hired as a World Class Scholar at the rank of Professor in the Department of Information Systems & Decision Sciences, Muma College of Business. He is currently the Ralph J. Tyser Professor of Information Systems at the Robert H. Smith School of Business at the University of Maryland, College Park. Dr. Mithas earned a Ph.D. in Business Administration from the Ross School of Business, University of Michigan in 2005. He holds a Post-Graduate Diploma in Management (equivalent of MBA) from MDI Gurgaon and a Bachelor of Engineering degree from IIT, Roorkee. Prior to pursuing the Ph.D., he worked for about ten years in engineering, marketing and general management positions with the Tata Group. He joined as an Assistant Professor the Decision, Operations & Information Technologies Department of the Robert H. Smith School of Business in 2005. Professor Mithas' scholarship is in the area of business value of information technology (IT) and strategic management of IT resources. He has 47 published/ forthcoming articles in refereed journals, of which 39 are in *Financial Times* 50 (FT50) journals. This level of publications will set a new record for the Muma College of Business upon his hire. He is among a group of about 30 or so authors who are on the premier journal *Management Information Systems (MIS) Quarterly's* "Most Prolific Authors List."

The faculty and Chair of the Department of Information Systems & Decision Sciences recommends tenure upon hire at the rank of Professor, a recommendation strongly supported by the Muma College of Business Promotion and Tenure Committee as well as the Dean Moez Limayem. Provost Ralph Wilcox and President Judy Genshaft concur with this recommendation.

**University of South Florida
Tenure Nominations as a Condition of Employment**

2

Engineering

David Simmons, PhD

Dr. David Simmons will join the University of South Florida as an Associate Professor in the Department of Chemical & Biomedical Engineering, College of Engineering, in Fall 2018. Dr. Simmons comes to USF from the University of Akron where he was an Assistant Professor in the Department of Polymer Engineering. He was approved for tenure there this year, but formal conferral by the state will not occur until this summer. Dr. Simmons completed his Ph.D. work at The University of Texas at Austin and completed a post-doctoral fellowship at the National Institute of Standards and Technology (NIST). Dr. Simmons' research focuses largely on glassy and polymeric materials, using a combined simulation and experimental approach to both understand the complex behavior and properties in such systems and to rationally design new engineering materials for a variety of application areas. He is the author or co-author of 25 refereed publications, and has been awarded external funding in excess of \$2 million dollars as lead or sole principal investigator. Included in his funding in the prestigious National Science Foundation Career Award.

The tenured faculty and Chair of the Chemical and Biomedical Engineering recommend Dr. Simmons for tenure and appointment at the rank of Associate Professor. Robert Bishop, Dean of the Engineering, along with Provost Ralph Wilcox and President Judy Genshaft, concur with this recommendation for tenure upon appointment.

University of South Florida
Tenure Nominations as a Condition of Employment

3

Engineering

Ramon Gonzalez, PhD

Dr. Ramon Gonzalez will join the College of Engineering in Fall 2018 as a World Class Scholar Professor in the Department of Chemical and Biomedical Engineering. Dr. Gonzalez is currently a tenured Professor in the Department of Chemical and Biomolecular Engineering at Rice University, having come there in 2005 after spending three years as an Assistant Professor at Iowa State University. Dr. Gonzalez received a B.S. in Chemical Engineering from the Central University of Las Villas, Cuba in 1993, a M.S. in Biochemical Engineering from the Catholic University of Valparaiso, Chile in 1999, and a Ph.D. in Chemical Engineering from the University of Chile in 2001. Dr. Gonzalez is an internationally recognized expert in metabolic engineering and biomanufacturing, and his lab pursues both fundamental work and applied work in areas including fuels and energy production, fine chemical manufacturing, and pharmaceutical production. He is the editor-in-chief of the *Journal of Industrial Microbiology & Biotechnology*. He has received a number of awards for his work including the ASM Distinguished Lecturer award, the Eugene Goldschmidt Lecture award, the SDA/NBB Glycerine Innovation Research Award, the Hershel M. Rich Invention Award, and a National Science Foundation CAREER Award. Dr. Gonzalez's work has been recognized through his being invited to give keynote addresses at prominent international meetings, including those of the American Institute of Chemical Engineers and the American Chemical Society. Dr. Gonzalez was also invited to be a Program Director for the Advanced Research Projects Agency—Energy (ARPA-E) within the U.S. Department of Energy (DOE), a position he held for 3 years from 2012-2015.

The faculty and Chair of the Department of Chemical & Biomedical Engineering, as well as Dean Robert Bishop, have endorsed the hiring of Dr. Gonzalez as Full Professor with tenure. Provost Ralph Wilcox and President Judy Genshaft concur with this recommendation.

University of South Florida
Tenure Nominations as a Condition of Employment

4

USF Health, Morsani College of Medicine

Matthias Majetschak, MD, PhD

Dr. Matthias Majetschak joined the faculty with the Department of Surgery, Morsani College of Medicine on May 1, 2018. Dr. Majetschak came to USF from Loyola University, Chicago, IL where he held the position of Professor with tenure since 2008. He also served as the Co-Director for the Burn Shock Trauma Research Institute with Loyola's Department of Surgery. Dr. Majetschak received his MD and PhD from the University of Essen, German in 1994 and 1996 respectively. He completed a residency in Surgery at the University Hospital, Essen. After serving as a trauma surgeon in Essen and Heidelberg, Dr. Majetschak served as a Research Professor at the University of Miami. Dr. Majetschak is internationally known for his work in the areas of burn, shock, and trauma research, specifically in cardiovascular physiology, and vascular and lung function. His ground-breaking work has revealed for the first time the effects and molecular mechanisms by which extracellular ubiquitin modulates vascular tone and its consequences for maintenance of cardiovascular function during hemorrhagic shock. And most recently his collaboration with other physician-scientists have revealed the important role of vascular potassium channels in the regulation of vascular tone following traumatic shock. Dr. Majetschak has authored 96 peer-reviewed publications. He has sustained continuous funding for the past 15 years and currently is the PI on a NIH R01 grant, two NIH T32 awards, and a Department of Defense grant, totaling more than \$3 million. Dr. Majetschak's primary role at USF will be to serve as a core investigator to create the Injury and Inflammation Research Group within the Department of Surgery. He will also teach and mentor graduate and post-doctoral students.

The Morsani College of Medicine Appointment, Promotion and Tenure Committee, and the Chair of the Department of Surgery recommend Dr. Kim for tenure at the rank of Professor. Dr. Charles J. Lockwood, Senior Vice President of USF Health, and Dean of the Morsani College of Medicine along with Provost Ralph Wilcox and President Judy Genshaft, concur with this recommendation for tenure upon appointment.

University of South Florida
Tenure Nominations as a Condition of Employment

5

USF Health, Morsani College of Medicine

Ramesh Ayyala, MD, FRCS, FRCOphth

Dr. Ramesh Ayyala joined the faculty of the Morsani College of Medicine April 1, 2018 as the James & Heather Gills Endowed Chair in Ophthalmology, and Chair of the Department of Ophthalmology. Dr. Ayyala came to USF from Tulane University Health Sciences Center, New Orleans, LA, where he served as Professor with Tenure. He also served as the Director of Glaucoma Services, the Ophthalmology Residency Director, and Director of the Glaucoma/Anterior Segment Fellowship Program. Dr. Ayyala established one of the largest practices in the South for treating complex cases of glaucoma and corneal diseases. He is a national leader in anterior segment reconstructive surgery that includes pupil reconstruction, and corneal transplants. Dr. Ayyala led Tulane's Residency program through the re-growth process after Hurricane Katrina in 2004. He created the on-line teaching tool, MediTred to teach displaced students throughout the state of Louisiana, and received the 2009 *New Orleans City Business Innovators' Award*, and the ACGME *Courage to Teach Palmer Award in 2010*. His collaboration with diverse disciplines has resulted in several products being used in the drug delivery system to improve the success rate of glaucoma surgery with slow-release antibiotic and anti-inflammatory systems for cataract surgery. Dr. Ayyala is an active spokesperson for the American Academy of Ophthalmology. In this role he introduced Senate Bill 258, Refill bill, which was passed and allows patients to obtain refill medications with no extra charge. He has sustained continuous foundation and industry grants since 1997. He has authored 55 peer reviewed publications, has contributed a significant number of book chapters, and has been the invited speaker at numerous national and international meetings.

The Morsani College of Medicine Appointment, Promotion and Tenure Committee, and the Chair of the Department of Surgery recommend Dr. Ayyala for tenure at the rank of Professor. Dr. Charles J. Lockwood, Senior Vice President of USF Health, and Dean of the Morsani College of Medicine along with Provost Ralph Wilcox and President Judy Genshaft, concur with this recommendation for tenure upon appointment.

University of South Florida
Tenure Nominations as a Condition of Employment

6

USF Health, Morsani College of Medicine

Haywood L. Brown, MD

Dr. Haywood Brown will join the faculty at USF Health, the Morsani College of Medicine (MCOM), on July 1, 2018 as the Associate Dean for Diversity, MCOM, the Chief Diversity Officer for USF Health, and as Professor with the Department of Obstetrics and Gynecology (OBGYN). He will also serve as the USF System's VP for Diversity, Inclusion & Equal Opportunity, and Title IX administrator. He comes to USF from Duke University Medical School where he served as the F. Bayard Carter Professor with tenure, and Department Chair, OBGYN. Dr. Brown earned his MD degree from Bowman Gray School of Medicine of Wake Forest University in 1978. He complete a residency in Obstetrics and Gynecology at the University of Tennessee Center for the Health Sciences in 1982, and a fellowship in Maternal-Fetal Medicine at Emory University School of Medicine in 1984. He is a national leader in maternal-fetal medicine focusing his research across a broad range of women's health issues with a commitment to those who are at risk and from underprivileged populations. Dr. Brown is currently the President of the American College of Obstetrics and Gynecology (ACOG). He has held numerous leadership roles on many state and national associations and organizations. Dr. Brown has published 97 peer reviewed articles and 17 book chapters, and has been the invited speaker at 75 state and national meetings. He has sustained continuous funding since 1991 totally nearly \$6 million in state and industry awards. He is on the editorial board for five major publications. Dr. Brown has earned numerous awards including the Society of Maternal and Fetal Medicine Lifetime Achievement Award, the March of Dimes Achievement Award, and the Lifetime Achievement Award from the National Black College Alumni Hall of Fame. At USF Health, Dr. Brown will lead the efforts to align USF Health's diversity initiatives with the university's strategic plan and assist in the recruitment and retention of a diverse community of students, faculty, and staff.

The MCOM Appointment, Promotion and Tenure Committee, and the Chair of the Department of OBGYN recommend Dr. Brown for tenure at the rank of Professor. Dr. Charles J. Lockwood, Senior Vice President of USF Health, and Dean, MCOM along with Provost Ralph Wilcox and President Judy Genshaft, concur with this recommendation for tenure upon appointment.

Agenda item: FL 104

USF Board of Trustees
June 12, 2018

Issue: Faculty Nominations for Tenure

Proposed action: Approve USF St. Petersburg Faculty Nominees for Tenure.

Background information:

Attached is USF St. Petersburg list of faculty nominees for tenure for review and approval by the USF Board of Trustees. President Judy Genshaft has certified that the nominations for tenure have met the requirements and conditions contained in USF Regulations, Policies, and Procedures. She is satisfied that the nominees will make a significant professional contribution to USF St. Petersburg and the academic community in general. If approved, tenure will be awarded effective August 6, 2018.

Strategic Goal(s) Item Supports:

USF St. Petersburg Strategic Plan 2014-2019, Goal 3
USF Strategic Plan 2013-2018, Goal 1

Workgroup Review:

Academics and Campus Environment Committee – May 22,
2018

Supporting documentation: YES

Prepared by: Olufunke Fontenot, Interim Regional Vice Chancellor of Academic Affairs, 727-873- 4290



MEMORANDUM

DATE: June 12, 2018

TO: Brian D. Lamb, Chair

FROM: Judy Genshaft, President

SUBJECT: Faculty Nominations for Tenure, USF St. Petersburg

I am requesting that the enclosed Faculty Nominations for Tenure USF St. Petersburg submitted to the USF Board of Trustees be approved. In nominating these faculty members for tenure, I certify that the requirements and conditions contained in USF Regulations, Policies, and Procedures for the granting of tenure have been met. I am satisfied that the nominees will make a significant professional contribution to USF St. Petersburg and the academic community.

Thank you for your consideration of this request. Please call me if you have any questions.

Enclosures

**Faculty Nominations for Tenure, USF St. Petersburg - Effective
2017/18 USF Board of Trustees Meeting – June 12, 2018**

College	Name	Rank Upon Tenure	Discipline	Degree of Effort*
College of Arts & Sciences	Erika Greenberg-Scneider	Associate Professor	Verbal and Visual Arts	1.0
College of Arts & Sciences	Joan Reid	Associate Professor	Criminology	1.0
College of Arts & Sciences	Thomas Whitmore	Associate Professor	Biological Sciences	1.0
College of Arts & Sciences	Jennifer Yucus	Associate Professor	Verbal and Visual Arts	1.0

* If Less than 1.0 FTE

**Florida Equity Reports
University of South Florida St. Petersburg
2016- 2017**

PART VII: Protected-class Representation in the Tenure Process, 2016-2017

Sex, Race/Ethnicity	*Applied	*Withdrawn	*Denied	*Deferred	*Nominated
MALES					
American Indian or Alaskan Native	0	0	0	0	0
Asian	0	0	0	0	0
Black or African American	0	0	0	0	0
Hispanic	0	0	0	0	0
Native Hawaiian/Other Pacific Islander					
Two or More Races	0	0	0	0	0
White	1	0	0	0	1
Other, Not Reported	0	0	0	0	0
Total Male (include Other, Not Reported)					
FEMALES					
American Indian or Alaskan Native	0	0	0	0	0
Asian	0	0	0	0	0
Black or African American	0	0	0	0	0
Hispanic	0	0	0	0	0
Native Hawaiian/Other Pacific Islander					
Two or More Races	0	0	0	0	0
White	3	0	0	0	3
Other, Not Reported	0	0	0	0	0
Total Female (Number and Percent) (include Other, Not Reported)					
GRAND TOTAL	4	0	0	0	4

*APPLIED: Faculty whose names have been submitted for tenure review. Sum of Withdrawn, Denied, and Nominated (or provide explanation).

*WITHDRAWN: Faculty who withdrew from tenure consideration after applying for review.

*DENIED: Faculty for whom tenure was denied during the review process.

*NOMINATED Faculty for whom tenure is being recommended by the University.

Florida Equity Reports
University of South Florida St. Petersburg

2017-2018

PART VIII: Promotion and Tenure Committee Composition, AY 2017-

Type of Committee		Black, not Hispanic		American Indian/ Alaskan Native		Asian or Pacific Islander		Hispanic		White, not Hispanic		Other, Not Reported		Total including Other, Not Reported	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F
University Committee	E	0	0	0	0	0	0	0	0	5	2	0	0	5	2
	S	0	0	0	0	0	0	0	0	5	2	0	0	5	2
College of Business	E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0
College of Arts & Sciences	E	0	0	0	0	0	0	0	0	5	2	0	0	5	2
	S	0	0	0	0	0	0	0	0	5	2	0	0	5	2
College of Education	E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S	0	0	0	0	0	0	0	0	0	0	0	0	0	0

E = Eligible to serve

S = Actually served (may include faculty from other USF campuses, who are not counted in eligible to serve)

Agenda Item: FL 105

USF Board of Trustees

June 12, 2018

Issue: Faculty Nomination for Tenure as a Condition of Employment

Proposed action: Approve Tenure as a Condition of Employment for USF St. Petersburg

Executive Summary:

USF St. Petersburg (USFSP) administrators such as the Regional Chancellor, Regional Vice Chancellors, Deans, and senior faculty are commonly awarded tenure as a condition of employment. Typically, these highly accomplished and qualified individuals have earned tenure at their previous institution (s), which makes them desirable candidates to USFSP. In order to attract them, USFSP must provide a package that is competitive with other nationally and internationally ranked institutions. Tenure upon appointment, among other things, is a term and condition of the employment package that makes USFSP an institution of choice.

Financial Impact:

Faculty granted tenure only will not receive a monetary award.

Strategic Goal(s) Item Supports:

USF St. Petersburg Strategic Plan 2014-2019, Goal 3
USF Strategic Plan 2013-2018, Goal 1

BOT Committee Review Date:

Academic and Campus Environment Committee – May 22, 2018

Supporting Documentation Online (*please circle*): **Yes**

USF System or Institution specific: USF St. Petersburg

Prepared by: Olufunke Fontenot, Interim Regional Vice Chancellor, Academic Affairs 727-873-4290



MEMORANDUM

DATE: June 12, 2018

TO: Brian D. Lamb, Chair

FROM: Judy Genshaft, President

SUBJECT: Tenure Nominations as a Condition of Employment, USF St. Petersburg

I am requesting that the enclosed Tenure Nominations as a Condition of Employment, USF St. Petersburg submitted to the USF Board of Trustees be approved. In nominating these faculty members for tenure, I certify that the requirements and conditions contained in USF Regulations, Policies, and Procedures for the granting of tenure have been met. I am satisfied that the nominees will make significant professional contributions to USF St. Petersburg and the academic community.

Thank you for your consideration of this request. Please call me if you have any questions.

Enclosures

Faculty Nominations for Tenure as a Condition of Employment, USF-St. Petersburg
USF Board of Trustees Meeting – June 12, 2018

<u>College</u>	<u>Name</u>	<u>Rank</u>	<u>Department/ School</u>	<u>Degree of Effort*</u>	<u>Previous Institution</u>	<u>Tenure at Previous Institution</u>
KTCOB	Huijian Dong	Associate Professor	Wealth Management Center Education	1.0	Pacific University (Forest Grove, OR)	YES

*If less than 1.0 FTE

Bio – Dr. Huijian Dong

Dr. Huijian Dong will join the Kate Tiedemann College of Business as a member of the Department of Finance, Economics, and Entrepreneurship. He comes in as Associate Professor of Finance and will also assume the role as Department Chair.

Dr. Huijian Dong received his PhD in financial economics from the University of Delaware in 2011 and earned the chartered financial analyst (CFA) designation in 2015. Dr. Dong was selected to join the Kate Tiedemann College of Business because of his academic credentials and his experience in wealth management.

Huijian Dong's primary teaching area focuses upon Fixed Income Asset Pricing, Derivatives, and Advanced Topics in Finance and teaches at the graduate and undergraduate levels at his current institution. He teaches the Capstone course in his program's MS Finance program as well as Investments, Entrepreneurial Finance, and Corporate Finance in the MBA program. Additionally, Dr. Dong has also taught Operations Management and Global Finance in the undergraduate program. As an active member of the CFA Society Portland Dr. Dong serves on various committees and serves as a liaison between the wealth management community and his students.

His current research interest focuses on investment strategies and asset valuation. He has more than 20 publications on research journals including Journal of Business, International Business Research, Journal of Finance and Investment Analysis, British Journal of Mathematics & Computer Science, Economics Research International, and Journal of Computations and Modeling.

Dr. Dong has led student investment clubs at his current institution and advised them in their pitch competitions. He will be the faculty advisor for students engaged with the KTCOB Student Managed Investment Fund (SMIF). Dr. Dong will work with these and other students within the newly named Merrill Lynch Wealth Management Center. Dr. Dong's CFA designation and his experience as a chief investment officer for ROI Financial will benefit the students who participate in the Investment club, SMIF, and his finance classes.

Dr. Dong also has experience in developing academic programs. He was primarily responsible for developing the MS Finance program at his current institution. The curriculum for this program prepares students for CFA certification.

Dr. Dong provides academic, administrative, and business expertise that will benefit students within the USF System.

Agenda Item: FL 106

USF Board of Trustees
June 12, 2018

Issue: Faculty Nomination for Tenure

Proposed action: Approve USF Sarasota-Manatee Faculty Nominee for Tenure

Background information:

Attached is USF Sarasota-Manatee's list of faculty nominees for tenure for review and approval by the USF Board of Trustees. President Judy Genshaft has certified that the nominations for tenure have met the requirements and conditions contained in USF Regulations, Policies, and Procedures. She is satisfied that the nominees will make a significant professional contribution to USF Sarasota-Manatee and the academic community in general. If approved, tenure will be awarded effective August 7, 2018.

Financial Impact:

USF Sarasota-Manatee faculty granted tenure and promotion will receive a 9% salary increase and \$5000 to Associate Professor and \$7000 to Professor in special achievement. Faculty granted tenure only will not receive a monetary award.

Strategic Goal(s) Item Supports:

USF Sarasota-Manatee Strategic Plan 2015-2020, Goals 4 and 5
USF Strategic Plan 2013-2018, Goal 1

Workgroup Review Date:

Academic and Campus Environment Committee – May 22, 2018

Supporting Documentation Online (*please circle*): Yes No

- Memorandum to Brian Lamb, Chair, USF Board of Trustees
- Faculty Nomination for Tenure

USF System or Institution specific:

USF Sarasota-Manatee

Prepared by: Karen Holbrook, Regional Chancellor, 941-359-4340



MEMORANDUM

DATE: June 12, 2018
TO: Brian Lamb, Chair
FROM: Judy Genshaft, President
SUBJECT: Faculty Nominations for Tenure, USF Sarasota-Manatee

I am requesting that the enclosed Faculty Nominations for Tenure USF Sarasota-Manatee submitted to the USF Board of Trustees be approved. In nominating these faculty members for tenure, I certify that the requirements and conditions contained in USF Regulations, Policies, and Procedures for the granting of tenure have been met. I am satisfied that the nominees will make a significant professional contribution to USF Sarasota-Manatee and the academic community.

Nominees for tenure: Giti Javidi, Information Technology
Ehsan Sheybani, Information Systems & Decision
Sciences

Thank you for your consideration of this request. Please call me if you have any questions.

Faculty Nominations for Tenure, USF Sarasota-Manatee - Effective 2018/19
USF Board of Trustees Meeting – June 12, 2018

<u>College</u>	<u>Name</u>	<u>Rank Upon Tenure</u>	<u>Discipline</u>	<u>Degree of Effort*</u>
College of Business	Giti Javidi	Associate Professor	Information Technology	1.00
College of Business	Ehsan Sheybani	Associate Professor	Information Systems & Decision Sciences	1.00

* If Less than 1.0 FTE

Florida Equity Reports
University of South Florida Sarasota-Manatee
2017- 2018

PART VII: Protected-class Representation in the Tenure Process, 2017-2018

Sex, Race/Ethnicity	*Applied	*Withdrawn	*Denied	*Deferred	*Nominated
MALES					
American Indian or Alaskan Native	0	0	0	0	0
Asian	0	0	0	0	0
Black or African American	0	0	0	0	0
Hispanic	0	0	0	0	0
Native Hawaiian/Other Pacific Islander	0	0	0	0	0
Two or More Races	0	0	0	0	0
White	1	0	0	0	1
Other, Not Reported	0	0	0	0	0
Total Male (include Other, Not Reported)	1	0	0	0	1
FEMALES					
American Indian or Alaskan Native	0	0	0	0	0
Asian	0	0	0	0	0
Black or African American	0	0	0	0	0
Hispanic	0	0	0	0	0
Native Hawaiian/Other Pacific Islander	0	0	0	0	0
Two or More Races	0	0	0	0	0
White	1	0	0	0	1
Other, Not Reported	0	0	0	0	0
Total Female (Number and Percent) (include Other, Not Reported)	1 50.0%	0 0.0%	0 0.0%	0 0.0%	1 50.0%
GRAND TOTAL	2	0	0	0	2

*APPLIED: Faculty whose names have been submitted for tenure review. Sum of Withdrawn, Denied, and Nominated (or provide explanation).

*WITHDRAWN: Faculty who withdrew from tenure consideration after applying for review.

*DENIED: Faculty for whom tenure was denied during the review process.

*NOMINATED Faculty for whom tenure is being recommended by the University.

Agenda Item: FL 107

USF Board of Trustees
(June 12, 2018)

Issue: B.A. Sustainability Studies – CIP 30.3301

Proposed action: Approval

Executive Summary:

The Sustainability Studies B.A. program at University of South Florida St. Petersburg will prepare graduates for careers as advisors to commercial enterprises, industry, not-for-profit institutions, and government agencies. Students will develop the skills and techniques to create and maintain sustainable operations as the result of an interdisciplinary education across business, social sciences and natural sciences. Graduates will also be prepared to enter post baccalaureate degree programs in Sustainability. The proposed program is identified as an important field of emphasis in Economic Development – STEM under Programs of Strategic Emphasis as described in the 2014 list approved by the BOG.

Financial Impact:

Resources needed for this program are dominated by the need for new full-time, permanent faculty lines. These faculty lines will be supported by anticipated performance-based funding, current base funding, or by funds released from internal reallocation of existing resources. No additional labs or physical facilities are needed.

Costs in year one are dominated by existing and anticipated new faculty salaries and benefits. Two new faculty lines have been granted, to be filled before the fall 2018 semester: a tenure-track assistant professor in social sciences specializing in environmental anthropology/policy and an instructor (MYA) in physical chemistry.

Strategic Goal(s) Item Supports:

The Florida SUS Goals directly supported by this program are:

- Increase Degree Productivity and Program Efficiency
- Increase the Number of Degrees Awarded within Programs of Strategic Emphasis
- Increase Research Activity and Attract More External Funding
- Strengthen Quality & Recognition of Commitment to Community and Business Engagement
- Increase Community and Business Engagement
- Increase Community and Business Workforce

The Florida SUS Goals indirectly supported by this program are:

- Strengthen Quality and Reputation of Academic Programs and Universities
- Strengthen Quality and Reputation of Scholarship, Research, and Innovation; and Increase Commercialization Activity

BOT Committee Review Date: May 22, 2018 ACE

Supporting Documentation Online (please circle): Yes **No**

USF System or Institution specific: USF St. Petersburg

Prepared by: Susan Toler, Ph.D., Associate Dean, College of Arts and Sciences

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

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

<u>University of South Florida St Petersburg</u>	<u>Fall 2018</u>
<u>University Submitting Proposal</u>	<u>Proposed Implementation Term</u>
<u>College of Arts and Sciences</u>	<u>College of Arts & Sciences</u>
<u>Name of College(s) or School(s)</u>	<u>Name of Department(s)/ Division(s)</u>
<u>Interdisciplinary: Social Sciences / Natural Sciences / Business</u>	<u>Bachelor of Arts in Sustainability Studies</u>
<u>Academic Specialty or Field</u>	<u>Complete Name of Degree</u>
<u>30.3301</u>	
<u>Proposed CIP Code</u>	

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.

<u>Date Approved by the University Board of Trustees</u>	<u>President</u>	<u>Date</u>
<u>Signature of Chair, Board of Trustees</u>	<u>Date</u>	<u>Vice President for Academic Affairs</u>
		<u>Date</u>

Provide headcount (HC) and full-time equivalent (FTE) student estimates of majors for Years 1 through 5. HC and FTE estimates should be identical to those in Table 1 in Appendix A. Indicate the program costs for the first and the fifth years of implementation as shown in the appropriate columns in Table 2 in Appendix A. Calculate an Educational and General (E&G) cost per FTE for Years 1 and 5 (Total E&G divided by FTE).

Implementation Timeframe	Projected Enrollment (From Table 1)		Projected Program Costs (From Table 2)				
	HC	FTE	E&G Cost per FTE	E&G Funds	Contract & Grants Funds	Auxiliary Funds	Total Cost
Year 1	80	96	\$1,268	\$121,776	\$0	\$0	\$121,776
Year 2	100	120					
Year 3	125	150					
Year 4	156	188					
Year 5	195	234	\$591	\$138,526	\$0	\$0	\$138,526

Note: This outline and the questions pertaining to each section must be reproduced within the body of the proposal to ensure that all sections have been satisfactorily addressed. Tables 1 through 4 are to be included as Appendix and not reproduced within the body of the proposals because this often causes errors in the automatic calculations.

TABLE OF CONTENTS

INTRODUCTION:

I. Program Description and Relationship to System-Level Goals 3

INSTITUTIONAL AND STATE LEVEL ACCOUNTABILITY:

II. Need and Demand 5
 III. Budget..... 7
 IV. Projected Benefit of the Program to the University, Local Community, and State 9
 V. Access and Articulation – Bachelor’s Degrees Only..... 10

INSTITUTIONAL READINESS:

VI. Related Institutional Mission and Strength 11
 VII. Program Quality Indicators - Reviews and Accreditation 14
 VIII. Curriculum 15
 IX. Faculty Participation..... 22
 X. Non-Faculty Resources 24

LIST OF TABLES

Table 1: Enrollment in all CIP 30.3301 in SUS by year 5
 Table 2: Degrees awarded in CIP 30.3301 in SUS by academic year..... 5
 Table 3: Planning Process..... 15
 Table 4: Events Leading to Implementation 15

APPENDICES

APPENDIX A: Required Tables
 Table 1-A: Projected headcount from potential sources (Required by Template) 28
 Table 2-A: Projected costs and funding sources (Required by Template) 29
 Table 3-A: Anticipated reallocation of education & general funds (Required by Template) 30
 Table 4-A: Anticipated faculty participation (Required by Template)..... 31
 APPENDIX B: Signature of the Equal Opportunity Officer and the Library Director 32
 APPENDIX C: Program Assessment 33
 APPENDIX D: Course Catalog (Proposed) 37
 APPENDIX E: EAB Report - Market Demand for Bachelor’s-Level Sustainability Studies:
 Analysis of Southern Florida Employer Demand 39
 APPENDIX F: Local Businesses & Letters of Support..... 50
 APPENDIX G: Sustainability Studies Library Assessment..... 59
 APPENDIX H: Faculty Curriculum Vitae 64

INTRODUCTION

I. Program Description and Relationship to System-Level Goals

- A. Briefly describe within a few paragraphs the degree program under consideration, including (a) level; (b) emphases, including majors, concentrations, tracks, or specializations; (c) total number of credit hours; and (d) overall purpose, including examples of employment or education opportunities that may be available to program graduates.**

The purpose of the Sustainability Studies program is to prepare graduates for careers as advisors to commercial enterprises, industry, not-for-profit institutions, and government agencies in the tools and techniques to create and maintain sustainable operations.

Program Summary:

- a) B.A. degree in Sustainability Studies (CIP 30.3301).
- b) This degree can be successfully completed by earning 120 credit hours, including all State, University and College requirements, core curriculum, and other requirements for this major. There are no concentrations in this degree program.

- B. Please provide the date when the pre-proposal was presented to CAVP (Council of Academic Vice Presidents) Academic Program Coordination review group. Identify any concerns that the CAVP review group raised with the pre-proposed program and provide a brief narrative explaining how each of these concerns has been or is being addressed.**

The pre-proposal was presented on March 31, 2017, to the CAVP Academic Coordinating Group. No concerns were identified.

- C. If this is a doctoral level program please include the external consultant's report at the end of the proposal as Appendix D. Please provide a few highlights from the report and describe ways in which the report affected the approval process at the university.**

Not Applicable. This is not a doctoral level program.

- D. Describe how the proposed program is consistent with the current State University System (SUS) Strategic Planning Goals. Identify which specific goals the program will directly support and which goals the program will indirectly support (see link to the SUS Strategic Plan on [the resource page for new program proposal](#)).**

At the current time, the University of Florida is the only state university to offer a Bachelor of Science in Sustainability Studies, based in the College of Design, Construction and Engineering. They also offer a Bachelor of Arts in Sustainability Studies, housed in the College of Liberal Arts and Sciences. No other university in the State of Florida offers a Sustainability Studies degree in partnership with the College of Business. Many institutions have majors in other disciplines with tracks in sustainability, such as Environmental Science or Construction and Architectural Design Programs. These tracks emphasize a particular component of sustainability to the exclusion (or near exclusion) of other critical contributors to a fundamental understanding of sustainability. The

USFSP Sustainability Studies program offers a unique approach requiring an expertise in science, business, and social sciences and allows the graduate to seek positions in not-for-profit, government, and private industry as omnibus resources on creating sustainable performance.

The Florida SUS Goals directly supported by this program are:

- Increase Degree Productivity and Program Efficiency
- Increase the Number of Degrees Awarded within Programs of Strategic Emphasis
- Increase Research Activity and Attract More External Funding
- Strengthen Quality & Recognition of Commitment to Community and Business Engagement
- Increase Community and Business Engagement
- Increase Community and Business Workforce

The Florida SUS Goals indirectly supported by this program are:

- Strengthen Quality and Reputation of Academic Programs and Universities;
- Strengthen Quality and Reputation of Scholarship, Research, and Innovation; and Increase Commercialization Activity.

The proposed program in Sustainability Studies incorporates many STEM disciplines, increases the number of majors offered at USFSP, within the USF System, and within the SUS. This program enhances the prestige and reputation of the USF System by providing a recognizable and highly valued discipline to our inventory. Critical workforce and economic development needs are served by graduates with the knowledge, skills, and abilities inherent in the Sustainability Studies program.

- E. If the program is to be included in a category within the Programs of Strategic Emphasis as described in the SUS Strategic Plan, please indicate the category and the justification for inclusion.**

Of the five identified categories, effective Fall 2014, the Sustainability Studies degree program falls into Category 5: Economic Development: STEM. Under the Programs of Strategic Emphasis, CIP 30.3301, Sustainability Studies is a STEM program.

Please see the Programs of Strategic Emphasis (PSE) methodology for additional explanations on program inclusion criteria at [the resource page for new program proposal](#).

The proposed program in Sustainability Studies is identified as an important field of emphasis in Economic Development – STEM under Programs of Strategic Emphasis as described in the 2014 list approved by the BOG. Within the SUS, only one other institution offers this program at the undergraduate level. Critical workforce and economic development needs will be served by graduates with the omnibus knowledge, skills, and abilities inherent in the Sustainability Studies program.

- F. Identify any established or planned educational sites at which the program is expected to be offered and indicate whether it will be offered only at sites other than the main campus.**

With the exception of internships, this program will be offered only on the USFSP campus or

through the USFSP campus via online courses.

INSTITUTIONAL AND STATE LEVEL ACCOUNTABILITY

II. Need and Demand

- A. **Need:** Describe national, state, and/or local data that support the need for more people to be prepared in this program at this level. Reference national, state, and/or local plans or reports that support the need for this program and requests for the proposed program which have emanated from a perceived need by agencies or industries in your service area. Cite any specific need for research and service that the program would fulfill.

Sustainability is an interdisciplinary field, therefore market research to assess student and employer demand over time is based on sustainability-related skills (i.e. sustainability research, environmental policy, and environmental sustainability). The U.S. Bureau of Labor Statistics (BLS) projects employment in these areas to increase 11 percent from 2016 to 2026, faster than the national average of 3 percent for other disciplines over the same period. The BLS attributes this growth to increased public interest in dangers to the environment and increased environmental demands due to population growth. See Appendix E for a detailed report from EAB.

Several employers have provided letters of support (see Appendix F). We anticipate additional letters of support from more prominent agencies as we develop the Sustainability Advisory Board in the context of implementing the program (see Table 6: Events Leading to Implementation).

- B. **Demand:** Describe data that support the assumption that students will enroll in the proposed program. Include descriptions of surveys or other communications with prospective students.

There is an increasing interest in the integration of business, cultural, societal, and environmental disciplines as a means to create a sustainable Earth. Enrollment data from the SUS demonstrates this increasing demand for sustainability programs. Student enrollment and degrees awarded in UF's undergraduate and USF's graduate programs in CIP 30.3301 are provided in Table 1 and Table 2, respectively.

Table 1.

Enrollment by State University System Institutions for CIP 30.3301								
Institution	2010	2011	2012	2013	2014	2015	2016	2017
UF	21	64	82	88	108	133	177	182
USF Master's program	17	38	49	65	73	93	110	201
TOTAL	38	102	131	153	181	226	287	383

Table 2.

Degrees Awarded by State University System Institutions for CIP 30.3301						
Institution	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
UF	3	10	26	39	37	35
USF Master's program	0	15	10	22	43	36
TOTAL	3	25	36	61	80	71

- C. If substantially similar programs (generally at the four-digit CIP Code or 60 percent similar in core courses), either private or public exist in the state, identify the institution(s) and geographic location(s). Summarize the outcome(s) of communication with such programs with regard to the potential impact on their enrollment and opportunities for possible collaboration (instruction and research). In Appendix C, provide data that support the need for an additional program.**

Only one other institution in the SUS offers a Bachelor of Arts degree within the 30.3301 CIP. University of Florida offers a Bachelor of Science program in the College of Design, Construction and Planning. The science-oriented program does not have a robust approach that incorporates an upper-level emphasis in social science, policy, and business sustainability. The College of Liberal Arts and Sciences at University of Florida offers a Bachelor of Arts in Sustainability Studies that integrates the natural sciences, the social sciences, and the humanities into the curriculum. The USFSP program establishes a foundation in Sustainability Studies by integrating the natural sciences, social sciences and business into the core curriculum. This distinctive core curriculum makes it unique in the state, providing students with a broad base of skills, knowledge, and abilities, in the context of a recognizable and valued program of preparation for careers or graduate studies. Communication with University of Florida suggests they are in support of the Sustainability Studies program proposed at University of South Florida St. Petersburg. Appendix F provides documentation of this support.

The University of South Florida Tampa offers a graduate program in Sustainability Studies (through the Patel College of Global Sustainability) and USFSP has begun exploration of the creation of a 4+1 program to link with this graduate program. It is expected that ongoing coordination and collaboration of the two degree programs will continue in the future. When proposed and initiated, this degree program will offer the possibility of advanced graduate-level training culminating in a Master of Arts diploma in the fifth year of study; again, unique to the SUS system. A letter of support from the Patel College of Global Sustainability can also be found in Appendix F.

- D. Use Table 1 in Appendix A (1-A for undergraduate and 1-B for graduate) to categorize projected student headcount (HC) and Full Time Equivalents (FTE) according to primary sources. Generally undergraduate FTE will be calculated as 30 credit hours per year and graduate FTE will be calculated as 24 credit hours per year. Describe the rationale underlying enrollment projections. If students within the institution are expected to change majors to enroll in the proposed program at its inception, describe the shifts from disciplines that will likely occur.**

Student enrollment in the first year is expected to be predominantly FTIC students. *Ad hoc* surveys of students with interests in sustainability, but majoring in other related disciplines such as Biology, Environmental Science and Business will likely enter the program as a second major or as a change of major. This program offers career alternatives to students who have difficulties progressing through the state mandated prerequisites and requirements of math and science strenuous curriculum. This new program offers a unique curriculum that is likely to appeal to students in related fields. In years two through five, growth of the program will be dominated by incoming FTIC students, as high school students, counselors, teachers, and families become aware of the program. Conversations with Saint Petersburg College have already begun to develop a FUSE program in an effort to build transfer student participation. Two grants have been submitted

to the National Oceanographic and Atmospheric Association (NOAA). The first grant is in collaboration with the College of Marine Science and addresses concerns with local littering of plastics in the water and drain water system. The second grant is in collaboration with a local high school to build issues related to sustainability into the curriculum. It is expected this grant will become a powerful recruiting tool.

- E. Indicate what steps will be taken to achieve a diverse student body in this program. If the proposed program substantially duplicates a program at FAMU or FIU, provide, (in consultation with the affected university), an analysis of how the program might have an impact upon that university's ability to attract students of races different from that which is predominant on their campus in the subject program. The university's Equal Opportunity Officer shall review this section of the proposal and then sign and date Appendix B to indicate that the analysis required by this subsection has been completed.**

USFSP actively recruits and supports prospective students in many underserved populations. In particular, USFSP prioritizes outreach to underrepresented groups and engages in monthly high school counselor updates for those students who are in the admissions process to ensure timely application completion and admission decisions. These actions and commitments are central to the draft institutional Diversity and Inclusion Plan, which emphasizes recruiting, retaining, and graduating more students from underrepresented groups, especially in fields where they are particularly underrepresented.

USFSP draws the majority of its students from the surrounding region, in particular from Pinellas County. Of the approximately 3,780 undergraduate students enrolled at USFSP in the Fall 2016, semester, and 15% were Hispanic, 8% were African American, and 61% were female. This program will provide access to students in these groups, which are historically underrepresented in STEM fields.

III. Budget

- A. Use Table 2 in Appendix A to display projected costs and associated funding sources for Year 1 and Year 5 of program operation. Use Table 3 in Appendix A to show how existing Education & General funds will be shifted to support the new program in Year 1. In narrative form, summarize the contents of both tables, identifying the source of both current and new resources to be devoted to the proposed program. (Data for Year 1 and Year 5 reflect snapshots in time rather than cumulative costs.)**

Projected costs and funding sources are provided in Table 2-A and 3-A in Appendix A. Costs in year one are dominated by existing and anticipated new faculty salaries and benefits. Two new faculty lines have been granted, to be filled before the Fall 2018 semester: a tenure-track assistant professor in social sciences specializing in environmental anthropology/policy and an instructor (MYA) in physical chemistry. In addition to salaries and benefits, approximately \$8,000 is anticipated in start-up costs (for both new faculty members combined). There is an additional \$3,000 each for administrative costs associated with these lines. Costs for adjunct and visiting faculty members are estimated to be \$6,000 per year. Instruction of courses in this proposed program requires the expertise of permanent faculty members. By year five, major program costs will be mainly for Sustainable Studies' faculty salaries and benefits.

- B. Please explain whether the university intends to operate the program through continuing education, seek approval for market tuition rate, or establish differentiated graduate-level tuition. Provide a rationale for doing so and a timeline for seeking Board of Governors' approval, if appropriate. Please include the expected rate of tuition that the university plans to charge for this program and use this amount when calculating cost entries in Table 2.**

USFSP does not intend to operate the program through continuing education, seek approval for market tuition rate, or establish differentiated graduate-level tuition.

- C. If other programs will be impacted by a reallocation of resources for the proposed program, identify the impacted programs and provide a justification for reallocating resources. Specifically address the potential negative impacts that implementation of the proposed program will have on related undergraduate programs (i.e., shift in faculty effort, reallocation of instructional resources, reduced enrollment rates, greater use of adjunct faculty and teaching assistants). Explain what steps will be taken to mitigate any such impacts. Also, discuss the potential positive impacts that the proposed program might have on related undergraduate programs (i.e., increased undergraduate research opportunities, improved quality of instruction associated with cutting-edge research, improved labs and library resources).**

This proposed Sustainability Studies program is not directly competing with or replacing any current programs. No programs will be terminated as a result of approval. No negative impacts to any units in the university are anticipated.

Resources needed for this program are dominated by the need for new full-time, permanent faculty lines. These faculty lines will be supported by anticipated performance based funding, current base funding, or by funds released from internal reallocation of existing resources. No additional labs or physical facilities are needed.

Positive impacts of this program include the fact that core and senior capstone courses are designed to require students to become more involved in community organizations and initiatives focused on sustainability. It is anticipated that this program will increase student involvement in all aspects of the community. Collaborative efforts on grants with such agencies as NOAA have already begun development to encourage students to participate in research on sustainability.

- D. Describe other potential impacts on related programs or departments (e.g., increased need for general education or common prerequisite courses, or increased need for required or elective courses outside of the proposed major).**

This program is interdisciplinary. It was developed by a team of faculty representing the following disciplines: Business, Anthropology, Interdisciplinary Social Science, Environmental Science, Environmental Policy, Physics and Chemistry. The demand for General Education courses resulting from this new degree program will not outpace the current availability of these courses. A wide range of electives are currently offered in the curriculum with adequate seating to accommodate a growing student population within the major. This program was strategically developed to offer the opportunity for a lean double major in the associated disciplines.

- E. Describe what steps have been taken to obtain information regarding resources (financial and in-kind) available outside the institution (businesses, industrial organizations,**

governmental entities, etc.). Describe the external resources that appear to be available to support the proposed program.

We have contacted a number of local businesses with interests in employing those people with expertise in sustainability. Those businesses are listed in Section II.A (see Appendix F). Many of these businesses have also indicated a willingness to create internship programs to support our Sustainability Studies majors.

In addition, we have conducted preliminary discussions with the Patel College of Global Sustainability and have begun to initiate planning for a 4+1 BA/MA program. This will allow students to acquire advanced knowledge, starting in their fourth year with the award of a master's degree in the fifth year. We anticipate that a portion of those costs will be subsidized by the Patel College of Global Sustainability.

IV. Projected Benefit of the Program to the University, Local Community, and State

Use information from Tables 1 and 2 in Appendix A, and the supporting narrative for "Need and Demand" to prepare a concise statement that describes the projected benefit to the university, local community, and the state if the program is implemented. The projected benefits can be both quantitative and qualitative in nature, but there needs to be a clear distinction made between the two in the narrative.

Positive impacts of this program on the university and other institutional programs are wide ranging. Incorporating an interdisciplinary approach to provide economic success and environmental and cultural preservation are relatively new approaches to sustainability. The USFSP Sustainability Studies program offers students an opportunity to begin applying their knowledge of sustainability in the first two years in the context of learning the core curriculum. The experiential learning involved in the senior capstone course, Practicing Sustainability, provides a unique set of skills to the state and local community as students gain an opportunity to incorporate knowledge of business, science and social science into not-for-profit, government, and industry in creating sustainable performance.

The local community also benefits in that no local universities provide a baccalaureate degree in Sustainability Studies. Thus, any regional employer will turn to USFSP, if there is an expressed interest in managing business through sustainable techniques and policies.

Graduates from this program will fulfill critical workforce needs identified in the State of Florida Workforce Innovation and Opportunity Act (WIOA). Specifically, the WIOA Program seeks fields requiring knowledge, skills, and abilities in the areas of critical thinking, problem solving, reasoning, and information ordering. Sustainability Studies bridges the disciplines of science, culture, policy, and business to create sustainable enterprises – meeting all of the program's requirements.

The program will provide numerous possible collaborative opportunities with the USFSP Office of Sustainability, the Patel College of Global Sustainability, the College of Public Health, and the School of Architecture on the USF Tampa campus as well as with the St. Pete Eco Village and the University of Florida Institute of Food and Agricultural Science (IFAS) Extension Service.

V. Access and Articulation – Bachelor’s Degrees Only

- A. If the total number of credit hours to earn a degree exceeds 120, provide a justification for an exception to the policy of a 120 maximum and submit a separate request to the Board of Governors for an exception along with notification of the program’s approval. (See criteria in Board of Governors Regulation 6C-8.014)

Total number of credit hours to earn a degree does not exceed 120.

- B. List program prerequisites and provide assurance that they are the same as the approved common prerequisites for other such degree programs within the SUS (see link to the Common Prerequisite Manual on [the resource page for new program proposal](#)). The courses in the Common Prerequisite Counseling Manual are intended to be those that are required of both native and transfer students prior to entrance to the major program, not simply lower-level courses that are required prior to graduation. The common prerequisites and substitute courses are mandatory for all institution programs listed, and must be approved by the Articulation Coordinating Committee (ACC). This requirement includes those programs designated as “limited access.”

If the proposed prerequisites are not listed in the Manual, provide a rationale for a request for exception to the policy of common prerequisites. NOTE: Typically, all lower-division courses required for admission into the major will be considered prerequisites. The curriculum can require lower-division courses that are not prerequisites for admission into the major, as long as those courses are built into the curriculum for the upper-level 60 credit hours. If there are already common prerequisites for other degree programs with the same proposed CIP, every effort must be made to utilize the previously approved prerequisites instead of recommending an additional “track” of prerequisites for that CIP. Additional tracks may not be approved by the ACC, thereby holding up the full approval of the degree program. Programs will not be entered into the State University System Inventory until any exceptions to the approved common prerequisites are approved by the ACC.

There are no State Mandated prerequisites for the Sustainability Studies program.

- C. If the university intends to seek formal Limited Access status for the proposed program, provide a rationale that includes an analysis of diversity issues with respect to such a designation. Explain how the university will ensure that Florida College System transfer students are not disadvantaged by the Limited Access status. NOTE: The policy and criteria for Limited Access are identified in Board of Governors Regulation 6C-8.013. Submit the Limited Access Program Request form along with this document.

The university does not intend to seek formal Limited Access status for this proposed program

- D. If the proposed program is an AS-to-BS capstone, ensure that it adheres to the guidelines approved by the Articulation Coordinating Committee for such programs, as set forth in Rule 6A-10.024 (see link to the Statewide Articulation Manual on [the resource page for new program proposal](#)). List the prerequisites, if any, including the specific AS degrees which may transfer into the program.

Not Applicable. This is not an AS-BS capstone.

INSTITUTIONAL READINESS

VI. Related Institutional Mission and Strength

- A. Describe how the goals of the proposed program relate to the institutional mission statement as contained in the SUS Strategic Plan and the University Strategic Plan (see link to the SUS Strategic Plan on [the resource page for new program proposal](#)).

The mission statement of USFSP is to “inspire scholars to lead lives of impact.” Graduates of this proposed program will be well prepared to make positive and significant impacts in the local, national, and global economy. Nationally, about 1 million new professions in STEM fields will be needed by 2022 to support economic growth and maintain global preeminence in these fields. Within areas most directly requiring the skills of sustainability majors, there are an anticipated 168,000 new positions; roughly 35% more than required at present. However, any new commercial ventures, as well as government agencies (not specifically identified by the study), could require additional sustainability-oriented expertise.

This program supports the first four goals of the Vision 20/20 USFSP Strategic Plan. These goals are:

1. **Distinctive Identity:** This program will contribute to the USFSP Distinctive Identity. Offering new programs and degrees is essential to being able to increase unduplicated and duplicated student headcount and retain students who might otherwise transfer to pursue degrees which we do not offer currently.
2. **Student Success and Culture:** Key performance indicators for this goal addressed by this program are:
 - 2.2 Percent of Bachelors graduates employed full time in Florida or continuing their education in the US one-year after graduation. The growth rate and job outlook for sustainability related fields is excellent, regionally, in the state, and nationally.
 - 2.3 Median average full-time wages of undergraduates employed in Florida one-year after graduation.

The annual median wage is \$50,000 for US workers with between 1 and 4 years of experience in businesses and agencies employing baccalaureate degrees in sustainability-related disciplines (Pay Scale, 2017). The median annual wage of Florida sustainability-related employees is \$68,910 (United States Department of Labor Bureau of Labor Statistics, 2015), while the 2015 Florida Median wage was \$49,426.

3. Faculty Excellence in Teaching and Research: Expanding on the excellence already demonstrated in our science, business, social sciences, and policy courses, this program will serve to foster continued improvement in pedagogy within the discipline. Current and future faculty in the Sustainability Studies program will engage in their own research and support undergraduate and graduate student research in all fields. These faculty members will also be able to collaborate with and support the research of colleagues in other disciplines.

4. Strategic: This program will prepare graduates for careers in fields that rely upon the skills, knowledge and abilities in business, science, and policy and cultural issues in all commercial and industrial ventures, government agencies, and not-for-profit institutions.

As such, faculty will work with partners in the business community to align the needs of potential employers with the courses offered as part of this program. These partners may also provide internships and opportunities for community engagement within the context of the program.

In support of the USF System goals, this program supports Goal 1, in developing “educated and highly skilled global citizens through our continuing commitment to student success” (University of South Florida System, n.d., p. 13). This program intends to prepare students with outstanding skills, knowledge, and ability in sustainability studies and skills. An explicit commitment of this goal is to increase support for students in STEM fields. Sustainability Studies supports Goal 2, by providing support for undergraduate, graduate, and faculty research in partnership with other disciplines that rely upon quantitative reasoning and analysis. Goal 3 addresses the need for building new partnerships that support Florida’s economy. This program supports Goal 3 as indicated in the USFSP Key Performance Indicators 2.2 and 2.3, previously mentioned above.

The Sustainability Studies program also supports the State University System goals in “finding solutions to the economic and societal challenges of the coming decades”. The program is focused on providing new, sustainable approaches to revitalizing the state economy through research and innovation and advances health and the economy “through community and business engagement and service” (p. 10).

References:

- Payscale. (2017). Bachelor of Science (BS / BSc), Sustainability/Environmental Degree Average Salary. Retrieved from <http://www.payscale.com/research/US>
- State of Florida. (2016). Workforce innovation and opportunity act: Unified plan 2017-2020. Retrieved from careersourceflorida.com/wp-content/uploads/2016/01/WIOA-Plan-2016-Web.pdf
- State University System of Florida Board of Governors. (2016). 2023 System strategic plan (amended March 2016). Retrieved from [Http://www.flbog.edu/pressroom/doc/2025_System_Strategic_Plan_Amended_FINAL.pdf](http://www.flbog.edu/pressroom/doc/2025_System_Strategic_Plan_Amended_FINAL.pdf)
- University of South Florida System (n.d.). 2013-2018 Strategic Plan. Retrieved from <http://www.usf.edu/system/documents/usf-system-strategic-plan.pdf>
- United States Department of Labor Bureau of Labor Statistics. (2015). Occupational outlook handbook. Retrieved from <https://www.bls.gov/oes/current/oes152021.htm#ind>

B. Describe how the proposed program specifically relates to existing institutional strengths, such as programs of emphasis, other academic programs, and/or institutes and centers.

This program will improve course delivery as new faculty members with outstanding teaching and research skills join the science, social sciences, and business faculty already in place.

The proposed major in Sustainability Studies addresses a critical need identified in the St. Petersburg GROW SMARTER economic development plan, through collaboration with the Kate Tiedemann College of Business.

Because Sustainability Studies contains disciplines that are considered to be fundamental to the future economic success of the region, this program offers abundant opportunities for collaborative and/or interdisciplinary opportunities at other USF and SUS institutions. Indeed, USFSP has already begun initial discussions with the USF Tampa’s Patel College of Global Sustainability to create a 4+1 feeder program that will result in highly trained individuals to successfully provide the skills and techniques necessary to create successful business ventures in the future.

- C. **Provide a narrative of the planning process leading up to submission of this proposal. Include a chronology in table format of the activities, listing both university personnel directly involved and external individuals who participated in planning. Provide a timetable of events necessary for the implementation of the proposed program.**

In September, 2016, the Regional Vice Chancellor of Academic Affairs (RVCAA) initiated the Master Academic Planning process at USFSP, to be completed in 5 phases. Each phase included analysis of critical data such as FTIC and transfer retention completion, enrollment growth trends graduation rates, and student credit hour production (SCH) for both permanent and contingent faculty. Phases also included qualitative analysis of Strengths, Weaknesses, Opportunities, and Threats that may impact the development of future programs.

During this time, faculty in the Kate Tiedemann College of Business (KTCOB) and the College of Arts and Sciences (CAS) identified the emerging field of Sustainability Studies as a need at USFSP. This need was echoed by faculty members across disciplines, colleges, and all levels of administration. The COB and CAS faculty members put forward a simple proposal for an interdisciplinary Sustainable Studies degree. During Phase 4, the RVCAA working with the campus deans composed a draft Master Academic Plan, which was thoroughly discussed and revised with significant input from faculty across colleges and disciplines. Ultimately, in Phase 5, the final Master Academic Plan was created and was subsequently approved by the USF System leadership. During the USF System Master Academic Planning process, the USFSP Sustainability Studies proposal was recognized as one of the highest priority initiatives. With that encouragement, the COB and CAS faculty members prepared a program pre-proposal for CIP 30.3301, which was added to the USFSP Work Plan for Fall 2017.

Table 3. Planning Process

Date	Participants	Planning Activity
September, 2016	Business, Social Science and Natural Science faculty, College Dean, RVCAA	In the context of developing the Master Academic Plan (MAP) Institutional Research developed program indicators to review, across disciplines, the feasibility of new academic programs essential to the mission of USFSP.
October, November 2016	Business, Social Science and Natural Science Faculty, College Dean, RVCAA	Prepared an analysis of each program in terms of Strengths, Weaknesses, Opportunities and Threats (SWOT) to identify potential collaborations that offer new degree programs.
November 2016 to Spring 2017	All college programs, college Deans and RVCAA	Multiple drafts and revisions of the Master Academic Plan to identify programs that might be developed with existing faculty and resources.

February, 2017 and March 2017	Assistant Dean and Director of Environmental Science & Policy began collaboration with interested faculty across multiple disciplines: Environmental Science, Chemistry, Physics, Geography, Business, Anthropology, and Interdisciplinary Social Sciences	Dr. Scott Burghart, Assistant Dean in the College of Arts & Sciences began collaboration across disciplines to develop a Sustainability Pre-Proposal
March 2017	Identified Interdisciplinary Faculty, Academic Programs Committee, College Council, College Dean, RVCAA	Pre-proposal submitted and vetted.
March 27, 2017	APAC	Pre-proposal approved
April 14, 2017	CVAP Academic Coordinating Group	No Concerns
April – October, 2017	Business, Social Science and Natural Science Faculty	Proposal drafted and curriculum developed
2nd Week November, 2017	Business, Social Science and Natural Science Faculty	Proposal final faculty review

Table 4. Events Leading to Implementation

Date	Implementation Activity
6 November 2017	First Full Draft of Program Request Complete
6 November 2017	Review by CAS Dean, Frank Biafora
7-9 November 2017	Review and Revisions of Program Request
10 November 2017	Submission to CAS Academic Programs Committee
17 November 2017	CAS Academic Programs Committee meets and deliberates
29 November 2017	Submission to Undergraduate Council (Thomas Smith)
6 December 2017	Undergraduate Council meeting and review
8 December 2017	Review by USFSP Registrar, Shari Schwartz
15 December 2017	Review by USFSP Interim Chancellor, Martin Tadlock
1 February 2018	Review by USF System, Cynthia Brown Hernandez
8 January 2018	Submission to APAC
8 February 2018	Deadline to submit all new course proposals for the degree program
22 February 2018	APAC reviews and decision
22 May 2018	ACE Committee Meeting
13 June 2018	Board of Trustees Meeting
	Board of Governors Staff Review

VII. Program Quality Indicators - Reviews and Accreditation

Identify program reviews, accreditation visits, or internal reviews for any university degree programs related to the proposed program, especially any within the same academic unit. List all recommendations and summarize the institution's progress in implementing the recommendations.

USFSP is accredited by the Southern Association of Colleges and Schools (SACS). If this proposed program is approved by the BOG, submission of a Substantive Change Form to SACS will be required. If the program is approved, formal Program Reviews will be conducted every seven years, in accordance with the College of Arts and Sciences' policy. These Program Reviews provide a substantial self-study, as well as evaluation and recommendations from outside reviewers. The proposed program will undergo annual Academic Learning Compact reviews by the program leaders (self-evaluation) to assess student learning. Additionally, institutional SACS accreditation reviews ensure appropriate Faculty Credentialing, ALC's, and all other aspects of higher education review are carried out for all programs at this institution.

VIII. Curriculum

A. Describe the specific expected student learning outcomes associated with the proposed program. If a bachelor's degree program, include a web link to the Academic Learning Compact or include the document itself as an appendix.

1. Demonstrate knowledge and the ability to synthesize the core ideas of sustainability and how they relate to the environment, culture, social equity, and economics.
2. Apply and manipulate diverse measures of sustainability and the key metrics used in such measurements.
3. Justify and apply systems theory to specific sustainability challenges in the three key areas of sustainability (economic, social/cultural, and environmental).
4. Demonstrate mastery of the key entrepreneurial components of sustainable jobs and the difference between obtaining and creating a job.
5. Effectively communicate concepts of sustainability to different audiences through both oral and written media.
6. Demonstrate understanding of the triple bottom line (*i.e.* environmental, social, economic)
7. Demonstrate strong and applied problem-solving skills in relation to specific sustainability challenges.

The Academic Learning Compact is provided in Appendix C.

B. Describe the admission standards and graduation requirements for the program.

Admissions standards for the program in Sustainability Studies are the same as those for admission standards to the University of South Florida St. Petersburg.

Graduation requirements include the minimum requirements for USFSP and the College of Arts and Sciences:

- Minimum of 120 earned semester hours with overall 2.00 GPA, including all courses attempted within the USF System;
- A transfer student must have a 2.0 GPA or higher when combined with all work attempted at other institutions;
- A minimum of score of C (not C-) or greater in and an overall average of 2.50 GPA or greater in all core courses;
- Satisfactorily complete communication and computation course requirements of 6A-10.030;
- Earn a minimum of 42 semester hours of upper-level work (courses numbered 3000 and above);
- Complete all Liberal Arts Requirements;
- Complete program requirements; and
- Be recommended for graduation by the Dean of the College of Arts and Sciences.

Currently, there are no State Mandated prerequisites in this major.

C. Describe the curricular framework for the proposed program, including number of credit hours and composition of required core courses, restricted electives, unrestricted electives, thesis requirements, and dissertation requirements. Identify the total numbers of semester credit hours for the degree.

Students must complete 37 credit hours in the Sustainability Studies major, this includes all required core courses (31 hours) and two electives (6 hours). The entire B.A. degree will require 120 credit hours. The curriculum includes all university and college degree requirements. The core courses are designed to provide students with a broad interdisciplinary knowledge base in business, social sciences and the natural sciences to prepare them for a wide variety of careers or graduate work in fields related to Sustainability Studies.

The required Core Courses are:

Natural Science:

Prefix & Number	Title	Credit Hours
EVR 2001	Introduction to Environmental Science	3
CHM 3080	Chemistry for Sustainability (newly proposed)	3
PHY 2038	Physics of Energy, Climate Change & Environment (newly proposed)	3

Social Science:

Prefix & Number	Title	Credit Hours
EVR 3877	Sustainability of Human Systems (newly proposed)	3
EVR 4000	Methods for Environmental Policy Analysis & Sustainability (newly proposed)	3
GEO 3113	Qualitative Research Methods in Geography	3

Business:

Prefix & Number	Title	Credit Hours
ENT 3004	Principles of Entrepreneurship	3
ENT 4801	Sustainable Entrepreneurship (newly proposed)	3
GEB 3373	International Business	3

Capstone:

Prefix & Number	Title	Credit Hours
ISS 4942	Practicing Sustainability (newly proposed)	4

D. Provide a sequenced course of study for all majors, concentrations, or areas of emphasis within the proposed program.

Freshman Year (Semester 1)			
Prefix & Number	Title	Credits	Course Attribute/ Use
ENC 1101	English Composition I	3	Communications General Education / 6A.10.030
MAC 1105	College Algebra	3	Mathematics General Education / 6A.10.030
XXX XXXX	Foreign Language Requirement	4	Requirement for B.A. Degree
EVR 2001	Introduction to Environmental Science	3	Natural Science General Education / Core
GEA 2000 <i>OR</i> ANT 2410	World Regional Geography Cultural Anthropology	3	Social Science General Education
Total Credit Hours:		16	
Freshman Year (Semester 2)			
Prefix & Number	Title	Credits	Course Attribute / Use

ENC 1102	English Composition II	3	Communications General Education / 6A.10.030
STA 2023	Introductory Statistics	3	Mathematics General Education / 6A.10.030
XXX XXXX	Foreign Language Requirement	4	Requirement for B.A. Degree
CHM 2020	Chemistry for Liberal Studies	3	Natural Science General Education
Total Credit Hours:		13	
Sophomore Year (Semester 3)			
Prefix & Number	Title	Credits	Course Attribute / Use
ECO 2013 <i>OR</i> SYG 2000	Principles of Macroeconomics Introduction to Sociology	3	Social Science General Education
CHM 3080	Chemistry for Sustainability	3	Sustainability Core
EVR 3877	Sustainability of Human Systems	3	Sustainability Core
XXX XXXX	Humanities General Education	3	Humanities General Education
XXX XXXX	General Education Elective	3	General Education
Total Credit Hours:		15	
Sophomore Year (Semester 4)			
Prefix & Number	Title	Credits	Course Attribute / Use
EVR 4000	Methods for Environmental Policy Analysis & Sustainability	3	Sustainability Core
XXX XXXX	Humanities General Education	3	Humanities General Education
XXX XXXX	General Education Elective	3	General Education
XXX XXXX	Sustainability Elective	3	Sustainability Elective
Total Credit Hours:		12	
Junior Year (Semester 5)			
Prefix & Number	Title	Credits	Course Attribute
ENT 3004	Principles of Entrepreneurship	3	Sustainability Core
PHY 2038	Physics of Energy, Climate Change and Environment	3	Sustainability Core
GEO 3113	Qualitative Research Methods in Geography	3	Sustainability Core
XXX XXXX	Free Elective meeting Communications 6A.10.030	3	Free Elective meeting Communications 6A.10.030
XXX XXXX	Sustainability Elective	3	Sustainability Elective
Total Credit Hours:		15	
Junior Year (Semester 6)			
Prefix & Number	Title	Credits	Course Attribute
ENT 4801	Sustainable Entrepreneurship	3	Sustainability Core
GEB 3373	International Business	3	Sustainability Core
XXX XXXX	Literature & Writing	3	CAS Exit Requirement
XXX XXXX	Upper Level Free Elective	3	Upper Level Free Elective
XXX XXXX	Upper Level Free Elective	3	Upper Level Free Elective
Total Credit Hours:		15	
Senior Year (Semester 7)			
Prefix & Number	Title	Credits	Course Attribute
XXX XXXX	Major Works & Major Issues	3	CAS Exit Requirement
XXX XXXX	Upper Level Free Elective	3	Upper Level Free Elective
XXX XXXX	Upper Level Free Elective	3	Upper Level Free Elective
XXX XXXX	Upper Level Free Elective	3	Upper Level Free Elective
Total Credit Hours:		12	
Senior Year (Semester 8)			
Prefix & Number	Title	Credits	Course Attribute
ISS 4942	Practicing Sustainability	4	Sustainability Capstone
XXX XXXX	Upper Level Free Elective	3	Upper Level Free Elective
XXX XXXX	Upper Level Free Elective	3	Upper Level Free Elective
XXX XXXX	Free Elective	3	Free Elective
Total Credit Hours:		13	

SUMMER SEMESTERS (9 Hours)

Freshman Summer Semester			
Prefix & Number	Title	Credits	Course Attribute
XXX XXXX	Free Elective	3	Free Elective
Total Credit Hours:		3	

Junior Summer Semester			
Prefix & Number	Title	Credits	Course Attribute
XXX XXXX	Major Works & Major Issues Elective	3	CAS Exit Requirement
XXX XXXX	Free Elective	3	Free Elective
Total Credit Hours:		6	

E. Provide a one- or two-sentence description of each required or elective course.

REQUIRED CORE COURSES: (31 Hours)

EVR 2001 Introduction to Environmental Science (3 credits)

General Education Natural Science

An introductory lecture course linking the human and physical/biological world. The course will develop an understanding of population and resource interactions.

CHM 3080 Chemistry for Sustainability (3 credits) (Currently being vetted)

Prerequisite: CHM 2020 *or* CHM 2023 *or* CHM 2045 + Lab, General Education Natural Science

This course introduces science and chemical concepts required for understanding and implementing sustainable technology, plans, and policies. Reviews several basic science concepts, such as mass and energy balances, and a few more advanced topics.

PHY 2038 Physics of Energy, Climate Change & Environment (3 credits) (Currently being vetted)

Prerequisite: MAC 1105

Students explore applied physics; how physical concepts relate to sustainability and other disciplines. The course examines the physics of new sustainable technologies and their economics and social consequences.

EVR 3877 Sustainability of Human Systems (3 credits) (Currently being vetted)

Students will evaluate sustainability, resilience, inequality, environmental justice, and environmental health. The course provides a framework for public policy that can shape sustainable agriculture, energy and water systems, and sustainable cities.

EVR 4000 Methods for Environmental Policy Analysis and Sustainability (3 credits) (Currently being vetted)

Students will learn to critically and systematically analyze and evaluate policies and programs. Students will distinguish among the different techniques used to analyze policies and programs used to address fundamental environmental problems.

GEO 3113 Qualitative Research Methods in Geography (3 credits) (Currently being vetted)

Explores qualitative research methods utilized by scholars in the social sciences. Interviews, participant observation, surveys, visual techniques and document analysis will be included.

ENT 3004

Principles of Entrepreneurship (3 credits)

Study of the principles related to entrepreneurship and entrepreneurial activity. Emphasis is placed on understanding the differences between small business and entrepreneurship. An introduction to skill sets required for entrepreneurial success.

ENT 4801 Sustainable Entrepreneurship (3 credits) (Currently being vetted)

Prerequisite: ENT 3004

This course advances a holistic model “triple bottom line”. This focuses on environment, economy, and equity which enhance and enforce each other to maximize long-term positive outcomes for society, environment and company.

GEB 3373 International Business (3 credits)

An overview of problems faced by firms engaging in international activities across a broad spectrum of business activities including topics such as: accounting, finance, management, marketing, import-export, multi-national; country-risk analysis.

SUSTAINABILITY CAPSTONE:

ISS 4942 Practicing Sustainability (4 credits) (Currently being vetted)

Students gain practical experience in sustainability related projects, internships, community service, or business enterprises. Students integrate and apply the diverse forms of knowledge gained during their coursework in Sustainability Studies.

SUSTAINABILITY ELECTIVES (6 Credit Hours)

ANT 4403 Environmental Anthropology (3 credits)

Prerequisite: ANT 2410

This course explores cultural, social, political, and economic dimensions of contemporary environmental problems. Emphasis placed on the links between local-level environmental degradation and broader regional and global forces.

ANT 4495 Methods in Cultural Research (3 credits)

All aspects of ethological research methods are reviewed and applied. Research design models from the case literature are studied and supervised research in the local community is designed and carried out.

ANT 4467 Food, Health and Culture (3 credits)

Prerequisite: ANT 2000 *or* ANT 2410 *or* ANT 2511

Basic human nutritional needs & their evolutionary foundation; reconstruction of past diets; relationship between food & health, medicine& disease; food in religion; gender and food; food in cross-cultural perspective; political economy of food.

ANT 4442 Urban Life and Culture (3 credits)

Prerequisite: ANT 2410

The cross-cultural study of urbanization, urbanism and human problems associated with metropolitan environments. Emphasis on the ethnography of city life and its relationship to the practical applications of urban research.

CPO 4034 Politics of Developing Areas (3 credits)

An analysis of the ideologies, governmental structures, and political processes of selected nations of the non-Western world.

EVR 2861 Introduction to Environmental Policy (3 credits)

An introduction to environmental policy using lectures, projects, and readings. Emphasis will be placed on understanding basic policy mechanisms and major policy actions relating to environmental issues at the local, national and international level.

EVR 4027 Wetland Environments (3 credits)

Major Works Major Issues

Study of the general properties and ecology of wetlands, examination of the distribution and functions of wetlands, and consideration of wetland conservation and policies.

EVR 4051 Environmental Field Methods (3 credits)

Prerequisite: STA 2023

This course will provide an overview of aspects of conducting environmental research, field experience, the critical analysis of environmental data, and learning the fundamentals of producing a scientifically sound report.

EVR 4114 Climate Change (3 credits)

Prerequisite: EVR 2001

The objective is to provide an understanding of the scientific principles pertaining to global and regional climate change. Both mechanisms causing the change and human impacts on climate will be examined. Not restricted to majors and not repeatable.

GEO 3352 Human Footprint on the Landscape (3 credits)

The study of human-environment relationships from a primarily geographic perspective focusing on the human forces that shape landscapes.

GEO 4340 Water Resources Management (3 credits)

Examination of the physical, social, economic, political and cultural forces that create the phenomena of natural hazards. Case studies from around the world will include floods, droughts, tornadoes, hurricanes, among many other natural events.

GEO 4372 Global Conservation (3 credits)

The distribution, exploitation, and conservation of physical and human resources, ecology.

GEO 4379 Geographic Perspectives on the Environment (3 credits)

Prerequisite: GEA 2000

The course examines human ideas about the natural environment and the fundamental character of the human-nature relationship across space and time. Literature is surveyed (geography, environmental history, ethics) on environmental perspectives.

GIS 3006 Computer Cartography (3 credits)

An introduction to the concepts underlying modern, computer-based mapping and to the collection and storage of digital spatial data.

GIS 4302C GIS for Sustainability (3 credits)

Prerequisite: GIS 3006

The application of GIS for sustainable planning and development; Policymakers & planning agencies increasingly use spatial data/methods to aid in their decisions; this course is relevant to anyone interested in issues for sustainable development.

GLY 4734 Beaches and Coastal Environments (3 credits)

Major Works Major Issues

Introduction to the nature of all coastal environments. Emphasis on the natural state of these environments and how human activities impact them. Coastal management policies involving economics, ethics, policy, and environmental law are considered.

PHI 3640 Environmental Ethics (3 credits)

A study of alternative theories of environmental ethics, including the application of these theories to contemporary environmental problems, such as pollution, resource depletion, species extinction, and land use.

PUP 4203 Environmental Politics and Policy (3 credits)

Examines the politics of environmental issues, formation and implementation of environmental policy.

ECP 3302 Environmental Economics (3 credits)

Prerequisite: ECO 2023 / Major Works Major Issues

An economic analysis of environmental issues. The economics of resource use and pollution control are examined using the concepts of externalities, cost-benefit analysis, public goods, and property rights.

ECP 3201 Economics of Women and Work (3 credits)

Prerequisites: ECO 2012 & ECO 2023 / Major Works Major Issues

Survey of research on women, men and work in the labor market and the household. Includes historical perspective, examination of the family as an economic unit, changing work roles, and gender differences in occupation and earnings.

ECS 3013 Economic Development (3 credits)

Prerequisite: ECO 1000

The major economic systems: traditional, capitalism, democratic socialism, communism and fascism.

- F. For degree programs in the science and technology disciplines, discuss how industry-driven competencies were identified and incorporated into the curriculum and indicate whether any industry advisory council exists to provide input for curriculum development and student assessment.

This is an interdisciplinary Bachelor of Arts program which requires science competency but is not a science and technology discipline. That said, the USFSP Office of Sustainability, under the direction of Mr. Brian Pullen, who holds an M.A. in Global sustainability from USF Tampa, has assembled a team of industry professionals who partner and support campus sustainability efforts. Mr. Pullen has provided feedback to faculty throughout the development of this proposal and identified local experts who will be invited to join our Sustainability Advisory Team. These

experts provide both public and private sector expertise in fields ranging from energy, food production, construction, engineering, consulting, data reporting, and waste management. This oversight adds further value to the projected learning outcomes of the degree. The advisory team and Mr. Pullen will provide insight into the skills employers will be seeking from graduates with a B.A. in Sustainability Studies. Contact has been made with local professionals in anticipation of having these individuals serve on the Sustainability Advisory Team. Appendix F provides letters of support from a few of the local agencies.

- G. For all programs, list the specialized accreditation agencies and learned societies that would be concerned with the proposed program. Will the university seek accreditation for the program if it is available? If not, why? Provide a brief timeline for seeking accreditation, if appropriate.**

Substantive change approval will be requested from the Southern Association of Colleges and Schools immediately upon program approval from the Board of Governors. There are no accrediting agencies in the field of Sustainability.

- H. For doctoral programs, list the accreditation agencies and learned societies that would be concerned with corresponding bachelor's or master's programs associated with the proposed program. Are the programs accredited? If not, why?**

Not Applicable. This is not a doctoral program.

- I. Briefly describe the anticipated delivery system for the proposed program (e.g., traditional delivery on main campus; traditional delivery at branch campuses or centers; or nontraditional delivery such as distance or distributed learning, self-paced instruction, or external degree programs). If the proposed delivery system will require specialized services or greater than normal financial support, include projected costs in Table 2 in Appendix A. Provide a narrative describing the feasibility of delivering the proposed program through collaboration with other universities, both public and private. Cite specific queries made of other institutions with respect to shared courses; distance/distributed learning technologies, and joint-use facilities for research or internships.**

This program will be offered on the University of South Florida St. Petersburg campus in face-to-face format (80%) and online format (20%).

IX. Faculty Participation

- A. Use Table 4 in Appendix A to identify existing and anticipated full-time (not visiting or adjunct) faculty who will participate in the proposed program through Year 5. Include (a) faculty code associated with the source of funding for the position; (b) name; (c) highest degree held; (d) academic discipline or specialization; (e) contract status (tenure, tenure-earning, or multi-year annual [MYA]); (f) contract length in months; and (g) percent of annual effort that will be directed toward the proposed program (instruction, advising, supervising internships and practica, and supervising thesis or dissertation hours).**

See Table 4 in Appendix A

- B. Use Table 2 in Appendix A to display the costs and associated funding resources for existing and anticipated full-time faculty (as identified in Table 4 in Appendix A). Costs**

for visiting and adjunct faculty should be included in the category of Other Personnel Services (OPS). Provide a narrative summarizing projected costs and funding sources.

Projected costs and funding sources are provided in Table 2-A, in Appendix A. Costs in year one are dominated by existing and anticipated new faculty salaries and benefits. Two new faculty lines have been granted, to be filled before the Fall 2018 semester: a tenure-track assistant professor in social sciences/environmental anthropology/policy and an instructor in physical science (MYA). In addition to salaries and benefits, approximately \$8,000 is anticipated in start-up costs (for both new faculty members combined) and an additional \$3,000 each for administrative costs associated with these lines. Costs for adjunct and visiting faculty members are estimated to be \$6,000 per year. Instruction of courses for majors in this proposed program requires the expertise of permanent faculty members. By year five, major program costs are comprised of Sustainable Studies' faculty salaries and benefits.

Because this is an interdisciplinary program, the College of Arts and Sciences has used new STEM funding to support new faculty positions and redistributed existing funds for faculty positions that not only support this new program, but existing programs such as Biology, Chemistry, Environmental Science and General Education.

- C. Provide in the appendices the abbreviated curriculum vitae (CV) for each existing faculty member (do not include information for visiting or adjunct faculty).**

See Appendix H

- D. Provide evidence that the academic unit(s) associated with this new degree 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, as well as qualitative indicators of excellence.**

This is an interdisciplinary program that is the result of collaboration across two colleges (CAS and KTCOB), nine disciplines (Geography, Geology, Chemistry, Physics, Comparative Politics, Anthropology, Global Business, Entrepreneurship and Economics) and four Departments (History and Politics, Biology, Society, Culture & Language, Business and unaffiliated). For this reason, the administrative coordination of the program will take place in the CAS office.

The current faculty members, who will teach in this program, are highly productive in all areas of teaching, research, and service. Documentation of their individual work is provided in their curriculum vitae, see Appendix H.

Natural Science faculty includes three Geographers ranging from Full Professor to Associate Professor, one Geologist who is a Full Professor, and a Chemist and Physicist, both full-time Instructors. Social Scientists include two Anthropologists (Full Professor and Instructor) and one Assistant Professor of Comparative Politics. Business faculty includes a Full Professor in Global Business, two Instructors and a Full Professor in Entrepreneurship in addition to a Full Professor, Assistant Professor and Instructor of Economics. A brief synopsis of their productivity in the 2016-2017 academic year follows:

Teaching:

The Sustainability faculty teach a wide range of upper- and lower-level courses including General Education courses in the natural sciences and social sciences, as well as writing intensive capstone and exit courses unique to their discipline. Both Instructors and tenure-earning faculty are highly regarded by students and faculty peers. To illustrate, Dr. Johns was appointed as the Frank E. Duckwall Professor of Florida Studies due to her rigor as an educator. In addition to supervising Honor's Theses, faculty are actively involved in supervision of dozens undergraduate research projects, master's theses at USFSP in addition to doctoral theses from USF Tampa. The faculty have developed courses integrating their research in Sustainability Studies into the classroom: courses include topics such as: Global Conservation, Water Resource Management, Florida Springs, and Sustainable Entrepreneurship.

Research:

Tenure earning faculty have been awarded grants ranging from local grants with the Department of Transportation (\$5,000) to national grants totaling over \$1.5 million from the U.S. Department of Agriculture and the National Science Foundation. Research in the area of sustainability at USFSP is extensive, representing peer review publications on a national and international level. Dr. Meindl, who teaches several Sustainability electives, has published three chapters on the history of water resource management in Florida and challenges to sustainability. Dr. Smoak, who also teaches several electives, published six publications related to soil contamination and sustainability, while faculty in physics and mathematics are researching the use of math models in sustainability. In the social sciences, publications include topics such as religion and political practice as it relates to sustainability, sustainability and cultural change, and urban agriculture and sustainability. Business faculty such as Dr. Braunsberger have published chapters on "Learning from Sustainability Initiatives".

Service:

Faculty services include individuals who serve as consulting editors across several international business journals. On a national level, faculty serve on projects with the National Science Foundation, and editorial positions on national peer-reviewed journals such as *The Journal of Marine Science and Engineering*. Business faculty are serving as consultants to the National Library of Medicine. On a state level faculty serve on agencies such as The Florida Society of Geographers and as guest lecturers on water resources across the state. The faculty have also been involved at every level of service on the university level, including Assistant Deans, Department Chairs, Program Directors as well as Faculty Council and Faculty Senate.

X. Non-Faculty Resources

- A. Describe library resources currently available to implement and/or sustain the proposed program through Year 5. Provide the total number of volumes and serials available in this discipline and related fields. List major journals that are available to the university's students. Include a signed statement from the Library Director that this subsection and subsection B have been reviewed and approved.

Overview of Library

The Nelson Poynter Memorial Library, University of South Florida St. Petersburg (USFSP), houses an extensive collection of materials that supports the educational, research, and service missions of USF St. Petersburg. USF St. Petersburg faculty, staff, and students have on-site access

to the Poynter Library's collection of over 221,620 items, including monographs, current periodical and serial subscriptions, newspaper subscriptions, and audiovisual titles, as well as to the shared electronic resources of the USF System, providing USFSP students unlimited access to the vast holdings of a Carnegie Research 1 doctoral institution, including major journals, databases, e-book collections and reference resources across disciplines.

Faculty and students can access 206,700 documentaries and instruction videos available online through streaming media. All resources are available remotely to currently affiliated USF students, faculty, and staff through the use of NetID or an authenticated server.

An interdisciplinary program focusing on sustainability in development, design, ecology, environmental policies, economics, ethics, anthropology, sociology, city and regional planning, and natural resources, Sustainability Studies requires library resources that are both broad in scope, and specific to the concept of sustainability.

Library Collections:

Sustainability Science Abstracts includes AGRICOLA, TOXLINE, ESPM (Environmental Sciences and Pollution Management) and Environmental Impact Statements (EIS) databases and provides full-text titles from around the world, including scholarly journals, trade and industry journals, magazines, technical reports, conference proceedings, and government publications. This database includes specialized, editorially-curated A&I resources covering such topics as the effects of pollution on people and animals and environmental action and policy responses. Appendix G outlines in detail a wide range of databases, major journals, selected e-books, major references and interdisciplinary materials on Sustainability Studies.

Library Services:

A reference and instruction librarian is assigned to support specialized collection development and library instruction for the Sustainability Studies program. Liaisons are available to faculty and students for both research and teaching needs. The reference librarian presents specialized bibliographic instruction for sustainability studies classes and programs and offers one-on-one reference sessions through the Reference Assistance Program (RAP). These services also include all Distance education support for both faculty and students.

The Library hosts a variety of computing resources, services, and access points to support staff, student and public users. Students use computing environments including the Information Commons, Library Instructional Classroom, and public spaces such as Poynter's Corner, powered by USFSP's robust wireless network. The first floor open use computing area, the Information Commons, hosts all of the hardware and software applications that students need.

- B. Describe additional library resources that are needed to implement and/or sustain the program through Year 5. Include projected costs of additional library resources in Table 2 in Appendix A. Please include the signature of the Library Director in Appendix B.**

No additional resources are needed because the USFSP library acquires full access to the shared electronic resources of the USF Library System through a cost sharing agreement paid by the University of South Florida Saint Petersburg, based upon student FTE. Both the total cost and the USFSP share of these costs increase annually, due to increases in the cost of resources, the numbers of resources, and the number of USFSP students. USF System spent \$2,570,094 on shared electronic resources in natural sciences and mathematics, by far the most expensive disciplinary

cluster, totaling almost half of the USF System shared e-resources (\$5,445,114 total). In 2016-17 USFSP paid \$257,009 for natural sciences and mathematics, which represents more than half of the USFSP total of \$464,196.

- C. Describe classroom, teaching laboratory, research laboratory, office, and other types of space that are necessary and currently available to implement the proposed program through Year 5.**

Existing classroom space in the Science and Technology Building, and Kate Tiedemann College of Business (LPH) at USFSP as well as classroom space in Harbor Hall and campus computer classrooms is sufficient for the needs of this proposed program. In anticipation of a major redesign and renovation of Davis Hall, it is anticipated that additional office space and classroom space will be given to new faculty.

- D. Describe additional classroom, teaching laboratory, research laboratory, office, and other space needed to implement and/or maintain the proposed program through Year 5. Include any projected Instruction and Research (I&R) costs of additional space in Table 2 in Appendix A. Do not include costs for new construction because that information should be provided in response to X (E) below.**

New faculty members will require furnished offices and computers. Initially, two new faculty members are anticipated in the Fall 2018 semester for this program. As the program grows during the first 5 years, additional faculty lines may be required, whether through conversion of existing visiting faculty lines or by creation of new lines. Formal requests for the 2018 faculty positions have been submitted to the College of Arts and Sciences. It is anticipated that this program will be jointly shared and administered through the College of Arts and Sciences and the Kate Tiedemann College of Business. However, the potential exists, as the program grows, that a new department of Sustainability and Environment may be created to house this and closely related degree programs.

- 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. Table 2 in Appendix A includes only Instruction and Research (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.**

We do not anticipate a need for new capital expenditures for this program.

- F. Describe specialized equipment that is currently available to implement the proposed program through Year 5. Focus primarily on instructional and research requirements.**

The university currently has five computer classrooms with a total of 188 student computers available. Campus Computing also has a virtual computer lab/classroom that can support hundreds of concurrent users. All campus classrooms are equipped with podium computers, projectors, and internet connectivity for instructional purposes. The library and tutoring center have additional computers and collaboration systems for multiple computers. SAS, SPSS, and other statistical software programs are already in place in the USF System application portal.

- G. Describe additional specialized equipment that will be needed to implement and/or sustain the proposed program through Year 5. Include projected costs of additional equipment in Table 2 in Appendix A.**

No additional specialized equipment is needed.

- H. Describe any additional special categories of resources needed to implement the program through Year 5 (access to proprietary research facilities, specialized services, extended travel, etc.). Include projected costs of special resources in Table 2 in Appendix A.**

No additional special categories of resources are anticipated at this time.

- I. Describe fellowships, scholarships, and graduate assistantships to be allocated to the proposed program through Year 5. Include the projected costs in Table 2 in Appendix A.**

There are no requests for fellowships, scholarships, and graduate assistantships to be allocated to the proposed program through Year 5. Students will be encouraged to apply for existing institutional and private scholarships to support their studies.

- J. Describe currently available sites for internship and practicum experiences, if appropriate to the program. Describe plans to seek additional sites in Years 1 through 5.**

USFSP adopted Handshake in May 2017. Employers are able to post jobs to subject areas, including sustainability and related majors. Since May 2017, there have been 137 internship postings on Handshake with an interest in hiring sustainability majors (including the major groups of environmental management and sciences, natural resource management, and conservation). Examples of companies hosting internships include: Next Era Energy, Southwest Florida Water Management District, Waste Management, Seaside Sustainability, Clean Water Action, and the US Geological Survey. USFSP has reached out to many of these agencies and they have indicated a continued interest in an internship relationship with the university. The College of Arts and Sciences recently hired an Internship Coordinator who establishes affiliation agreements with companies, and will continue to explore new internship sites in the first five years of the program.

APPENDIX A

**TABLE 1-A
PROJECTED HEADCOUNT FROM POTENTIAL SOURCES
(Baccalaureate Degree Program)**

Source of Students (Non-duplicated headcount in any given year)*	Year 1		Year 2		Year 3		Year 4		Year 5	
	HC	FTE	HC	FTE	HC	FTE	HC	FTE	HC	FTE
Upper-level students who are transferring from other majors within the university**	20	24	25	30	31	38	39	47	49	59
Students who initially entered the university as FTIC students and who are progressing from the lower to the upper level***	25	30	31	38	39	47	49	59	61	73
Florida College System transfers to the upper level***	15	18	19	23	23	28	29	35	37	44
Transfers to the upper level from other Florida colleges and universities***	10	12	13	15	16	19	20	23	24	29
Transfers from out of state colleges and universities***	5	6	6	8	8	9	10	12	12	15
Other (double-majors)***	5	6	6	8	8	9	10	12	12	15
Totals	80	96	100	120	125	150	156	188	195	234

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

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

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

APPENDIX A

TABLE 2 -A
PROJECTED COSTS AND FUNDING SOURCES

Instruction & Research Costs (non-cumulative)	Year 1								Year 5						
	Funding Source								Funding Source						Subtotal coulumns 9+...+ 14
	Reallocated Base* (E&G)	Enrollment Growth (E&G)	New Recurring (E&G)	New Non-Recurring (E&G)	Contracts & Grants (C&G)	Philanthropy Endowments	Enterprise Auxiliary Funds	Subtotal 1+...+7	Continuing Base** (E&G)	New Enrollment Growth (E&G)	Other*** (E&G)	Contracts & Grants (C&G)	Philanthropy Endowments	Enterprise Auxiliary Funds	
Columns	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Faculty Salaries and Benefits	79,651	0	21,875	0	0	0	0	\$101,526	120,526	0	0	0	0	0	\$120,526
A & P Salaries and Benefits	0	0	0	0	0	0	0	\$0	0	0	0	0	0	0	\$0
USPS Salaries and Benefits	0	0	0	0	0	0	0	\$0	0	0	0	0	0	0	\$0
Other Personal Services	0	9,000	0	0	0	0	0	\$9,000	0	3,000	0	0	0	0	\$3,000
Assistantships & Fellowships	0	0	0	0	0	0	0	\$0	0	0	0	0	0	0	\$0
Library	0	7,000	0	0	0	0	0	\$7,000	0	15,000	0	0	0	0	\$15,000
Expenses	0	0	3,000	1,250	0	0	0	\$4,250	0	0	0	0	0	0	\$0
Operating Capital Outlay	0	0	0	0	0	0	0	\$0	0	0	0	0	0	0	\$0
Special Categories	0	0	0	0	0	0	0	\$0	0	0	0	0	0	0	\$0
Total Costs	\$79,651	\$16,000	\$24,875	\$1,250	\$0	\$0	\$0	\$121,776	\$120,526	\$18,000	\$0	\$0	\$0	\$0	\$138,526

*Identify reallocation sources in Table 3.

**Includes recurring E&G funded costs ("reallocated base," "enrollment growth," and "new recurring") from Years 1-4 that continue into Year 5.

***Identify if non-recurring.

Faculty and Staff Summary

Total Positions	Year 1	Year 5
Faculty (person-years)	0.66	1.13
A & P (FTE)	0	0
USPS (FTE)	0	0

Calculated Cost per Student FTE

	Year 1	Year 5
Total E&G Funding	\$121,776	\$138,526
Annual Student FTE	96	234
E&G Cost per FTE	\$1,268	\$591

APPENDIX A

**TABLE 3
ANTICIPATED REALLOCATION OF EDUCATION & GENERAL FUNDS***

Program and/or E&G account from which current funds will be reallocated during Year 1	Base before reallocation	Amount to be reallocated	Base after reallocation
I.S.S. faculty salary	65,000	8,125	\$56,875
Chemistry faculty salary	55,000	6,875	\$48,125
Environmental Science & Policy faculty salary	119,453	14,932	\$104,521
Geography faculty salary	73,235	9,154	\$64,081
Entrepreneurship faculty salary	153,672	19,209	\$134,463
Management faculty salary	170,846	21,356	\$149,490
Totals	\$637,206	\$79,651	\$557,555

Table 4-A

ANTICIPATED FACULTY PARTICIPATION

Faculty Code	Faculty Name or "New Hire" Highest Degree Held Academic Discipline or Speciality	Rank	Contract Status	Initial Date for Participation in Program	Mos. Contract Year 1	FTE Year 1	% Effort for Prg. Year 1	PY Year 1	Mos. Contract Year 5	FTE Year 5	% Effort for Prg. Year 5	PY Year 5
C	New Hire, Ph.D. I.S.S./Envi. Anthro./Policy	Assistant Professor	Tenure-Track	Fall 2019	9	0.75	0.13	0.09	9	0.75	0.13	0.09
C	New Hire, Ph.D. Chemistry - Physical	Instructor	MYA	Fall 2019	9	0.75	0.13	0.09	9	0.75	0.50	0.38
C	New Hire, Ph.D. Environmental Science	Instructor	MYA	Fall 2019	9	0.75	0.13	0.09	9	0.75	0.25	0.19
A	Richard Mbatu, Ph.D. Environmental Policy	Assistant Professor	Tenure-Track	Fall 2019	9	0.75	0.13	0.09	9	0.75	0.13	0.09
A	Rebecca Johns, Ph.D. Geography	Associate Professor	Tenured	Fall 2019	9	0.75	0.13	0.09	9	0.75	0.13	0.09
A	Karin Braunsberger, Ph.D. Entrepreneurship	Professor	Tenured	Fall 2019	9	0.75	0.13	0.09	9	0.75	0.25	0.19
A	Hemant Merchant, Ph.D. International Management	Professor	Tenured	Fall 2019	9	0.75	0.13	0.09	9	0.75	0.13	0.09
Faculty Code								PY Workload by Budget Classification				
			Source of Funding					Year 1				Year 5
A	Existing faculty on a regular line		Current Education & General Revenue					0.38				0.47
B	New faculty to be hired on a vacant line		Current Education & General Revenue					0.00				0.00
C	New faculty to be hired on a new line		New Education & General Revenue					0.28				0.66
D	Existing faculty hired on contracts/grants		Contracts/Grants					0.00				0.00
E	New faculty to be hired on contracts/grants		Contracts/Grants					0.00				0.00
						Overall Totals for	Year 1	0.66			Year 5	1.13

APPENDIX B
Signature of Equal Opportunity Officer and Library Director

Please include the signature of the Equal Opportunity Officer and the Library Director.

		<u>11/3/17</u>
Signature of Equal Opportunity Officer	Date	
	11/3/17	

This appendix was created to facilitate the collection of signatures in support of the proposal. Signatures in this section illustrate that the Equal Opportunity Officer has reviewed section II.E of the proposal and the Library Director has reviewed sections X.A and X.B.

APPENDIX C: Program Assessment

Academic Learning Compacts
Sustainability Studies
Fall 2018 – Spring 2019



APPENDIX C: PROGRAM ASSESSMENT

Academic Program-linked College Mission-based Goals/Objectives

In the matrix on the following page, please place an X in the grid that identifies the degree program goals and objectives that align with the institutional mission-based goals/objectives and the College based goals/objectives. These goals/objectives need to be documented in your ALC data.

Signature Page for Academic Program

Academic Program: *Sustainability Studies*

Chair/Coordinator:

Date:

Summary Statement – Academic Program Performance in Fall 20XX- Spring 20XX

Provide a summary statement about academic program performance over the previous year including high points and low points

Summary Statement – Impact of Changes Made in Fall 20XX- Spring 20XX

Provide a summary statement about the changes that were made in your program resulting from the ALC's in the preceding Academic Year. Include both the high points and low points

Mission of Academic Program (include URL):

The Sustainability Studies program strives to develop students into becoming *the individual* that managers, owners, and politicians *consult* when implementing new technologies and policies. Sustainability Studies provides the tools to safeguard the well-being of future generations, increase profits today and understand the role science plays in developing new technologies to address societal changes.

List Program Goal(s) / Objective(s):

The program emphasizes:

1. Demonstrate knowledge and the ability to synthesize the core ideas of sustainability and how they relate to the environment, culture, social equity, and economics.
2. Apply and manipulate diverse measures of sustainability and the key metrics used in such measurements.
3. Justify and apply systems theory to specific sustainability challenges in the three key areas of sustainability (economic, social/cultural, and environmental).
4. Demonstrate mastery of the key entrepreneurial components of sustainable jobs and the difference between obtaining and creating a job.
5. Effectively communicate concepts of sustainability to different audiences through both oral and written media.
6. Demonstrate understanding of the triple bottom line (*i.e.* environmental, social, economic)
7. Demonstrate strong research and applied problems-solving skills in relation to specific sustainability challenges.

ALC GOALS ESTABLISHED FOR DATA COLLECTION: Fall 20XX & Spring 20XX

1. Content/Discipline Skills

Goals/Objectives	Means of Assessment/ Corroborating Evidence*	Criteria for Success	Findings	Plan for Use of Findings to Improve Degree Program
A. Demonstrate Knowledge of the core ideas of sustainability and how they relate to the environment	CHM 3080: 4 Mastery Examinations	70% of the students will earn 70% or better on the average of 4 examinations		
B. Demonstrate Knowledge of the core ideas of sustainability and how they relate to Culture & Social Equity & Economics	EVR 4873: Essay focused on student's ability to articulate the impact of cultures around the world on the environment.	80% of the students will earn 80% or higher on this essay.		
C. Demonstrate understanding of the triple-bottom line (<i>i.e.</i> environmental, social, economic)	ENT 4XXX: Sustainable Business Plan: Create a comprehensive business plan for exercising entrepreneurial leadership at a sustainable enterprise.	80% of the students will earn 80% or higher on the Development of a Sustainable Business Plan		
D. Demonstrate mastery of the key entrepreneurial components of sustainable jobs and the difference between obtaining and creating a job.	ENT 3004: Essay focused on Contemporary Topics in Sustainability	80% of the students will earn 80% or higher on this essay.		

2. Communication Skills				
Goals/Objectives	Means of Assessment/ Corroborating Evidence*	Criteria for Success	Findings	Plan for Use of Findings to Improve Degree Program
A. Effectively communicate concepts of sustainability to different audiences through both oral and written media.	CHM 3080: Personal Sustainability Journal with class presentation on individual “footprint”.	70% of the students will earn 70% or better on the class oral presentation.		
	SYA 3310: Introduction and Literature review for research paper on sustainability (written presentation)	80% of the students will receive a grade of 80% or higher on this assessment		

3. Critical Thinking Skills				
Goals/Objectives	Means of Assessment/ Corroborating Evidence*	Criteria for Success	Findings	Plan for Use of Findings to Improve Degree Program
A. Demonstrate strong research and applied problem-solving skills in relation to specific sustainability studies.	SYA 3310: Successfully complete a community-based research project on a local sustainability problem utilizing qualitative research methods.	80% of the students will receive a grade of 80% or higher on these assignments		
	ENT 4XXX: Sustainable Business Plan: Create a comprehensive business plan for exercising entrepreneurial leadership at a sustainable enterprise.			
B. Justify and apply systems theory to specific sustainability challenges in the three key areas of sustainability (economic, social/cultural, and environmental).	EVR 3877: Present and defend a detailed proposal for a sustainability project in a community.	75% of the students will receive a grade of 80% or higher on this assignment		
C. Synthesize the core ideas of sustainability and how they relate to the environment, culture, social equity and economics.	CHM 3080: Personal Sustainability Journal with class presentation on individual “footprint”.	70% of the students will earn 70% or better on the class oral presentation.		

4. Civic Engagement (optional):				
Goals/Objectives	Means of Assessment/ Corroborating Evidence*	Criteria for Success	Findings	Plan for Use of Findings to Improve Degree Program
A. Apply and manipulate diverse measures of sustainability and the key metrics used in such measurements.	ISS 4942: Practicing Sustainability: Final report and / or poster	70% of students will earn 70% or better on the final project		

APPENDIX D
Course Catalog (proposed)

B.A. in Sustainability Studies (CIP 30.3301)

Total Degree Hours: 120

The Sustainability Studies Bachelor of Arts degree at University of South Florida St. Petersburg will prepare graduates for careers in industrial settings, commercial outlets, not-for-profit organizations, and government agencies. A degree in Sustainability Studies allows the individual to become *the point of contact* for *managers*, owners, and politicians when implementing new technologies and policies. Sustainability Studies provides the tools to safeguard the well-being of future generations, increase profits today, and understand the role science plays in developing new technologies to address societal challenges.

A degree in sustainable studies will increase the value of a degree in:

Business: by understanding how sustainability concepts can increase efficiency and profits and provide corporate direction to deal with the ever-changing policy landscape.

Social Science and Policy: to help create and implement new policies, laws, and techniques to create a stable and enriched future and to protect the well-being of future generations.

Science: by enhancing the understanding behind new technologies and the ability to help businesses and government agencies to implement sustainable processes.

Students must complete 120 course hours, including all required prerequisite and core courses concentration. The curriculum includes all university and college degree requirements.

- Minimum of 120 earned semester hours with overall 2.00 GPA, including all courses attempted within the USF System;
- A transfer student must have a minimum USF GPA of 2.0 or higher and an overall GPA of 2.0 or higher;
- Complete a minimum of 30 credit hours at USFSP;
- Complete a minimum of 20 credit hours in the major at USFSP;
- Satisfactorily complete writing and computation course requirements of 6A-10.030;
- Earn a minimum of 42 semester hours of upper-level work (courses numbered 3000 and above);
- Complete all Liberal Arts Requirements;
- Complete program requirements; and
- Be recommended for graduation by the Dean of the College of Arts and Sciences.

University General Education Requirements (36 hours)

- Six (6) hours credit in English
- Six (6) hours credit in Mathematics
- Six (6) hours credit in Natural Sciences
- Six (6) hours credit in Social Sciences
- Six (6) hours credit in Humanities
- Six (6) additional hours of approved General Education electives

College of Arts and Sciences Exit Requirements (9 hours)

- Six (6) hours credit in Major Works and Major Issues
- Three (3) hours credit in Literature and Writing

Students must complete all required courses with a grade of C or better (not C-).

The Sustainability Studies degree program includes:

All prerequisite requirements are included in the General Education requirements:

- MAC 1105 – College Algebra (3 Credit Hours) (General Education Mathematics)
- STA 2023 - Introductory Statistics I (3 Credit Hours) (General Education Mathematics)
- CHM 2020 – Chemistry for Liberal Studies I (3 Credit Hours) (General Education Natural Science)
- EVR 2001 – Introduction to Environmental Science (3 Credit Hours) (General Education Natural Science)
- GEA 2001 World Regional Geography (3 Credit Hours) *or* ANT 2410 Cultural Anthropology (3 Credit Hours) (General Education Social Science)
- ECO 2013 Macroeconomics (3 Credit Hours) *or* SYG 2000 Introduction to Sociology (3 Credit Hours) (General Education Social Science)

The core courses are designed to provide students with a broad interdisciplinary knowledge base in business, social sciences and the natural sciences to prepare students for a wide variety of careers or graduate work in fields related to sustainability studies.

A dual major is strongly recommended. Please contact your adviser to plan your degree.

Required core courses (30 Credit Hours):

Natural Science

- EVR 2001 – Introduction to Environmental Science (3 Credit Hours)
- CHM 3080 – Chemistry for Sustainability (3 Credit Hours)
- PHY 2038 – Physics of Energy, Climate Change & Environment (3 Credit Hours)

Social Science

- EVR 3877 – Sustainability of Human Systems (3 Credit Hours)
- EVR 4873 – Environmental Policy & Sustainability (3 Credit Hours)
- GEO 3113 – Qualitative Research Methods in Geography (3 Credit Hours)

Business

- ENT 3004 – Introduction to Entrepreneurship (3 Credit Hours)
- ENT 4XXX – Sustainable Entrepreneurship (3 Credit Hours)
- GEB 3373 - International Business (3 Credit Hours)

CAPSTONE

- ISS 4942 – Practicing Sustainability (4 Credit Hours)

APPENDIX E. EAB Report



DATA SNAPSHOT

Market Demand for a
Bachelor's-Level
Sustainability Studies
Program

Analysis of National and Southern Florida
Employer Demand

COE Forum

Bridget Moran

Market Research Associate

Kacper Coulter

Market Research Manager

LEGAL CAVEAT

EAB is a division of The Advisory Board Company ("EAB"). EAB has made efforts to verify the accuracy of the information it provides to members. This report relies on data obtained from many sources, however, and EAB cannot guarantee the accuracy of the information provided or any analysis based thereon. In addition, neither EAB nor any of its affiliates (each, an "EAB Organization") is in the business of giving legal, medical, accounting, or other professional advice, and its reports should not be construed as professional advice. In particular, members should not rely on any legal commentary in this report as a basis for action, or assume that any tactics described herein would be permitted by applicable law or appropriate for a given member's situation. Members are advised to consult with appropriate professionals concerning legal, medical, tax, or accounting issues, before implementing any of these tactics. No EAB Organization or any of its respective officers, directors, employees, or agents shall be liable for any claims, liabilities, or expenses relating to (a) any errors or omissions in this report, whether caused by any EAB organization, or any of their respective employees or agents, or sources or other third parties, (b) any recommendation or graded ranking by any EAB Organization, or (c) failure of member and its employees and agents to abide by the terms set forth herein.

EAB, Education Advisory Board, The Advisory Board Company, Royall, and Royall & Company are registered trademarks of The Advisory Board Company in the United States and other countries. Members are not permitted to use these trademarks, or any other trademark, product name, service name, trade name, and logo of any EAB Organization without prior written consent of EAB. Other trademarks, product names, service names, trade names, and logos used within these pages are the property of their respective holders. Use of other company trademarks, product names, service names, trade names, and logos or images of the same does not necessarily constitute (a) an endorsement by such company of an EAB Organization and its products and services, or (b) an endorsement of the company or its products or services by an EAB Organization. No EAB Organization is affiliated with any such company.

IMPORTANT: Please read the following.

EAB has prepared this report for the exclusive use of its members. Each member acknowledges and agrees that this report and the information contained herein (collectively, the "Report") are confidential and proprietary to EAB. By accepting delivery of this Report, each member agrees to abide by the terms as stated herein, including the following:

1. All right, title, and interest in and to this Report is owned by an EAB Organization. Except as stated herein, no right, license, permission, or interest of any kind in this Report is intended to be given, transferred to, or acquired by a member. Each member is authorized to use this Report only to the extent expressly authorized herein.
2. Each member shall not sell, license, republish, or post online or otherwise this Report, in part or in whole. Each member shall not disseminate or permit the use of, and shall take reasonable precautions to prevent such dissemination or use of, this Report by (a) any of its employees and agents (except as stated below), or (b) any third party.
3. Each member may make this Report available solely to those of its employees and agents who (a) are registered for the workshop or membership program of which this Report is a part, (b) require access to this Report in order to learn from the information described herein, and (c) agree not to disclose this Report to other employees or agents or any third party. Each member shall use, and shall ensure that its employees and agents use, this Report for its internal use only. Each member may make a limited number of copies, solely as adequate for use by its employees and agents in accordance with the terms herein.
4. Each member shall not remove from this Report any confidential markings, copyright notices, and/or other similar indicia herein.
5. Each member is responsible for any breach of its obligations as stated herein by any of its employees or agents.
6. If a member is unwilling to abide by any of the foregoing obligations, then such member shall promptly return this Report and all copies thereof to EAB.

Table of Contents

1) Research Methodology.....	4
Project Challenge.....	4
Methodology and Definitions	4
Burning Glass Labor/Insight™	4
Project Sources	5
2) Employer and Student Demand	6
Demand over Time	6
Student Completions.....	7

1) Research Methodology

Project Challenge:

Leadership at the University of South Florida—St. Petersburg approached the Forum as they considered launching a new bachelor's-level sustainability studies program. Through a combination secondary research and quantitative data analytics, the Forum sought to assess the market viability of a bachelor's-level sustainability studies program.

EAB's market research function provides insights which guide strategic programmatic decisions at member institutions. The Forum combines qualitative and quantitative data to help administrators identify opportunities for new program development, assess job market trends, and align curriculum with employer and student demand.

EAB reports rely primarily on labor market data from the Burning Glass Labor/Insight™ tool (description below). Reports occasionally use data from the United States Census Bureau and United States Bureau of Labor Statistics data to explore occupation and job trends. Market research reports may also incorporate Integrated Postsecondary Education Data System (IPEDS) data to assess student enrollment, demographics, and completion rates across competitor programs.

Methodology and Definitions:

Methodology: Unless stated otherwise, this report includes data from online job postings from October 2016 to September 2017. The Forum analyzed postings which required a bachelor's-level degree and sustainability-related skills (e.g., 'sustainability research,' 'environmental policy,' 'environmental sustainability').

Definitions: "Regional data" refers to five counties in southern Florida: Hillsborough, Manatee, Pasco, Pinellas, and Sarasota.

"State" and "statewide" data refers to Florida.

Annual growth in job postings is measured in the change between January 2014 and June 2017 by six-month halves (i.e., H2 2014 is July 2014 to December 2014).

Burning Glass Labor/Insight™

EAB's Partner for Real-Time Labor Market Data

This report includes data made available through EAB's partnership with Burning Glass Technologies, a Boston-based leader in human capital data analytics. Burning Glass Technologies specializes in the use of web spidering technology to mine more than 80 million online job postings and analyze real-time employer demand. Under this partnership, EAB may use Burning Glass's proprietary Labor/Insight™ tool to answer member questions about employer demand for educational requirements, job titles, and competencies over time, as well as by geography. The tool considers job postings "unspecified" for a skill, industry, employer, geography, certification, or educational requirement when the job posting did not advertise for one of these particular job characteristics. Unspecified postings represent null values and should be excluded from the total number (n value) of job postings analyzed in the query. A more complete description of the tool is available at <http://www.burning-glass.com/products/laborinsight-market-analysis/>.

For more information about the Labor/Insight™ tool, please contact Betsy Denious, Director of Business Development Learning & Policy at bdenious@burning-glass.com or 301-525-6596.

Project Sources

The Forum consulted the following sources for this report:

- EAB's internal and online research libraries (eab.com)
- National Center for Education Statistics (NCES) (<http://nces.ed.gov/>)

2) Employer and Student Demand

Demand over Time

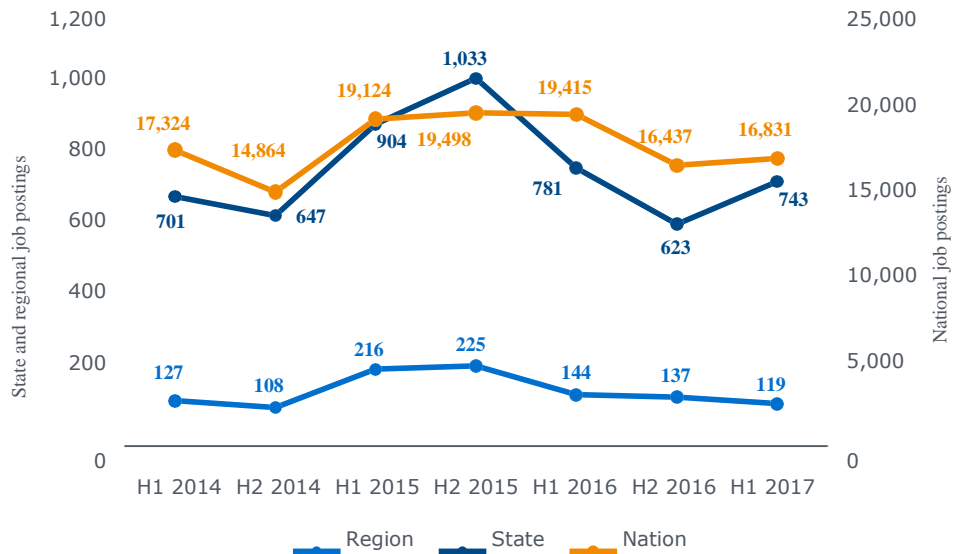
Regional Demand for Bachelor’s-Level Sustainability Professionals Decreased Six Percent

Administrators at the **University of South Florida-St. Petersburg** should note regional employers post six percent fewer bachelor’s-level sustainability-related positions from H1 2014 to H1 2017 (i.e., 127 postings to 119). Conversely, employers in Florida post six percent more bachelor’s-level sustainability-related positions in the same time period. Nationally, employers post two percent fewer bachelor’s level sustainability-related positions from H1 2014 to H1 2017. Demand reached a peak in H2 2015 regionally, statewide, and nationally.

The Bureau of Labor Statistics (BLS) projects an average of seven percent growth across all occupations nationwide between 2016 and 2026. However, the BLS projects employment of “environmental scientists and specialists” to increase 11 percent from 2016 to 2026, faster than average. The BLS attributes this growth to increased public interest in dangers to the environment and increased environmental demands due to population growth.¹

Historical Demand for Bachelor’s-Level Sustainability Professionals

January 2014-June 2017, National and Regional Data²



¹The Bureau of Labor Statistics

Student Completions

Institutions Nationwide Report a 198 Percent Increase in Degree Completions of Bachelor’s-Level Sustainability Studies Programs between 2011 and 2015

Nationwide, student completions of bachelor’s-level sustainability studies programs increased 198 percent between 2011 and 2015 (i.e., from 137 graduates in 2011 to 408 in 2015), according to the most recent year of available data (i.e., 2015).³

Within the state of Florida, institutions report 43 graduates of bachelor’s-level sustainability studies degree programs, compared to three graduates in 2011. Three state institutions report at least one graduate from a bachelor’s-level sustainability studies program between 2011 and 2015 (i.e., **Eckerd College, Jacksonville University, and the University of Florida**).

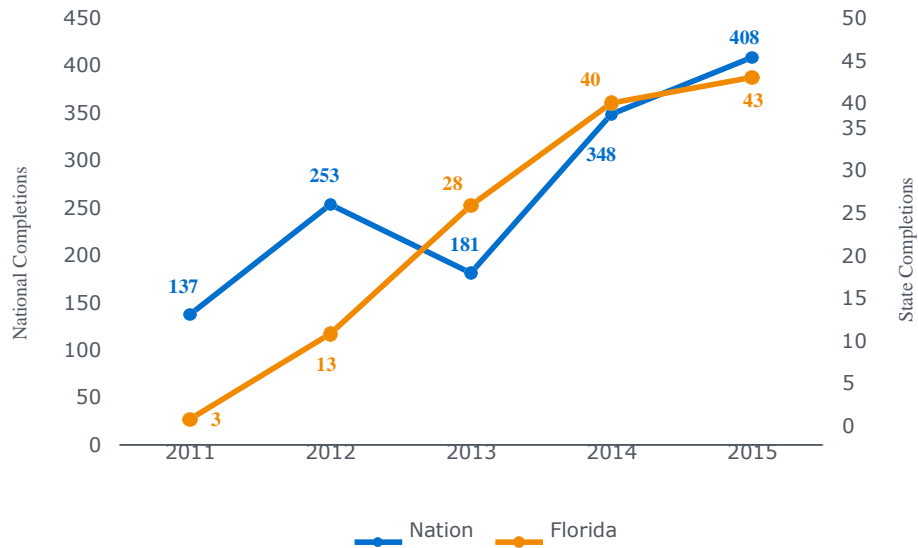
Eckerd College reported one sustainability studies graduate in 2012. However, the institution website no longer lists a sustainability studies major. The schools in Florida with the highest number of bachelor’s-level sustainability graduates in 2015 include:

- University of Florida: 40 graduates, and
- Jacksonville University: 3 graduates.

Degree Completions of Bachelor’s-Level Sustainability Studies Programs

2011-2015, State and National Data

The Forum identified completions using the following CIP Code: 30.33 (Sustainability Studies)



Appendix F

Local Businesses Expressing a Need to Hire Experts in Sustainability

NAME	COMPANY	POSITION	EMAIL	PHONE NUMBER
Sharon Wright	City of St. Petersburg	Sustainability & Resiliency Manager	sharon.wright@stpete.org	727-551-3396
Marty Sorrentino	City of St. Petersburg	Capital Projects Coordinator	martin.sorrentino@stpete.org	727-893-7495
Cheryl Stacks	City of St. Petersburg	Transportation Manager	cheryl.stacks@stpete.org	727-892-5328
Lucas Cruse	City of St. Petersburg	Bicycle & Transportation Coordinator	lucas.cruse@stpete.org	727-892-5274
Robyn Keefe	City of St. Petersburg	Urban Planner & Historic Preservation	robyn.keefe@stpete.org	727-892-5255
Tom Lawery	Duke Energy	Wholesale Renewable Energy Manager	thomas.lawery@duke-energy.com	727-820-5032
Laura Whitted	Duke Energy	Account Executive	laura.whitted@duke-energy.com	727-820-4413
George Gurlaskie	Duke Energy	Energy Efficiency Engineer	george.gurlaskie@duke-energy.com	386-451-9533
Janet Hall	Destination Better	Sustainability Consultant	janet@destinationbetter.com	813-416-4194
Josh Kane	Two Trails	LEED Project Manager	josh@twotrails.com	941-776-8680
Pete Killean	Two Trails	LEED Consultant	pete@twotrails.com	941-776-8681
Susan Glickman	Southern Alliance for Clean Energy	Florida Director	susan@cleanenergy.org	727-742-9003
Travis Barnes	Hillsborough County	Recycling Coordinator-Solid Waste Division	barnest@hillsboroughcounty.org	813-209-3085
Marian Davidore	Pinellas County	Senior Public Health Nutritionist	marian_davidove@doh.state.fl.us	7270824-6900
Jan Tracy	Pinellas County	Recycling Program Coordinator	jtracy@co.pinellas.fl.us	727-464-7533
Mark Webb	Tampa Bay Trane	Director of Business Development	mark.webb@trane.com	813-877-8251
Brice Rich	Tampa Bay Trane	Intelligent Energy Services Manager	brice.rich@trane.com	813-486-6571
Christina Perez	City of Dunedin	Sustainability Coordinator	cperez@dunedinfl.net	727-298-3215
Trista Brophy	City of Oldsmar	Sustainability Coordinator	brophy.trista@gmail.com	
Evan Bollier	Eckerd College	Sustainability Director	bolliea@eckerd.edu	727-864-8908
Jennifer Vessel-Smith	Hillsborough Community College	Sustainability Coordinator	jsmith387@hccfl.edu	813-253-7681
Chris Kenrick	St. Pete Eco Village/Hostel	Managing Director	chriskenrick195@gmail.com	727-212-2883
Bakari Kennedy	Suncoast Credit Union	Director of Facilities	bakarichris.kennedy@suncoastcreditunion.com	813-621-7511
Bill Johnson	Brilliant Harvest	President	bill@brillianttharvest.com	941-345-7652
Monte Bains	Region Solar	Solar Professional	monte@regionsolar.co	941-355-6565
Scott McIntyre	SEM Power	President	scott@solarenergymgmt.com	727-430-3043
James Helm	SEM Power	Vice President	james@sempower.net	321-795-8823
Brett Emes	SEM Power	Owner	brett@sempower.net	813-477-8486
Sharon Joy Kleitsch	Connection Partners	Community Consultant	kleitsch@verizon.net	727-550-9660
Rich Glueck	Solar Energy Systems	Commercial Contractor	info@solar4u.com	727-347-4246
Debbie Evenson	Keep Tampa Bay Beautiful	Executive Director	devenson@keepbb.org	813-221-8733
Pat DePlasco	Keep Pinellas Beautiful	Executive Director	pdeplasco@kpbcares.org	813-598-8803
Stephanie Cain	Blue Turtle Society	Project Manager	stephanie@blueturtlesociety.org	727-310-1820

Board of Trustees Meeting - New Business - Consent agenda

Albert LaPara	TLC Engineering	Senior Energy Consultant	al.lapara@tlc-eng.com	813-281-8416
Steve Roe	Center for Climate Strategies	Technical Program Manager	sroe@climatestrategies.us	407-864-1895
Phil Compton	Sierra Club	Senior Organizing Representative	phil.compton@sierraclub.org	727-824-8813
Shannon O'Malley	Brick Street Farms	Operational Manager	shannon@brickstreetfarms.com	727-310-5775
Bill Bilodeau	St. Pete Sustainable Urban Ag Coalition	Founding Director	bbilodeau40@gmail.com	
Aaron Metz	Solar Source	Commercial Accounts Manager	ametz@solarsource.net	727-572-4247
Sean Sullivan	Tampa Bay Regional Planning Council	Executive Director	sean@tbrpc.org	727-570-5151
Amanda Sloan	PSTA	Public Engagement Specialist	aslone@psta.net	727-540-1804
Juan Luvian	PSTA	Community Engagement Liaison	jluvian@psta.net	727-540-1895
Cassandra Borchers	PSTA	Chief Development Officer	cborchers@psta.net	727-540-1802
Kip Goulder	APG Engineering & Automation	Energy Estimator	kip.goulder@apg.company	727-530-0077
Jamie Morgan	Tecta America	Roofing Project Manager	jmorgan@tectaamerica.com	813-321-0464
Pete Kanaris	GreenDreams	Chief Consultant	greendreamsfl@yahoo.com	727-430-6700
Aleta Kane	City of Tampa	Recycling Specialist	aleta.kane@tampagov.net	813-348-1027
Heather Henderson	Edible Peace Patch	Farm Director	gardenman@gmail.com	727-709-5258
Gabriella Balsam	SWFWMD	Low Risk Permit Evaluator	gabriella.balsam@watermatters.org	813-985-7481
Siobhan Gorham	Fish & Wildlife Research Institute	Plant Biologist Researcher	siobhan.gorham@myfwc.com	727-896-8682
Howard Johnston	Chart 411	Board Director	hojofl@gmail.com	813-240-2620
Sara Kane	Sarasota County	Sustainability Manager	skane@scgov.net	941-861-9802
Eric Trull	Cycle Hop	Program Director	eric.trull@cyclehop.com	407-569-8993
Eve Spengler	Bay Mulch	Organics Recycling Director	eve@baymulch.com	813-465-1726
Josh Stewart	Solgen Renewables	Divisional Sales Manager	josh@solgenrenewables.com	603-966-7599
Paromita Chatterjee	United Nations Tampa Bay Chapter	Program Director	programs@unatampabay.org	954-821-6126
Sarah mason	Real Building Consultants	LEED Building Consultant	sarah@realbuildingconsultants.com	941-779-8637
Bob Bruno	Advanced Green Technologies	Business Development Manager	robertb@agt.com	908-963-2332
Rick Love	Commercial Plastics Recycling	Purchasing & Sales Manager	rickl@cprinc.net	813-712-3771
Joe Petti	Busch Gardens	Director of Env. Health & Safety	joseph.petti@buschgardens.com	813-987-5354

Letters of Support



College of Liberal Arts and Sciences
Academic Advising Center

100 Fletcher Drive
PO Box 112015
Gainesville, FL 32611-2015
352-395-1521
352-392-2905 Fax

March 29, 2018

Dr. Frank Biafora
Professor and Dean, College of Arts and Sciences
University of South Florida St. Petersburg

Dear Dr. Biafora,

Many thanks for the opportunity to review your proposed Bachelor of Arts in Sustainability Studies. The University of Florida currently offers this degree through our college. Your proposal seems like a thoughtful and appropriate addition to the curriculum, and we certainly have no concerns or objections. On the contrary, we are pleased to see the growth in this interdisciplinary field, which will be critical to meeting the needs of the state in the twenty-first century.

Sincerely,

A handwritten signature in black ink, appearing to read 'Joseph F. Spillane', with a horizontal line extending to the right.

Joseph F. Spillane
Professor, History
Associate Dean for Academic and Student Affairs, College of Liberal Arts and Sciences
Director, Academic Advising Center

Letter of Support from Patel College of Global Sustainability



March 23, 2018

**Dr. Frank Biafora
Dean, College of Arts &
Sciences University of South
Florida, St. Petersburg**

Re: Letter of Support for Bachelor of Arts degree in Sustainability Studies

It is with great pleasure that I write in support of your proposal to launch a new interdisciplinary Bachelor of Arts major in Sustainability Studies. After having had several productive meetings with you and your colleagues, I am convinced about the academic merits of the proposed program. I have had discussions with my colleagues in the Patel College of Global Sustainability about your program; we are very supportive of your venture. Moreover, we see opportunities for collaboration down the road as your graduates as potential applicants to our Master of Arts degree in Global Sustainability. I am also open to your suggestion of exploring a 4+1 BA and MA program in due course.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Govindan Parayil". The signature is fluid and cursive.

**Govindan
Parayil, PhD
Dean**

Cc: Cynthia Brown Hernandez, Associate Director



November 6, 2017

Dear USFSP and USF System Academic Review Committees/Teams,

It is with great pleasure that I write this letter in support of Bachelor of Arts degree in Sustainability Studies. From the very early stages of deliberation and development this program has been intentionally built to be as relevant, distinctive, and collaborative as possible.

This degree has never been more important than today. The career opportunities for graduates across business, social sciences and natural sciences reflect an emerging market that is both promising and strong. Our students will be prepared through rigorous coursework and required engagement/internship experiences for direct entry into high wage careers and/or for entry into further graduate study.

With respect to being distinctive you will appreciate that only University of Florida offers a major in this area, and ours is distinct and unique in its own right. We anticipate that students seeking to pursue exciting careers that students across a wide range of disciplines will be drawn to this particular program. As will students who recognize the utility of this degree as a second major or minor.

You will also notice that this program benefits by being interdisciplinary and collaborative, having been built from the ground up with direct input from faculty from the College of Arts and Sciences, and the Kate Tiedemann College of Business. Once the program launches in 2018 we will monitor student interest, graduate success and market demand and adjust the curriculum quickly to meet head-on any future opportunities.

In terms of the budget, I wish to acknowledge that the College is well positioned financially to launch this program in 2018 and to grow overtime. Recurring funds have already been committed and set aside to hire the necessary faculty.

For all these reasons and more, I cannot help be extremely excited about this new major. Thank you for your careful consideration. I hope that you too see that this is the right time and place to launch the Bachelor's Degree in Sustainability Studies.

I wish to thank Dr. Jim Gore and Dr. Susan Toler and the many members of the team (Dr. John Osegovic, Dr. Rebecca Johns, Dr. Chris Meindl, Dr. Karin Braunsberger, Dr. Jay Sokolovsky, Dr. Richard Mbatu, Dr. Gary Patterson, Brian Pullen, Dr. Leon Hardy, Dr. Serge Desir, Holly Kickliter, Paul Schultz, Lauren Freedman, and Lesa Shouse) for their dedication and collegial approach to pulling together this exceptional proposal in record time.

Sincerely,

A handwritten signature in blue ink, appearing to read "Frank Biafora", is written over a light blue horizontal line.

Frank Biafora, Ph.D.
Dean



DestinationBetter™

Discover social, environmental and wellness opportunities
to make your business better

November 7, 2017

Brian Pullen
University of South Florida St Petersburg 140 7th Ave S.
St. Petersburg, FL 33701 Dear Brian,

Please accept this letter as a show of Destination Better's support for USFSP with their development of the Bachelor of Arts degree in Sustainability Studies.

As sustainability and corporate responsibility strategists and communicators for companies as large as the Fortune 15, including the companies in those larger supply chains, we know first-hand what our firm and other companies expect of a student who has graduated with a degree in sustainability studies. Hence, we look forward to further providing input on curriculum and influencing the progress of the degree as well as its learning outcomes and objectives.

Sincerely,

Janet Hall
Founding Partner, Destination Better



Dear Board of Trustees;

The concept of sustainability has become prevalent across many different fields and is quickly becoming a foundational element of decision making in policymaking, conservation, business, urban design, consumer behavior, and building design/construction. The field of sustainability will require leadership development to guide its direction and growth. Colleges and Universities are the ideal places to garner this type of leadership development.

We fully support USFSP with their development of the Bachelor of Arts degree in Sustainability Studies. We look forward to further influencing the progress of the degree as well as its learning outcomes and objectives.

Sincerely,

A handwritten signature in black ink, appearing to read "Josh Kane". The signature is stylized and cursive.

Josh Kane
LEED & NGBS Project Manager Two Trails, Inc.
941.776.8680
josh@twotrails.com



Office of the Dean

MEMO

To: Dr. Frank Biafora
Dean, College of Arts and Science

From: Dr. Sridhar Sundaram
Dean, Kate Tiedemann College of Business

Subject: Letter of Support – B.A. in Sustainability Studies

Date: March 28, 2018

CC: Dr. Olufunke Fontenot, Regional Vice Chancellor of Academic Affairs
Dr. Susan Toler, Associate Dean, College of Arts and Science
Dr. Gary Patterson, Associate Dean, Kate Tiedemann College of Business

The Kate Tiedemann College of Business is committed to supporting the Bachelor of Arts degree in Sustainability Studies. We are committed to offering the “Sustainable Entrepreneurship” course which is a required course for the major. Other elective courses for the major may be offered based upon student demand. We look forward to collaborating with our colleagues from the College of Arts and Science in offering this degree program.



To Whom It May Concern,

The concept of sustainability has become prevalent across many different fields and is quickly becoming a foundational element of decision making in policymaking, conservation, business, urban design, consumer behavior, and building design/construction. The field of sustainability will require leadership development to guide its direction and growth. Colleges and Universities are the ideal places to garner this type of leadership development.

Duke Energy joins other organizations in fully supporting the University of South Florida St. Petersburg (USFSP) in their development of a degree program in Sustainability Studies. We have had the privilege of working with USFSP on several diverse sustainability projects that have fostered sustainable design and innovative research. Some of these projects include awarding USFSP with our SunSense grant, which entailed the installation of a 100kW solar carport array that sits on top of the Fifth Avenue Parking Facility and feeds energy to a 200kW battery storage system. This project helps the garage meet all of its energy needs including lighting loads and various levels of electric vehicle charging stations while being a carbon neutral facility. Our Duke Energy engineering team is also working with USF engineering on data research of an Auto Demand Response system at the Harbor Hall building. Furthermore, we remain engaged with the USFSP Office of Sustainability as they achieve their Climate Action Plan goals.

We look forward to further influencing the progress of the degree as well as its learning outcomes and objectives. If I can be any further assistance please don't hesitate to reach out.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tom Lawery', written over a white background.

Tom Lawery, P.E. ,MBA
Manager of Wholesale and Renewable Energy
Duke Energy

Appendix G

Sustainability Studies Library Assessment

Collection Assessment, Sustainability Studies
Nelson Poynter Memorial Library, University of South Florida
October 2017, prepared by Patricia Pettijohn

The Nelson Poynter Memorial Library, University of South Florida St. Petersburg (USFSP), houses an extensive collection of materials that supports the educational, research, and service missions of USF St. Petersburg. USF St. Petersburg faculty, staff, and student have on-site access to the Poynter Library's collection of over 221,620 items, including monographs, current periodical and serial subscriptions, newspaper subscriptions, and audiovisual titles, as well as to the shared electronic resources of the USF System, providing USFSP students unlimited access to the vast holdings of a Carnegie Research 1 doctoral institution, including major journals, databases, e-book collections and reference resources across disciplines.

Additionally, USFSP faculty and students can access 206,700 documentaries and instruction videos available online through streaming media. All resources are available remotely to currently affiliated USF students, faculty, and staff through the use of NetID or an authenticated server.

An interdisciplinary program focusing on sustainability in development, design, ecology, environmental policies, economics, ethics, anthropology, sociology, city and regional planning, and natural resources, Sustainability Studies requires library resources that are both broad in scope, and specific to the concept of sustainability.

Selected Databases

Sustainability Science Abstracts: Includes AGRICOLA, TOXLINE, ESPM (Environmental Sciences and Pollution Management) and Environmental Impact Statements (EIS) databases and provides full-text titles from around the world, including scholarly journals, trade and industry journals, magazines, technical reports, conference proceedings, and government publications. This database includes specialized, editorially-curated A&I resources covering such topics as the effects of pollution on people and animals and environmental action and policy responses.

Other relevant databases include:

- ProQuest Biological Science
- BIOSIS Previews
- Web of Knowledge (includes Web of Science, Current Contents Connect, Journal Citation Reports (JCR) and Biosis Previews)
- Ecology Abstracts
- Environmental Index
- Proquest Environmental Science Collection
- GEOBASE
- GeoRef
- GreenFile (Ebsco)
- GREENR
- JSTOR
- Pollution Abstracts
- Toxicology Abstracts
- Water Resources Abstracts
- Applied Science & Technology Source, includes Applied Science & Technology Index Retrospective, Applied Science & Technology Index, Applied Science & Technology Abstracts, Applied Science & Technology Full Text
- Applied Social Sciences Index and Abstracts (ASSIA)
- SAGE Research Methods
- Social Services Abstracts
- Social Sciences Full Text (EBSCO)
- Sociological Abstracts
- Sociology: A SAGE Full-Text Collection
- WestlawNext (Westlaw Campus Research)
- ACM Digital Library
- ABI/INFORM ProQuest: Archive complete; Dateline; Global; Trade and Industry
- Academic Search Premier
- Business & Management Practices
- Business Source Premier (Ebsco)
- Gale Business & Company Resource Center
- Gale EconLit
- Gale General Business File ASAP
- Hospitality & Tourism complete (Ebsco)
- Lexis Nexis Academic
- NewsBank Access World News
- Wilson Business Full Text

Selected Major Journals

- Annual Review of Environment and Resources
- Business Strategy and the Environment
- Corporate Social Responsibility and Environmental Management
- Current Opinions in Environmental Sustainability
- Ecological Economics
- Ecology and Society
- Ecosystem Services
- Energy, Sustainability and Society
- Environmental and Resource Economics
- Environmental Education Research
- Environmental Impact Assessment Review
- Environmental Management
- Environmental Science & Policy
- International Journal of Life Cycle Assessment
- International Journal of Environmental, Cultural, Economic, and Social Sustainability: Annual Review
- International Journal of Renewable Energy Research
- International Journal of Sustainability Policy and Practice
- Journal of Environmental Economics and Management
- Journal of Environmental Management
- Journal of Industrial Ecology
- Journal of Sustainable Tourism
- Mitigation and Adaptation Strategies for Global Change
- Sustainability

In addition, the following large journal packages offer broad full text coverage in relevant subject areas:

- AGU Digital Library Journals (1896-1995) [Accessible on Wiley Online Library]
- BioOne
- Century of Science
- Nature Publishing Group
- ScienceDirect
- SpringerLink
- Taylor & Francis Online
- Wiley Interscience--now called Wiley Online Library

Selected Reference Resources

- *Dictionary and Introduction to Global Environmental Governance*, ed. 2, Richard A Meganck and Richard E Saunier. Taylor and Francis, 2009
<https://ebookcentral-proquest-com.ezproxy.lib.usf.edu/lib/usf/detail.action?docID=430022>
- *Dictionary of Ecodesign: An Illustrated Reference*, Ken Yeang and Lillian Woo. Taylor and Francis, 2010.
<https://ebookcentral-proquest-com.ezproxy.lib.usf.edu/lib/usf/detail.action?docID=496319>
- *A Dictionary of Environment and Conservation* by Michael Allaby (Editor); Chris Park (Editor) Print USF LIBRARY-St. Petersburg Circulating Collection GE10 .P375 2007
- 2013 ed. online <http://www.oxfordreference.com/view/10.1093/acref/9780198609957.001.0001/acref-9780198609957>
- *A Supplementary Dictionary of Transport Studies*, Helen Roby. Oxford University Press, 2014.
<http://www.oxfordreference.com/view/10.1093/acref/9780191765094.001.0001/acref-9780191765094>
- *A Dictionary of Energy Science*, Nick Jelley. Oxford University Press, 2017
<http://www.oxfordreference.com/view/10.1093/acref/9780191826276.001.0001/acref-9780191826276>
- *Encyclopedia of Global Change*, David Cuff and Andrew S. Goudie, eds.
<http://www.oxfordreference.com/view/10.1093/acref/9780195108255.001.0001/acref-9780195108255>
- *A Supplementary Dictionary of Renewable Energy and Sustainability*, Helen Roby. Oxford University Press, 2013.
<http://www.oxfordreference.com/view/10.1093/acref/9780199654581.001.0001/acref-9780199654581>
- *Berkshire Encyclopedia of sustainability. Volume 1, the spirit of sustainability*, Willis Jenkins and Whitney Bauman, eds. online
<https://ebookcentral-proquest-com.ezproxy.lib.usf.edu/lib/usf/detail.action?docID=500756>
- *Berkshire Encyclopedia of sustainability. Volume 2, the business of sustainability*, Willis Jenkins and Whitney Bauman, eds. Print USF LIBRARY-St. Petersburg Circulating Collection -- GE140.B47 2010

Selected Ebook Collections

Records for individual ebook titles are searchable in the USF Libraries Catalog. The following e-book collections have substantive content in sustainability studies across disciplines:

- *Cambridge Books Online* offers access to 10,189 eBooks from Cambridge University Press, including 731 titles specific to sustainability studies.
- *CRCnetBASE*, Science, Technology, Engineering and Medicine eBook platform from CRC Press, a comprehensive eBook collection of over 15,000 references in 400 subject areas and more than 40 collections, including 8,089 book chapters with sustainability or sustainable in the title, and 222 books with sustainability or sustainable in the title.
- *e-Duke Books Scholarly Collection* includes at least 100 new electronic books published each year by Duke University Press in the humanities and social sciences and over 1,500 backlist titles, with 27 book titles with sustainability or sustainable in the title
- *EBSCOhost eBook Collection* (NetLibrary) The USF collection of over 69,000 titles with a focus on scholarly publications; over half of the titles are from university presses such as Oxford, MIT, and SUNY. This includes 543 books with sustainability or sustainable as subject headings, across disciplines.
- *EEE Xplore Digital Library*, The IEEE-Wiley Ebooks Library contains over 400 ebooks that cover a variety of disciplines in technology and science, including 38 books and 12,397 articles or chapters from conference proceedings, with sustainability or sustainable in the abstract.
- *Knovel Library*: Knovel provides reference works, handbooks, and datasets in science, technology and engineering covering material properties, process and design information, best practices, equations and formulations, interactive tables and graphs allowing users to manipulate, analyze, and export data. USF subscribes to three collections: Civil Engineering & Construction Materials, Electrical & Power Engineering, and Mechanics & Mechanical Engineering.
- *Lecture Notes in Earth Sciences (LNES)*: This series reports new developments in research and teaching in the entire field of earth sciences, including drafts of academic monographs, technical reports, advanced-level lectures, and reports of meetings.
- *OECD iLibrary* of statistical databases, books, and periodicals from the Organisation for Economic Co-Operation and Development (OECD), is one of the world's largest publishers in the fields of economics and public policy. OECD iLibrary includes over 1,800 online books, many on sustainability.
- *Oxford Handbooks Online*, includes Oxford Handbook of Business Ethics, and the Economics and Finance Foundation Collection (26 titles)
- *Oxford Scholarship Online (OSO)* is an online resource that aggregates over 13,600 ebooks from Oxford University Press, and includes collections of interest to sustainability studies across disciplines, including the Biology Collection, focused on "Ecology and Evolution", with emphasis on evolutionary biology, epidemiology, conservation biology, physiology, animal biology, marine biology, plant science, microbiology, ornithology, biotechnology, and natural history. Other relevant collections include the Business and Management Collection; Economics and Finance Collection; Law Collection; Public Health and Epidemiology Collection; Social Work Collection; and Sociology Collection.
- *Project MUSE ebooks* includes books sustainability in education, sociology, heritage, politics, energy and the environment.
- *ProQuest Ebook Central* major academic publishers worldwide, including Taylor & Francis, Palgrave Macmillan, Cambridge University Press, Kluwer Academic, Springer, and others. USF has access to 44,809 ebooks through Ebook central; 15,241 of these have sustainability as a keyword.
- *SAGE Research Methods (SRM)* provides the most comprehensive access to information about research methods (quantitative, qualitative and mixed methods) across the social and behavioral sciences, with over 100,000 pages of SAGE book and reference materials on research methods, and content from more than 800 books, including the "Little Green Books" series of complete Quantitative Applications in the Social Sciences.
- *The Springer ebook Collections*: USF has access to the collections in Architecture, Design and Arts, Behavioral Sciences, Biomedicine & Life Sciences, Business & Economics, Earth & Environmental Science, Energy, Engineering, and Humanities, Social Sciences & Law.
- *Taylor and Francis e-Books*: Over 65,000 e-books in a broad range of subjects, including humanities, social sciences, education, politics and international relations, behavioral sciences, business and industry.

Including all formats and materials, the USF Libraries offer materials specific to sustainability in the following subject areas:

- Environmental policy: 10,821 items matching subject heading USF LIBRARIES, 7,300 online.
- Ecology: 19,166 items matching subject heading USF LIBRARIES, 8,480 online.
- Landscape architecture: 1,009 items matching subject heading USF LIBRARIES, 351 online.
- City planning: 6,109 items matching subject heading USF LIBRARIES, 2,361 online.
- Regional planning: 4,003 items matching subject heading USF LIBRARIES, 1,572 online.
- Natural resources: 5,584 items matching subject heading USF LIBRARIES, 2,445 online.
- Ethics: 17,904 items matching subject heading USF LIBRARIES, 7,368 online.
- Economics: 41,185 items matching subject heading USF LIBRARIES, 27,446 online.
- Sociology: 16,970 items matching subject heading USF LIBRARIES 7,378 online.
- Anthropology: 9,985 items matching subject heading USF LIBRARIES, 5,075 online.
- Interdisciplinary Materials on Sustainability, Related to:

Agriculture (128)	History (109)
Business & Economics (185)	Human ecology (113)
Business & Economics/Industries/General (79)	Industrial management (102)
City planning (209)	International cooperation (71)
Climatic changes (96)	Law and legislation (98)
Conservation of natural resources (89)	Management (397)
Design and construction (73)	Natural resources (114)
Dissertations, Academic (117)	Organizational change (72)
Development durable (81)	Planning (103)
Economic aspects (250)	Renewable energy sources (158)
Economic conditions (143)	Social aspects (228)
Economic development (276)	Social responsibility of business (201)
Economic policy (133)	Sustainability (208)
Economics (73)	Sustainable agriculture (326)
Energy Conservation, Consumption, & Utilization (97)	Sustainable architecture (107)
Energy conservation (76)	Sustainable buildings (78)
Energy policy (72)	Sustainable development (1,894)
Environment (79)	Sustainable engineering (146)
Environmental aspects (959)	Sustainable forestry (100)
Environmental economics (88)	Sustainable urban development (120)
Environmental policy (368)	Technological innovations (114)
Environmental protection (106)	United States (76)
Forest management (79)	Urban ecology (Sociology) (108)
Government policy (154)	Water resources development (99)
	Water supply (121)

APPENDIX H

Core Faculty Curriculum Vitae

Richard S. Mbatu, PhD – Environmental Policy
Rebecca A. Johns, PhD – Geography
Karin Braunsberger, PhD - Entrepreneurship
Hemant Merchant, PhD – International Management

Richard S. Mbatu

Department of Environmental Science, Policy & Geography
Mail Drop, Davis 216
University of South Florida St. Petersburg
140 Seventh Ave South
St. Petersburg
FL 33701
Phone: 727 873 4967 Fax: 727 873 4526
Email:mbatu@mail.usf.edu

Education

Ph.D. (Environmental Science – Policy Focus) Oklahoma State University, 2006 Stillwater OK.
Graduate Certificate: (International Studies) Oklahoma State University, 2006 Stillwater OK
Graduate Diploma: (Environmental Engineering) University of Witwatersrand, 2012 South Africa.
M.S. (Geography) Oklahoma State University, 2003 Stillwater OK.
B.S. (Hons) (Geography and Environmental Management) University of Witwatersrand, South Africa 1999
B.S. (Geography and Environmental Management) University of Dschang, 1998 Dschang, Cameroon.

Professional Associations

- Association for Environmental Studies and Sciences
- Association of American Geographers
- Gamma Theta Upsilon Honor Society

Teaching Interests

My teaching interests are in the following areas of global environment and resource policy and politics: (1) International Resource Policy/Governance; (2) Global Environmental Institutions; (3) International Negotiations, Agreements and Conventions on Resource Issues; (4) Global Environmental Policy and Politics; (5) Society, Politics and the Environment.

Courses Taught

August 2013–Present: Assistant Professor – University of South Florida, St Petersburg.

- Global Conservation (GEO 4372).
- Environmental Politics and Policy (PUP 4203).
- Graduate Seminar in Environmental Policy (EVR 6937).
- Environmental Policy and Sustainability (EVR 4873).
- Introduction to Environmental Policy (EVR 2861).
- Environmental Science and Policy Project (EVR 4910).
- Geography Senior Seminar (EVR 4971)

- Thesis: Masters (EVR 6971).

January 2013–June 2013: Visiting Assistant Professor –Temple University.

- Environment and Society (ENVT/GUS 1051).
- Introduction to Physical Environment (ENVT/GUS 1052).
- Sustainable Environments (ENVT/GUS 0842).

August 2011–December 2012: Visiting Assistant Professor – Philadelphia University.

- Energy Systems and Politics (SUST 200).
- Environmental Policy (SUST 421).
- Sustainable Food Chains (SUST 120).
- Sustainable Planning and Land Use (SUST 204).

August 2007– May 2011: Instructor – Bowling Green State University, Ohio.

- Introduction to Environmental Studies (ENVS 1010).
- Water Resource Management – Environments in Context (ENVS 2300).
- Environmental Problems (ENVS 3010).
- Energy Policy (ENVS 4000).
- Forest Resource Management and Conservation (ENVS 4700).

August 2002–May 2006: Teaching Associate, Oklahoma State University.

- Introduction to Physical Geography (GEOG 1114).
- Introduction to Cultural Geography – TA (GEOG 1113).

Academic and Leadership Experiences

August 2013 – Present: Assistant Professor – University of South Florida St Petersburg.

January 2013 – May 2013: Visiting Assistant Professor – Temple University, Philadelphia, Pennsylvania.

August 2011 – December 2013: Visiting Assistant Professor – Philadelphia University, Philadelphia, Pennsylvania.

Community and Service-Learning Activities:

- Leader: Historic Preservation and Land Use, Fair Mount Park, Philadelphia.
- Leader: Sustainable Urban Farming, Weavers Way Farm, Philadelphia.
- Leader: Sustainable Urban Farming, Mill Creek Farm, Philadelphia. August 2007– May 2011: Instructor – Bowling Green State University, Ohio.

Internship Program Coordinator:

- Coordinating internship activities for Environmental Studies (Science and Policy) majors and ensuring that the type and quality of internships undertaken by students meet the objectives and goal of the internship program, and contributes to the overall mission of the Department.
 - o Organizing internship lectures.
 - o Collaborating with Campus Job Fair Center and client agencies in identifying suitable internships for students.
 - o Collaborating with faculty advisors and internship site supervisors in assessing interns' progress.
 - o Evaluating student internship portfolios.
 - o Organizing annual presentation of student internship experience.
- Production of *Internship Manual: A Guide for Students, Faculty, and Organizations*.

Community and Service-Learning Activities:

- Leader: Sustainable Forest Management Project - Oak Opening, Toledo Metro Parks, Ohio.
- Leader: Water Quality Testing and River Clean-up, Portage River, Pemberville, Ohio.
- Leader: Invasive Species Removal, Winter Garden, Bowling Green, Ohio.
- Leader: Prairies Restoration Project, Bowling Green Parks District, Bowling Green, Ohio.

September 2006: Associate Scholar – Center for World Indigenous Studies, Olympia, Washington.

August 2006-May 2007: RAISE Project – Rural Alliance for Improving Science Education, Oklahoma State University, Stillwater, OK.

Program Coordinator

- Worked with a team of 10 environmental educators (School Teachers) and 10 graduate students (Student Scientists) to involve high school students in environmental studies projects in school districts and communities in Oklahoma.
 - o Monitoring activities of Student Scientists and School Teachers.
 - o Directing activities of the program to meet the goals of the program.
 - o Collecting and analyzing data for the establishment of program priorities.
 - o Chairing meetings of Student Scientists and School Teachers.
 - o Assessing progress and outcomes of the program.
 - o Making regular visits and giving presentations at schools.
 - o Giving feedback on program activities to the Associate Dean of the College of Arts and Sciences (program director and grant PI), and helping in establishing strategic plans for the program.
 - o Producing monthly newsletters on the progress of the program.
 - o Producing the annual program report.

January 2003 – December 2006: Dissertation field work – Natural Resources Management and Land Use in the Rain Forest of Cameroon.

- Assessment of environmental impacts of forest loss in southern Cameroon.

May 1999 – August 2000: Consulting – Environmental Impact Assessment (EIA) of Power Line Transmission on the Prairie ecological landscape in northern Johannesburg, South Africa.

- Worked with a team of honors students at the University of Witwatersrand as consultants for the Guakan-Volcans project.

Research Interests

My research focus is in two interconnected areas: 1) forest resource management and policy aspects of sustainable development and climate change, and 2) the structure and function of plans, programs, bilateral and multilateral agreements and conventions dealing with forest resource management and climate change. I look into human-environment interactions through the lenses of political ecology, political economy of natural resources, environmental politics, and sustainable development. My current work looks at the role of the Reducing Emissions from Deforestation and forest Degradation (REDD+) program within the international climate change mitigation regime.

Publications

Refereed Journal Articles

- Gruber, J., **Mbatu, R.**, Johns, R., Dixon, B. (2017). “Measuring conservation success beyond the traditional biological criteria: the case of conservation projects in Costa Rica, Mekong Valley, and Cameroon”. *Natural Resources Forum*. DOI: 10.1111/1477-8947.12132.
- Mbatu, R.S. (2017). “Challenges and opportunities of a landscape governance approach to the REDD+ programme: a conservation outlook”. *Oryx*, 1-6.
- Mbatu, R.S. (2017). “Analysis of the effects of sectoral and subsectoral forces on forest policy related issues: the case of Cameroon's forest policy sector”. *International Forestry Review*, 19(2), 180-191.
- Mbatu, R.S. (2016) “REDD + research: Reviewing the literature, limitations and ways forward”. *Forest Policy and Economics* 73, 140–152.
- Mbatu, R.S. (2016). “Linking the global to the national: Examining the influence of international environmental agreements on Cameroon’s forest policy”. *International Environmental Agreements: Politics, Law and Economics*, 16(4), 465-492.
- Mbatu, R.S. (2015) “Domestic and international forest regime nexus in Cameroon: Assessing the effectiveness of REDD+ policy design in the context of the climate change regime”. *Forest Policy and Economics* 52, 46–56.
- Mbatu, R.S. and Otiso, K.M. (2012). “Chinese Economic Expansionism in Africa: A Theoretical Analysis of the Environmental Kuznets Curve Hypothesis in the Forest Sector in Cameroon”. *African Geographical Review*, 31(2), 142-162.
- Mbatu, R.S. (2009). “Forest Policy Analysis Praxis: Modeling the Problem of Forest Loss in Cameroon”. *Forest Policy and Economics* 11(1), 26-33.
- Mbatu, R.S. (2009). “Forest Exploitation in Cameroon (1884-1994): An Oxymoron of Top-down and Bottom-up Forest Management Policy Approaches”. *International Journal of Environmental Studies*, 66(06), pp. 747 - 763. 2009.
- Mbatu, R.S. (2009). “Deforestation in the Buea-Limbe and Bertoua Regions in Cameroon (1984-2000): Modernization, World- Systems, and Neo-Malthusian Outlook”. *GeoJournal*, 75(5), 443-458.
- Mbatu, R.S. (2007). “Environmental Injustice and the Ogoni and Bakola-Bagyeli Pygmy Peoples: Experiences from Nigeria and Cameroon”. *Fourth World Journal* 7(2), 40-53.

Edited Book Chapters

- Mbatu, R.S. (2013). “Globalization and Deforestation: An Examination of the Environmental Effects of Direct Investment in the Forest Sector in Cameroon”. In *Deforestation: Conservation Policies, Economic Implications and Environmental Impact*. Carlos Bouza (Ed), Nova Publishers, pp. 3-34, ISBN: 978-1-62948-241-5.
- Mbatu, R.S. (2012). “Obstacles to a Conceptual Framework for Sustainable Forest Management under REDD in Central Africa: A Two-Country Analysis”. In *Sustainable Forest Management: Case Studies*. Julio J. Diez (Ed), InTech Publisher, pp. 27-50, ISBN: 978- 953-51-0511-4.

Book Reviews

- Mbatu R.S. (2015). “Transforming the Frontier: Peace Parks and the Politics of Neoliberal Conservation of Southern Africa,” Bram Buscher, Durham, NC: Duke University Press, pp. 312, 2013, *African Studies Quarterly*, 15(14), 93-95.
- Mbatu, R.S. (2010). “Trade, Globalization and Sustainability Impact Assessment: A Critical Look at Methods and Outcomes,” edited by Paul Ekins and Tancrede Voituriez, Earthscan Publishers, London and Sterling, VA, 348 pp, 2009, *International Journal of Environmental Studies*, 67(2), 271-273.
- Mbatu, R.S. (2010). “If a Tree Falls: Rediscovering the Great American Chestnut,” D.J. Buege, Xlibris Corporation, Philadelphia, pp.186, 2008, *International Journal of Environmental Studies*, 67(1), 93
- Mbatu, R.S. (2010). “The Balance of Nature: Ecology's Enduring Myth,” John Kricher, Princeton University Press, Princeton & Oxford, pp. 237, 2009, *International Journal of Environmental Studies*, 67(1), 94-95.

Grant Proposals, Funding and Awards

- Mbatu, R.S. (2017). The Center for Civic Engagement Faculty Course Development Grant (“Citizen Scholar”) – \$500
- Njoh, A. (PI). Mbah, A., Ntumngia, F., Alsharif, K., Akiwumi, F., Ananga, E., **Mbatu, R.S**, Deba, E. (Co-PIs) (2016). Remittances from Africans in the United States: The Self-Help Ethos and Poverty Eradication in Africa. (USF Patel College Global Sustainability Grant. \$50,000 – **Not Funded**)
- Mbatu, R.S. (2016). Department of Environmental Science, Policy & Geography Junior Faculty Research Support Award – \$500.
- Mbatu, R.S. (2016). Department of Environmental Science, Policy & Geography Faculty Award for Excellence in Teaching.
- Mbatu, R.S. (2015). Assessing the Impact of Reducing Emissions from Deforestation and Forest Degradation on the Millennium Development Goals and Beyond 2015: A Comparative Analysis between Cameroon and the Democratic Republic of Congo – the Japanese Influence. (Social Science Research Council (SSRC) Abe Fellowship. \$15,000 – **Not Funded**).
- Mbatu, R.S. and Flanery, A.E. (2015). Community-Based Forest Conservation Under REDD+: Assessing the Role of Integration and Collective Agency in the Korup National Park, Cameroon (The Smithsonian Center for Tropical Forest Science - Forest Global Earth Observatories (CTFS-ForestGEO) research grant. \$15,000 – **Not Funded**).
- Mbatu, R.S. (2015). Global Warming, Climate Change and Sea Level Rise: The Impact on Pinellas County (50 Great Events Grant Program. \$1500 – **Funded**)
- Mbatu, R.S. (2015). Assessing the Impact of Reducing Emission from Deforestation and Degradation on the Millennium Development Goals and Beyond 2015 in Cameroon (USFSP Internal Research Grant. \$9,954.00 – **Funded**)
- Mbatu, R.S. (2015). Junior Faculty Research Support Award – University of South Florida St Petersburg – \$500.
- Mbatu, R.S. (2014). Junior Faculty Research Support Award – University of South Florida St Petersburg – \$1000.
- Mbatu, R.S. (2013). “Assessing the Impact of REDD+ on MDGs and Beyond in Central Africa: The Case of Cameroon (New Researcher Grant - USF System \$10,000 – **Not Funded**)
- Mbatu, R.S. (2010). Teaching and Learning Community Award – Bowling Green State University – \$500.
- Mbatu, R.S. (2006). Dissertation Research and Travel Awards – Oklahoma State University – \$200.
- Mbatu, R.S. (1999). DAFI-Scholarship for Graduate Studies – United Nations.

Professional Presentations

- Mbatu, R.S. (2017). Challenges and opportunities of a landscape governance approach to the REDD+ program: A conservation outlook. The 28th IUFRO Conference for Specialists in Air Pollution and Climate Change Impacts on Forest Ecosystems. 22-26 October, 2017, Fuchu, Tokyo, Japan.
- Mbatu, R.S. (2017). The Socio-economic, Political and Environmental Impacts of China's Resource Diplomacy in Africa. St. Petersburg Conference on World Affairs, February 15 -17, 2017, University of South Florida, St. Petersburg.
- Mbatu, R.S. (2017). REDD+ Research: Reviewing the Literature, Limitations, and Ways Forward. Thirteenth International Conference on Environmental, Cultural, Economic & Social Sustainability, 19-21 January, 2017, Rio de Janeiro, Brazil.
- Mbatu, R.S. (2016). Fieldwork Experience Abroad: Collecting Data for Forest Community Integration and Collective Agency in Korup National Park Cameroon: Interactions with Forest Policies and the REDD+ Mechanism. School of Earth Sciences Faculty Colloquium, USF-Tampa, October 7th, 2016.
- Mbatu, R.S. (2016). REDD++ and Conservation: A Balanced View of Challenges and Opportunities for Forest Governance Beyond Forests. Association of American Geographers (AAG) Annual Meeting, March 29-April 2, San Francisco, CA.

- Mbatu, R.S. and E. Coleman*. (2016). Assessing the Impact of Reducing Emissions from Deforestation and Degradation (REDD+) on the Sustainable Development Goals in Cameroon. Association of Environmental Science and Studies (AESS) Annual Conference, June 8-11, Washington DC. (*student)
- Mbatu, R.S. (2015). Non-governmental Organization and International Development Agency Influence on Forest Management Policy: A Discursive Analysis of FLEGT-VPA and REDD+ Regimes in Cameroon. International Studies Association – South (ISA-South) Conference, October 23rd and 24th, Tampa, Florida.
- Mbatu, R.S. (2015). Linking the global to the national: An application of the international pathways model to examine the influence of international environmental agreements on Cameroon’s forest policy. Association of Environmental Science and Studies (AESS) Annual Conference, June 24-27, San Diego, California.
- Mbatu, R.S. (2015). Analysis of sectoral and subsectoral forces and configurations on policy outcomes: the case of Cameroon’s forest policy sector. Association of American Geographers (AAG) Annual Meeting, April, 21-25, Chicago, IL.
- Burford*, M.P., Smoak, J.M., Moyer, R.P. and **R.S. Mbatu** (2015). Examining Organic Carbon Burial in Charlotte Harbor Mangrove Forests, Bay Area Scientific Information Symposium, St. Petersburg, FL. (*student)
- Burford*, M.P., Smoak, J.M., Moyer, R.P. and **R.S. Mbatu** (2015). Carbon sequestration in the mangrove forests of Charlotte Harbor and implications for conservation and restoration, Greater Everglades Ecosystem Restoration Conference, Coral Springs, FL. (*student)
- Burford*, M, Smoak, J.M., **Mbatu, R.S.** and R.P. Moyer (2015). Examining the potential for carbon sequestration in mangrove forests in Charlotte Harbor and the implications for conservation and restoration. All Scientists Meeting, Florida Coastal Everglades Long Term Ecological Research, Miami. (*student)
- Flanery*, A.E. and **R.S. Mbatu** (2015). Forest community integration and collective agency in Korup national park, Cameroon: interactions with forest policies and the REDD+ mechanism, Association of American Geographers (AAG) Annual Meeting, April, 21-25, Chicago, IL. (*student)

Selected Recent Departmental/University Committees

- 2017-2018: *University Committees* – Faculty Learning Community (FLC) exploration group. (Member); College of Arts and Sciences Scholarship Committee (Member); Gamma Theta Upsilon (GTU) Mu Chi Chapter (Faculty Sponsor).
- 2016-2017: *University Committees* – College of Arts and Sciences Scholarship Committee (Member); Gamma Theta Upsilon (GTU), international honor society in geography, Mu Chi Chapter (Faculty Adviser); The Environment Living Learning Community (LLC) (Faculty Sponsor); *Department Committees* – Balloting Committee (Chair); Undergraduate Curriculum Committee (Member); Environmental Policy Tenure Track Search Committee (Member).
- 2015-2016: *University Committees* – College of Arts and Sciences Scholarship Committee (Member); Declaration of Major Planning Committee (Member); Gamma Theta Upsilon (GTU) international honor society in geography, Mu Chi Chapter (Faculty Adviser); The Environment Living Learning Community (LLC) (Faculty Sponsor); *Department Committees* – Balloting Committee (Chair); Undergraduate Curriculum Committee (Member); Environmental Policy Tenure Track Search Committee (Member).
- 2014-2015: *Departmental Committees* – Balloting Committee (Chair); Budget Committee (Member); Undergraduate Curriculum Committee (Member). *University Committees* – Sustainability Forum at USFSP (Participant).
- 2013-2014: *Departmental Committees* – Undergraduate Curriculum Committee (Member); Annual Review Committee (Alternate Member); Environmental Policy Tenure Track Search Committee (Member). *University Committees* – Clean Energy Resource Conservation Commission (Commissioner); Student Green Energy Fund (Participant).

Student Advising

Graduate Students Currently Advising

- Adam Flanery:** Thesis title – Forest Change and Local Perspectives on REDD+ in the Context of Community Forestry around Korup National Park, Cameroon (Advising – MS Thesis)
- Jessica Gruber:** Thesis title – Analyzing and Mapping of Factors that Influence Success and Failure of Conservation Practice: A Multi-scale Study (Co-advising – MS Thesis)
- Megan Burfort:** Thesis title – Examining the Potential for Carbon Sequestration in Mangrove Forests in Charlotte Harbor and the Implications for Conservation and Restoration (Committee Member – MS Thesis)
- Aleta Kane:** Thesis title – Local and Diverse Economies as a Function of Sustainability: A Review of US Cities (Co-advising – MS Thesis)
- Todd Waldorf:** Project title – A Water Scarcity Assessment for Rural Outback Town Wilcannia, NSW, Australia (Second Reader – MA Project)
- Peter Killeen:** Project title – Solar Energy Potential and Policy Comparison: State of Florida versus North Carolina (Advising – MA Project)
- Coleman Ewell:** Thesis title – Analysis of REDD+ Influence on the UN Sustainable Development Goals: The Case of Cameroon (Advising – MS Thesis)
- Sydney Alhale:** Thesis title – Who Should Manage Red Snapper (*Lutjanus campechanus*) in the Gulf of Mexico? A Study of the Social Dynamics of the Red Snapper Fishery (Committee Member – MS Thesis)

Undergraduate Student Internship Project Advising

Environmental Science and Policy Majors, Bowling Green State University.

- Spring 2011:
 - o **Erin Bork:** Horticulture – Parks, Recreation and Landscape Management at Bowling Green Parks and Recreation, Bowling Green, OH.
 - o **Toby Abby:** Data Collection and Analysis at United States Geological Survey (USGS) Ohio Water Science Center, Columbus, OH.
 - o **Becky Zimmer:** Management of Water Treatment Systems at Industrial Fluid Management, McClure, OH.
- Summer 2010:
 - o **Zachary Freeh:** Horticulture – Parks, Recreation and Landscape Management at Metro Parks, Toledo, OH.
 - o **Austin Nelson:** Environmental Education and Grassroots Activism at Ohio Citizen Action, Toledo, OH.
 - o **Mitchell Oster:** Horticulture – Parks, Recreation and Landscape Management at City of Avon Parks, Avon, OH.
 - o **Patrick Kennedy:** Climate Justice Activism (Urban Defense Project), at Ohio Student Environmental Coalition, Cleveland, OH.
- Summer 2009:
 - o **Andrea Parmelee:** Environmental Compliance at Master Chemical Corporation, Perrysburg, OH.
 - o **Mary Olive:** Soil and Water Conservation at Trumbull County District, Warren, OH.
 - o **Dan Skoglund:** Horticulture – Parks, Recreation and Landscape Management at Bowling Green Parks and Recreation, Bowling Green, OH.
 - o **Laura Winbarger:** Environmental Education and Grassroots Activism – Mountain Top Removal, Pollution and Green Energy at Ohio Citizen Action, Toledo, OH.
- Spring 2009:
 - o **Melissa Greene:** Policy Issues and Policy Implementation of Natural Resources Use at Greenpeace International.

- Fall 2008:
 - **Christina Coporale:** Marine Biology at Sea World Discovery Aquatic, Orlando, FL.
 - **Teagan Loew:** Tourism and Recreational Activities at National Parks Service: Indiana Dunes National Lakeshore, Chesterton, IN.
 - **Jazmine Bennett:** Land Conservation, Easements and Land Trusts at Black Swamp Conservancy, Toledo, OH.
 - **Elizabeth Dusky:** Pollution Control and Hazard Management at Geo-Environmental Consortium, Toledo, OH.
-

Rebecca A. Johns

430 39th Avenue South
St. Petersburg, Florida 33705
727-686-0191
rjohns@mail.usf.edu

EDUCATION

- Doctor of Philosophy, Rutgers University, Department of Geography, New Brunswick, New Jersey. Degree conferred May 19, 1994.
- Master of Science, University of Wisconsin-Madison, Geography, 1988.
- Bachelor of Arts, Stanford University, Anthropology, 1981.
- Master of Liberal Arts in Rhetoric and Composition, USFSP, 2012 to present.

TEACHING/RESEARCH/ADMINISTRATIVE EXPERIENCE

Frank E. Duckwall Professor of Florida Studies, August 2016 to August 2018.

Executive Committee Member, Director of Community Outreach, Initiative for Coastal Adaptation and Resilience, USFSP. Organized annual workshops.

Co-Editor, Proceedings of the 2016 Annual iCAR Workshop.

Program Coordinator, Interdisciplinary Social Sciences, USFSP. 2011 – present.

Associate Professor of Geography, University of South Florida St. Petersburg. May 2002 to present. Duties: 3/2 teaching load; research activities; university and community service.

Courses taught:

ISS 1103 Nature and Culture
ISS 3010 Introduction to Social Science
ISS 4935 Senior Seminar in the Social Sciences
ISS 3930 Qualitative Methods for the Social Sciences
ANT 4401 Exploring Cultural Diversity
GEA 2000 World Regional Geography
GEO 4379 Geographic Perspectives on Environment
GEO 4450 Medical Geography
GEO 2400 Human Geography
GEO 4470 Political Geography of the United States
GEO 4502 Economic Geography: World Development

GEO 4421 Cultural Geography
GEO 4372 Global Conservation
GEO 3602 Urban Geography
GEA 3194 Regional Geography of South Asia
GEO 4933 Senior Colloquium in Geography
IDH 4200 Honors Seminar in Geographic Perspectives on Nature.
GEO 6116 Seminar in Perspectives in Environmental Thought
GEO 6421 Seminar in Cultural Geography
GEO 6475 Seminar in Political Geography
EVR 6934 Seminar in Qualitative Research Methods

Program Coordinator, Interdisciplinary Social Sciences Program, University of South Florida St. Petersburg, August 2011 to present. Responsibilities: advise students, schedule courses, hire and supervise adjunct instructors, oversee curriculum revisions, manage website, develop and evaluate Academic Learning Compact, create promotional materials, attend open houses and recruitment events.

Associate Dean, College of Arts and Sciences, University of South Florida St. Petersburg, August 2006 to 2007.

Associate Chair, Environmental Science, Policy and Geography Program of Distinction, University of South Florida St. Petersburg, August 2004 to 2007.

Interim Chair, Environmental Science, Policy and Geography Program of Distinction, University of South Florida St. Petersburg, August 2002 – May 2003.

Assistant Professor, University of South Florida, August 1996 to May 2002.

(Previous employment available upon request.)

PUBLICATIONS

Under Review:

Flanery, Adam, Mbatu, Richard, **Johns, Rebecca** and Steward, Dona. “Forest Community Agency in Korup National Park, Cameroon: Interactions with Forest Policies and the REDD+ Program,” submitted to *Natural Resources Forum*.

Johns, Rebecca. “The Role of Local Parks in Building Environmental Literacy: Challenges and Opportunities,” submitted to *The Journal of Environmental Education*.

Johns, Rebecca. “Building Environmental Literacy Through Non-Formal Environmental Education: Challenges And Opportunities,” submitted to *Environmental Education Research*.

In Progress:

Johns, Rebecca. “Creating Diversity in Environmental Education Programs in Florida,” for submission to *The Journal of Environmental Education*.

Johns, Rebecca. “The Lack of Training Standards and Resulting Variability in Non-formal Environmental Education in Florida,” for submission to *Environmental Education Research*.

Johns, Rebecca. "Permanent Educational Exhibits: Contributions to Environmental Literacy," for submission to *Environmental Education Research*.

Johns, Rebecca, Dixon, Barnali and McKenna, Kelly. "Climate Change Education: Adapting Outreach to Diverse Neighborhoods," in preparation.

Published (partial):

Gruber, Jessica, Mbatu, Richard, Dixon, Barnali and **Johns, Rebecca**, forthcoming, 2017. "Factors that influence success of conservation practice: Re-framing the traditional biological factors approach to an integrated holistic approach" *Natural Resources Forum*.

Johns, Rebecca, and Merton, Elizabeth, 2015. "Neglected Yards and Community Landscaping," *The Southeastern Geographer*.

Johns, Rebecca, Dixon, Barnali, McHan, Chris and Westmark, Zach, 2013. "Evaluating Food Deserts in St. Petersburg, Florida." *The Florida Geographer* 44: 15-37.

Mustafa D, Smucker T A, Ginn F, **Johns R**, Connelly S, 2010, "Xeriscape people and the cultural politics of turfgrass transformation" *Environment and Planning D: Society and Space* 28(4) 600 – 617.

Johns, Rebecca A., 2009. "Assessing The Social And Ecological Impact Of Voluntary Simplicity," *Papers of the Applied Geography Conferences* 32:262-271.

Johns, Rebecca A., 2008. "Ecologically Appropriate Residential Landscaping in Pinellas County, Florida: Barriers and Incentives." *Papers of the Applied Geography Conference* 31:283-291.

Johns, Rebecca A., Connelly, Shanon, Dorsey Joseph, Krest, Jim, Mustafa, Daanish, Smucker, Thomas, 2007. "Xeriscaping as Coastal Amelioration: using "Florida Friendly Landscaping" to reduce pollutant runoff and water consumption in Pinellas County, Florida," *Interdisciplinary Environmental Review* X, (2): 113-141.

Johns, Rebecca A., 2005. "The Potential of Geographic Analysis in Solving Environmental Dilemmas." *Interdisciplinary Environmental Review* VII (2): 13-33.

Schmidt, Nancy, Mark Luther, and **Rebecca Johns**. 2004. "Climate variability and estuarine water resources: A case study from Tampa Bay, Florida." *Coastal Management* 32(2):101-116.

Johns, Rebecca A., 2003. "Remembering Our Place: Ethical Activism for Scholars" *Ethics, Place and Environment* 6(1): 56-61.

Johns, Rebecca, 2001. "Identifying Barriers to Native American Participation in Higher Education," *Papers of the Applied Geography Conferences* 24: 322-331.

Johns, Rebecca, 2001. "Understanding the Influences of Global Processes and Local Context in the Construction of Nature in South Asia: Teaching Strategies," *Teaching South Asia*.

Johns, Rebecca A., 2001. "Arbitration as a Decision-Making Tool: The Tampa Bay Water Case, *Southeastern Geographer* 41 (1) pp.117-135.

Johns, Rebecca A., 2000. "Building Unity in a Common Place: Intentional Communities in the United States,"

Papers of the Applied Geography Conferences 23:1-9.

Johns, Rebecca A., and Vural, Leyla, 2000. "Class, Geography and the Consumerist Turn: UNITE and the Stop Sweatshops Campaign," *Environment and Planning A* 32(7):1193-1213.

Sen, Bagchi, Cline-Cole, R., DeFillipis, J., Douglass, M., Emel, J., Hanson, S., **Johns, R.**, Lake, R., Lawson, V., Leaf, M., Leichenko, R., Marston, S., McGee, T., Pandit, K., Pincetl, S., Schroeder, R., Sheppard, E., and Waterstone, M., 1999. "Toward a Comprehensive Geographical Perspective on Urban Sustainability," *Final Report of the 1998 NSF Workshop on Urban Sustainability*, Center for Urban Policy Research, Rutgers University.

Johns, Rebecca A., 1998. "Bridging the Gap Between Class and Space: U.S. Worker Solidarity with Guatemala." *Economic Geography* 74(3): 252-271.

Johns, Rebecca A., 1993. "Class and Place in the New World Order: International Labor Solidarity," *The Middle States Geographer* 26.

Lake, Robert W. and **Johns, Rebecca A.**, 1990. "Legitimation Conflicts: The Politics of Hazardous Waste Siting Law," *Urban Geography*, Vol. II (5): 488-508.

PRESENTATIONS/CONFERENCES (PARTIAL)

Upcoming:

"Climate Change Education: Adapting Outreach to Diverse Neighborhoods," to be presented at the Annual Meetings of the North American Association of Environmental Education in Puerto Rico, October 17 – 21, 2017.

"The American Preservationist Movement, Past and Future," to be presented at Campus Tour & Talk, September, 2017.

"The Role of Parks in Environmental Education," to be presented at the Annual Meetings of the Association of American Geographers, New Orleans, April, 2018.

Completed:

"The American Preservationist Movement, Past and Future," presented at the United Unitarian Universalist Fellowship of Florida, St. Petersburg, August, 2017.

"Environmental Education in a Time of Crisis," presented at the United Unitarian Universalist Fellowship of Florida, St. Petersburg, May, 2017.

"Reworking Environmental Education in Florida," presented at Faculty Lightning Talks, Nelson Poynter Library, April, 2017.

"Reworking Environmental Education in the U.S." presented at the Annual Meetings of the Association of American Geographers, Boston, April, 2017.

"Ponies are for Sissies: Critical Animal Geographies of Florida" presented at the Campus "Tour & Talk," April, 2017.

“Ponies are for Sissies: Critical Animal Geographies of Florida” presented at the Annual Meetings of the Association of American Geographers, San Francisco, April 2016.

“Neglected Yards and Community Landscaping,” Annual Meetings of the Association of American Geographers, Chicago, April 2015.

“Evaluating Food Deserts in St. Petersburg, Florida,” presented at the 2011 Florida Society of Geographers Conference, Tallahassee, Florida.

“Assessing the Social and Ecological Impact of Voluntary Simplicity,” presented at the 2009 Applied Geography Conferences.

“Ecologically Appropriate Residential Landscaping in Pinellas County, Florida: Barriers and Incentives.” Invited presentation, Florida Native Plant Society, Pinellas Chapter, June 2012.

“Ecologically Appropriate Residential Landscaping in Pinellas County, Florida: Barriers and Incentives.” presented at the 2008 Applied Geography Conferences, Delaware.

“Voluntary Simplicity: Radical Economics for the 21st Century?”, presented at the annual meeting of the Florida Society of Geographers, St. Petersburg, Florida, February 17 – 19, 2005.

“The Cold War and Beyond: U.S. Foreign Policy Concerns in the 21st Century,” presented to the Lee County League of Women Voters, February 4, 2005. Invited speaker.

ACADEMIC AWARDS

Outstanding Undergraduate Teaching Award 2000/01, University of South Florida

The Knapp Fellowship for Graduate Study, University of Wisconsin-Madison, 9/86-6/87.

The Marion Johnson Fellowship for Graduate Study, Rutgers University, New Jersey, 9/88-6/93.

GRADUATE STUDENTS AND HONORS THESES (PARTIAL)

Kelly McKenna, Chair, MS, ESP

Sydney Woolfolk, Chair, MS, ESP

Raina Cumby, Chair, MA Project Committee, ESP

Matt Smith, Committee Member, MS, ESP

Alita Kane, Committee Member, MS, ESP

Brent Jowers, Chair, MLA, Florida Studies

Completed:

Adam Flanery, Committee Member, MS, ESP

Jessica Gruber, Committee Member, MS, ESP

Lauren Drakopoulos, Chair, MS, ESP

Johnny Wong, Committee Member, Ph.D. Geography

Chris Metzger, Committee Member, Ph.D., Geography

Kris Bezdecny, Committee Member, Ph.D, Geography

Cindy Grace, Committee Member, Ph.D., Anthropology

Ravic Njbroek, Committee Member, Ph.D., Geography

Allyson Bennett, Committee Member, MLA, Florida Studies

Andy Hayslip, Committee Member, MS, ESP

Kyle Buck, Chair, MS, ESP

Shannon Connelly, Committee Member, MS, ESP
Michele Mician, Chair, MS, ESP
Kathy Eversoll, Chair, MS, Geography
Denise Corrales, Chair, MS, ESP
Cassie Williams, Chair, MS, ESP
Nan Schmidt, Ph.D., Marine Science

PROFESSIONAL ORGANIZATIONS/COMMUNITY SERVICE (PARTIAL)

Secretary, Florida Society of Geographers, Fall 2013 to present.
Member, NSF Geospatial and Regional Science Doctoral Dissertation Improvement Committee, 2005-2008.
Examiner, Geography, International Baccalaureate Organization, Cardiff, Wales.
Member, Association of American Geographers (1986 to present)
Member, North American Association of Environmental Education, 2015 to present.
Member, League of Environmental Educators of Florida, 2015 to present
Member, AAG Affirmative Action and Minority Status Committee (7/99-6/02)
Member, Institute of British Geographers/Royal Geographic Society (1996 to present)
Member, Southeast Division of the Association of American Geographers.
Member, Review Panel, *Thought & Action*, NEA Journal of Higher Education (1998 to present)
President's Equal Opportunity Committee, USF
Board Member, Feathered Serpent Art Gallery, St. Petersburg, FL
Member, Florida Native Plant Society, Pinellas Chapter
Member, Friends of Boyd Hill Nature Preserve
Volunteer, Pinellas County Schools

Manuscript Reviewer:

Antipode; Interdisciplinary Environmental Review; Thought & Action; University of Florida Press; Taylor & Francis Publishers

External Tenure Reviewer: University of California, Santa Barbara

Travel: India, Kuwait, Germany, England, Ireland, Switzerland, France, Costa Rica, Belgium, the Netherlands, Canada, Sri Lanka, and most of the United States, including Hawaii.

Karin Braunsberger, Ph.D.

Professor - Entrepreneurship

Office: LPH 314E
Phone: 727-873-4082
Fax: 727-873-4571
Email: braunsbe@usfsp.edu

Academic Background

Ph.D. University of Texas-Arlington, Business Administration, 1996
M.B.A. University of Texas-Arlington, Business Administration, 1992

Professional Certifications

Certificate in Entrepreneurial Studies and Innovation, Jake Jobs Center for Entrepreneurship, University of Colorado, 2016 (2016-Present), Denver, CO.

Envision Sustainability Professional (ENV-certified infrastructure), 2016

Work Experience

Academic

Professor, Kate Tiedemann College of Business, USF St. Petersburg (August, 2011 - Present), St. Petersburg, Florida.

Associate Professor, College of Business, USF St. Petersburg (August, 2005 - May, 2011), St. Petersburg, Florida.

Assistant Professor, College of Business, USF St. Petersburg (August, 2001 - May, 2005), St. Petersburg, Florida.

Assistant Professor, School of Business and Economics, Arkansas Tech University (August, 1998 - May, 2001), Russellville, Arkansas.

Adjunct Instructor, School of Business Administration, St. Edward's University (January, 1998 - May, 1998), Austin, Texas.

Assistant Professor, School of Business Administration, Al Akhawayn University (January, 1997 - December, 1997), Ifrane, Morocco.

Visiting Assistant Professor, University of Texas-Arlington (June, 1996 - December, 1996), Arlington, Texas.

Non-Academic

Graduate Research Assistant, University of Texas-Arlington (January, 1993 - August, 1993), Arlington, Texas.

Teaching

Courses Taught

Courses from the Teaching Schedule:

Basic Marketing (MAR3023),

Buyer Behavior (MAR4503),

Consulting in Latin America Guatemala Edu Abd (MAR6936),

New Venture Creation (ENT3013),

ST: Sustainable Entrepreneurship (ENT6930),

Seminar in Consumer Behavior (MAR6577),

Social Entrep in Emerging Mkt (ENT6507),

Social Entrepreneurship I (ENT6508),

Social Entrepreneurship I (GEB6930)

Intellectual Contributions

Articles in Refereed Journals

Applied or Integrative/application Scholarship

Felix, R. & Braunsberger, K. (2016). I believe therefore I care: The relationship between religiosity, environmental attitudes, and green product purchase in Mexico. *International Marketing Review*, 33 (1), 137-155. [January]

Flamm, R. & Braunsberger, K. (2014). Applying marketing to conservation: A case study on encouraging boater reporting of watercraft collisions with Florida manatees. *Ocean & Coastal Management*, 96 (2014), 20-28. [May]

Braunsberger, K. (2014). The impact of animal welfare advertising on opposition to the Canadian seal hunt and willingness to boycott the Canadian Seafood Industry. *Anthrozoos*, 27 (1), 111-125. [March]

Teaching and Learning Scholarship

Braunsberger, K. & Flamm, R. (2013). A mission of civic engagement: Undergraduate students working with nonprofit organizations and public sector agencies to enhance societal wellbeing. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 24 (1), 1-31. [March]

Publications in Refereed Conference Proceedings

Applied or Integrative/application Scholarship

Buckler, B. & Braunsberger, K. (2015). Exploring the social environment of marketplace compulsiveness: The effects of presence of others in compulsive behavior (abstract only). *Society for Marketing Advances Conferences*.

Braunsberger, K. (2013). The effect of animal protection advertising on opposition to the slaughter of wildlife and willingness to boycott the offending industry: Initial and carryover effects (abstract only). *Academy of Marketing Science World Marketing Congress*.

Teaching and Learning Scholarship

Braunsberger, K., Branch, J., Buckler, B., Elahee, M., Flamm, R., Wooldridge, B. & Rountree, M. (2015). A crash course on short-term faculty-led education abroad trips (abstract only). *Society for Marketing Advances Conferences*.

Braunsberger, K., McCuiston, V., Patterson, G., & Watkins, A. (2014). Perceived risks and psychological well-being in online education: Implications for grade expectations and future enrollment (abstract only). *Academy of Marketing Science World Marketing Congress*.

Presentations of Refereed Papers

Applied or Integrative/application Scholarship

Buckler, B. & Braunsberger, K. (2015-2016, November). *Exploring the social environment of marketplace compulsiveness: The effects of presence of others on compulsive behavior*. Society for Marketing Advances Conferences, San Antonio, Texas.

Braunsberger, K. (2012-2013, July). *The effect of animal protection advertising on opposition to the slaughter of wildlife and willingness to boycott the offending industry: Initial and carryover effects*. Academy of Marketing Science World Marketing Congress, Melbourne, Australia.

Teaching and Learning Scholarship

Braunsberger, K., Branch, J., Buckler, B., Elahee, M., Flamm, R., Wooldridge, B. & Rountree, M. (2015-2016, November). *A crash course on short-term faculty-led education abroad trips*. Society for Marketing Advances Conferences, San Antonio, Texas.

Braunsberger, K., Watkins, A., Patterson, G. A., & McCuiston, V. (2014-2015, August). *Perceived risks and psychological well-being in online education: Implications for grade expectations and future enrollment*. Academy of Marketing Science World Marketing Congress, Lima, Peru.

Chapters, Cases, Readings, Supplements

Braunsberger, K. & Flamm, R. (2016). Learning from Sustainability Initiatives in Emerging Markets. In H. Merchant (Ed.), *Handbook of Contemporary Research On Emerging Markets* (pp. 117-138). Elgar Publishing.

Working Papers

Braunsberger, K. & Buckler, B. (2016). "Consumer boycott behavior: A longitudinal analysis of consumer boycott behavior."

Lewis, A., Braunsberger, K., Hardy, L., & O'Neill, D. (2016). "Researching the feasibility of a sustainability degree program: A cross-disciplinary approach," Initial submission.

Honors and Awards

2014-2015: Bank of America Endowed Professor in Business 2014-2015, Kate Tiedemann College of Business, USF St. Petersburg.

Service

Service to the Institution

College Assignments

Chair:

2012-2013 – 2013-2014: COB Full Professor Committee

Member:

2016-2017: COB Strategic Planning Task Force

2016-2017: COB College of Business Council

2014-2015: COB Full Professor Committee

2012-2013 – 2014-2015: COB Graduate Curriculum and Assessment Committee

Chair:

2012-2013: COB Dean's Budget Committee

University Assignments

Member:

2014-2015 – 2016-2017: USF UFF Senator

2014-2015 – 2015-2016: USF System Faculty Council

Service to the Profession

Academic Conference: Moderator / Facilitator

2015-2016: St. Petersburg Conference on World Affairs, St. Petersburg, Florida (Local).

Board Member: PRJ Editorial Review Board

2012-2013 – 2016-2017: Journal of Business Research, St. Petersburg, Florida (National).

Chair: Conference / Track / Program

2015-2016: Society for Marketing Advances Conferences, San Antonio, Texas (National). Track Chair, Marketing Ethics, November 2015

2012-2013: Academy of Marketing Science Conference, Melbourne, Australia (International). Track Chair, Social Marketing, July 2013.

Editor: Associate Editor

2014-2015 – 2016-2017: Journal of Asia Business Studies, St. Petersburg, Florida (International). Area Editor for Entrepreneurship & SMEs.

Member: Committee/Task Force

2013-2014: Society for Marketing Advances Conferences, Orlando, Florida (National). Doctoral Consortium Faculty, November 2013

Reviewer: Ad Hoc Reviewer for a Journal

2014-2015: Field Methods (National).
2014-2015: Transportmetrica (National).
2014-2015: Journal of Retailing (National).
2014-2015: Academy of Management Learning & Education (AMLE) (National).
2014-2015: Journal of Market-Focused Management (National).
2014-2015: Journal of the Academy of Marketing Science (JAMS) (National).

Reviewer: Conference Paper

2014-2015: Academy of Marketing Science Conferences (National).
2014-2015: American Marketing Association Conference (National).
2014-2015: Consumer Research (ACR) (National).

Service to the Community

Chair of a Committee

2012-2013 – 2016-2017: St. Petersburg Science Festival, Evaluations Committee

Member of a Committee

2012-2013 – 2016-2017: St. Petersburg Science Festival, Steering Committee

HEMANT MERCHANT
Professor of Global Business
Kate Tiedemann College of Business
University of South Florida - St. Petersburg
St. Petersburg, Florida 33701, USA
Tel: (727) 873-4891
E-mail: hmerchant@usfsp.edu

EDUCATION

Purdue University, Krannert Graduate School of Management
Doctorate in Philosophy (Strategic Management); May 1995.

Clarion University of Pennsylvania
Master of Business Administration; May 1988.

University of Bombay, India, Sydenham College of Commerce and Economics
Bachelor of Commerce; May 1984.

RECENT PUBLICATIONS

Refereed Journals

Rao-Nicholson R, Khan Z, Akhtar P, Merchant H. (2016). The impact of leadership on emerging-market multinationals' global acquisitions: Organizational ambidexterity and employees' psychological safety. *International Journal of Human Resource Management* 27(20): 2461-2487.

Books

Merchant, H. (ed.). 2016. *Handbook of Contemporary Research on Emerging Markets*. Elgar Publishing, London, UK.

Book Chapters

Ghuman K, Merchant H. (2017; Conditionally accepted). Reconfiguring the marketing mix to counter the counterfeits in the global arena. In *Emerging Issues in Global Marketing: A Shifting Paradigm*, Agarwal J, Wu T. (eds.). Springer Publishing, New York, USA. [Refereed book chapter]

Merchant H. 2016. Exploring the frontiers of contemporary research on emerging markets. In *Handbook of Contemporary Research on Emerging Markets*, Merchant H. (ed.). Elgar Publishing, London, UK. [Non-refereed book chapter]

Annushkina O, Merchant H, Colonel R, Berselli E. 2016. How do emerging markets differ from developed markets?: An empirical analysis. In *Handbook of Contemporary Research on Emerging Markets*, Merchant H. (ed.). Elgar Publishing, London, UK. [Refereed book chapter]

Nair K, Prabhu J, Merchant H. 2016. Mapping institutional influences on multinational firms' R&D investments in emerging markets: The case of India. In *Handbook of Contemporary Research on Emerging Markets*, Merchant H. (ed.). Elgar Publishing, London, UK. [Refereed book chapter]

WORK UNDER REVIEW

Refereed Journals

Merchant H. Service firms' internationalization to developed countries and emerging markets: A comparison with manufacturing firms. (Under 3rd review at *International Marketing Review*; Originally submitted for the Special issue on the 'Internationalization of service firms.')

Symeou P, Merchant H. Revisiting the role of home-country conditions on firm performance: A longitudinal analysis of the moderating role of international geographic diversification. (Under review at *Management International Review*.)

WORK IN PROGRESS

Refereed Journals

Merchant H, Trevino L, Zhu J. Explaining international joint venture performance: A institutional theory perspective. (Under final revision; Targeted to *Journal of World Business*)

Blagoeva D, Jensen PO, Merchant H. The 'services' landscape in International business research: Insights from the last five years and a research agenda. (Under final revision; Targeted to *Management International Review*; Authors listed alphabetically)

Merchant H. Nurturing a ecosystem of research excellence in the Middle East. (Invited paper under preparation for the *PSU Research Review*)

Merchant H. Do competitive pressures improve firm performance? (Under revision; Targeted to *Journal of Management Studies*)

Merchant H, Kansal P, Iheikhena EG. Subjective well-being of Nigerian self-initiated expatriates in Germany: The role of individual, group, organizational and societal factors. (Under revision; Targeted to *International Business Review*)

Merchant H, Verbeke A, van Witteloostuijn A. Towards a richer understanding of competitive advantage: Integrating economic geography and strategic management. (In literature review stage; Targeted to *Strategic Management Journal*)

PUBLICATIONS

Refereed Publications

- Ghuman K, Merchant H. (2017; Conditionally accepted). Reconfiguring the marketing mix to counter the counterfeits in the global arena. In *Emerging Issues in Global Marketing: A Shifting Paradigm*, Agarwal J, Wu T. (eds.). Springer Publishing, New York, USA. [Refereed book chapter]
- Rao-Nicholson R, Khan Z, Akhtar P, Merchant H. 2016. The impact of leadership on emerging-market multinationals' global acquisitions: Organizational ambidexterity and employees' psychological safety. *International Journal of Human Resource Management* 27(20): 2461-2487.
- Annushkina O, Merchant H, Colonel R, Berselli E. 2016. How do emerging markets differ from developed markets?: An empirical analysis. In *Handbook of Contemporary Research on Emerging Markets*, Merchant H. (ed.). Elgar Publishing, London, UK. [Refereed book chapter]
- Nair K, Prabhu J, Merchant H. 2016. Mapping institutional influences on multinational firms' R&D investments in emerging markets: The case of India. In *Handbook of Contemporary Research on Emerging Markets*, Merchant H. (ed.). Elgar Publishing, London, UK. [Refereed book chapter]
- Merchant H. 2015. A primer for competing successfully in emerging markets. *Emerging Economy Studies* Inaugural issue 1(1): 9-31. Featured in *Strategy+Business*, a PriceWaterhouseCoopers Strategy& LLC publication for decision makers in businesses and organizations around the world.
- Merchant H. 2015. Institutional signatures or firm-specific imprints?: Joint venture profiles and the performance panorama in five emerging market groups. In *Handbook of International Alliances and Network Research*, Larimo J, Nummela N, Mainela, T. (eds.). Elgar Publishing, London, UK. [Refereed book chapter]
- Merchant H. 2014. Configurations of governance structure, generic strategy, and firm size: Opening the blackbox of value creation in international joint ventures. *Global Strategy Journal* Special issue titled 'Structuring, Managing, and Governing International Collaborations' 4(4): 292-309.
- Merchant H. 2014. Value creating strategies for emerging markets. In *International Finance Review* Special issue on 'Emerging market firms in the global economy,' Pattnaik C & Kumar V (eds.). Elgar Publishing, London, UK; 147-179. [Refereed book chapter]
- Merchant H. 2012. The characteristics and stock-market performance of international joint ventures located in three host-country groups: An extension and empirical validation. *International Business Review* 21(4): 1173-1189.
- Merchant H, Allen-Ford L. 2012. Management research on emerging markets: Existing trends and future opportunities. In *Handbook of Research on International Strategic Management*, Verbeke A, Merchant H (eds.). Elgar Publishing, London, UK. [Reviewed book chapter]
- Merchant H, Tung RL, Verbeke A. 2012. The tenuous link between cultural distance and international strategy: Navigating the assumptions of cross-cultural research. In *Handbook of Research on International Strategic Management*, Verbeke A, Merchant H (eds.). Elgar Publishing, London, UK. [Reviewed book chapter; Authors listed alphabetically]
- Merchant H. 2008. International joint venture configurations in big emerging markets. *Multinational Business Review* 16(3): 93-119. Reprinted 2012. In *Handbook of Research on International Strategic Management*, Verbeke A, Merchant H (eds.). Elgar Publishing, London, UK. [Reviewed book chapter]
- Merchant H, Gaur A. 2008. Opening the 'non-manufacturing' envelope: The next big enterprise for international business research. *Management International Review* 48(4): 380-396.
- Kundu S, Merchant H. 2008. Service multinationals: Their past, present, and future. *Management International Review* 48(4): 371-377.
- Merchant H, Chand M. 2008. DHL Bangladesh: Managing headquarters-subsidiary relationships. *Thunderbird International Business Review* 50(3): 201-211. **[Winner, ASAC 2007 Honorable Mention Case Award]** Reprinted in *Global Business* (2nd edition), Peng MW. 2008. Cengage: Belmont, California. Reprinted in *Strategic Management Competitiveness and Globalization Cases* (3rd Canadian edition), Hitt MA, Ireland RD, Hoskisson R, Rowe G, Sheppard J. 2008. Nelson: Toronto, Canada.

- Merchant H. 2006. The international joint venture performance of American firms: A comparative analysis of emerging markets and non-emerging markets. In *Emerging Economies and The Transformation of International Business: Brazil, Russia, India, and China (BRICs)*, Jain S (ed.). Elgar Publishing, London, UK; 294-312. [Refereed book chapter]
- Merchant H. 2005. Efficient resources, industry heterogeneity, and shareholder value creation: The case of international joint ventures. *Canadian Journal of Administrative Sciences* 22(3): 193-205. [**Winner, Douglas C. Mackay 2005 Outstanding Paper Award in International Business**]
- Merchant H. 2005. The structure-performance relationship in international joint ventures: A comparative analysis. *Journal of World Business* 40(1): 41-56.
- Merchant H. 2004. Revisiting shareholder value creation via international joint ventures: Exploring interactions among firm- and context-specific variables. *Canadian Journal of Administrative Sciences*, 21(2): 129-145. [**Winner, Douglas C. Mackay 2004 Outstanding Paper Award in International Business**]
- Merchant H. 2003. Joint venture characteristics and shareholder value: The pervasive role of partner nationality. *Management International Review* 43(1): 21-40.
- Merchant H. 2002. Shareholder value creation via international joint ventures: Some additional explanations. *Management International Review* 42(1): 49-69.
- Merchant H. 2001. International joint ventures and shareholder value creation: Evidence from manufacturing and non-manufacturing sectors. *Vikalpa* (Journal of the Indian Institute of Management, Ahmedabad) 26(4): 21-34.
- Merchant H, Schendel D. 2000. How do international joint ventures create shareholder value? *Strategic Management Journal* 21(7): 723-737.
- Merchant H. 2000. Configurations of international joint ventures. *Management International Review* 40(2): 107-140.
- Merchant H. 1999. International joint ventures in the non-manufacturing sector: How much economic value do they really create? *Sasin Journal of Management* 5(1): 64-79.
- Merchant H. 1997. The international joint venture performance of firms in the non-manufacturing sector. In *Cooperative Strategies: North American Perspectives*, Beamish PW, Killing JP (eds.). New Lexington Press, San Francisco; 428-456. [Refereed book chapter]
- Lubatkin M, Merchant H, Srinivasan N. 1997. Merger strategies and shareholder value during times of relaxed antitrust enforcement: The case of large mergers during the 1980s. *Journal of Management* 23(1): 61-81.
- Lubatkin M, Merchant H, Srinivasan N. 1993. Construct validity of some unweighted product-count diversification measures. *Strategic Management Journal* 14(6): 433-449.

Book Chapters (Non-refereed)

- Merchant H. 2016. Exploring the frontiers of contemporary research on emerging markets. In *Handbook of Contemporary Research on Emerging Markets*, Merchant H. (ed.). Elgar Publishing, London, UK.
- Merchant H. 2000. Event-studies of joint venture formation announcements: A synthesis and some possible extensions. In *The Current State of Business Disciplines* (Volume 4; Management I), Dahiya SB (ed.). Spellbound Publications: Rohtak, India; 1837-1861.

Books

- Merchant, H. (ed.). 2016. *Handbook of Contemporary Research on Emerging Markets*. Elgar Publishing, London, UK.
- Verbeke A, Merchant, H (eds.). 2012. *Handbook of Research on International Strategic Management*. Elgar Publishing: London, UK.
- Merchant H. 2007. *Competing in Emerging Markets: Cases & Readings*. Routledge: London, UK.

Refereed Case-studies / Other Publications

- Merchant H, Chand M. 2008. DHL Bangladesh: Managing headquarters-subsiary relationships. (Teaching note)
- Abramson N, Merchant H. 2007a. Red Star China (A): Discovering the essence of guanxi. In *Competing in Emerging Markets: Cases & Readings*, Merchant H (ed.). Routledge: London, UK. [Refereed casestudy]
- Abramson N, Merchant H. 2007b. Red Star China (B): Discovering the essence of guanxi. In *Competing in Emerging Markets: Cases & Readings*, Merchant H (ed.). Routledge: London, UK. [Refereed casestudy]
- Abramson N, Merchant H. 2007c. Red Star China: Discovering the essence of guanxi (Teaching note). Merchant H, Narchi N. 2005a. Unicord: The Bumble Bee acquisition. In *Strategic Management: Competitiveness and Globalization (Cases)*, Hitt MA, Ireland RD, Hoskisson R, Rowe G, Sheppard J. (eds.). Thompson: Toronto, Canada. [**Academy of Management 2006 Dark Side Case Competition Finalist Award**] Reprinted in *Competing in Emerging Markets: Cases & Readings*, Merchant H (ed.). 2007. Routledge: London, UK.
- Merchant H. 2005b. Unicord: The Bumble Bee acquisition (Teaching note). In *Strategic Management: Competitiveness and Globalization (Instructor Case Notes)*, Hitt MA, Ireland RD, Hoskisson R, Rowe G, Sheppard J. (eds.). Thompson: Toronto, Canada
- Merchant H. 2004a. Olly Racela in Bangkok. Ivey Case Publishing, University of Western Ontario: London, Canada. Reprinted in *Competing in Emerging Markets: Cases & Readings*, Merchant H (ed.). 2007. Routledge: London, UK.
- Merchant H. 2004b. Olly Racela in Bangkok (Teaching note). Ivey Case Publishing, University of Western Ontario: London, Canada.
- Merchant H. 2000a. Quadra Logic Technologies Inc. (Teaching note). Ivey Case Publishing, University of Western Ontario: London, Canada.
- Merchant H. 2000b. Quadra Logic Technologies Inc. (Case video). Ivey Case Publishing, University of Western Ontario: London, Canada.

Refereed Conference Proceedings

- Abramson N, Merchant H. 2006. Building guanxi between Westport China and Nanjing ZP Chemical Company Limited. Conference proceedings of the *Administrative Sciences Association of Canada*, 571- 581. Reprinted in *Business Essentials* (5th Canadian edition), Ebert R, Griffin R, Starke F. 2005. Pearson: Toronto, Canada. Reprinted in *Business Essentials* (6th Canadian edition), Ebert R, Griffin R, Starke F. 2006. Pearson: Toronto, Canada.
- Merchant H. 2003. How much does partner nationality matter to international joint venture performance? Conference proceedings of the *Administrative Sciences Association of Canada*, 103-110.
- Merchant H. 1994. The expected performance of international joint ventures: An event study approach. Conference proceedings of the *International Federation of Scholarly Associations of Management (IFSAM)*, 149-150.
- Lubatkin M, Merchant H, Srinivasan N. 1992. Merger strategies and value creation during the Reagan years. Conference proceedings of the *Midwest Academy of Management*, 158-164.
- Lubatkin M, Merchant H, Srinivasan N. 1991. The predictive validity of unweighted SIC-based measures of corporate diversification. Conference proceedings of the *Midwest Academy of Management*, 227-232.
- Lubatkin M, Merchant H, Srinivasan N. 1990. Convergent validity: A comparison of measures of corporate diversity. Conference proceedings of the *Midwest Academy of Management*, 1-6. [**Winner, Midwest Academy of Management 1990 Best Paper Award**]
- Merchant H. 2001. Review of *Cooperative Strategy: Economic, Business, and Organizational Issues*, Faulkner D De Rond M (eds.). Oxford University Press: New York. *Academy of Management Review*, 26(2): 316-318.
- Merchant H. 1996. A strategic analysis of the expected performance of American firms participating in international joint ventures. *Journal of International Business Studies* 27(3): 603. (Dissertation abstract)
- Merchant H. 1995. A strategic analysis of the expected performance of U.S. firms participating in international joint ventures. Unpublished doctoral dissertation, Krannert Graduate School of Management, Purdue University: West Lafayette, IN.

DOCTORAL COMMITTEES

Dr. Daniel Rottig, Florida Atlantic University (USA). [**Winner, 2009 Richard Farmer Best Dissertation Award** (*Academy of International Business*) and **Runner-up, 2009 Barry Richman Best Dissertation Award** (*Academy of Management*)]

Dr. Masud Chand, Simon Fraser University (Canada). [Withdrew from committee due to my move to Florida Atlantic University.]

PAPER PRESENTATIONS

Conference Presentations

2017 conference presentations

Symeou P, Merchant H. 2017. Revisiting the role of home-country conditions on firm performance: A longitudinal analysis of the moderating role of international geographic diversification. Paper to be presented at the *Academy of International Business Southeast* conference, Washington DC (USA): October. [**Winner, AIB Southeast Best Conference Paper Award**] [**Winner, AIB Southeast Best ‘Global Strategy’ Track Paper Award**]

Merchant H. 2017. Competitiveness of Asian vis-à-vis Western firms and nations. Panel presentation at the *Academy of International Business* conference, Dubai (UAE): July. (With Profs. Chris Baumann, Sue Claire Berning, Michael Cherry, Wujin Chu, Tony Fang, Ingyu Oh, Ricardo Regatieri, Rosalie L. Tung, Rachel Wilson)

Merchant H. 2017. International service research: Taking stock and moving forward. Panel presentation at the *Academy of International Business* conference, Dubai (UAE): July. (With Profs. Kristin Brandl, Pawan Budhwar, Michael Mol, Patrick Strom, Elizabeth Rose)

2016 conference presentations

Merchant H. 2016. Ownership and control in MNEs: Implications for National Policy. UNCTAD *World Investment Report* Panel presentation at the *Academy of International Business* conference, New Orleans (USA): June. (With Profs. Peter Buckley, Gary Gereffi, Jean-Francois Hennart, and Hafiz Mirza)

Rao-Nicholson R, Khan Z, Merchant H, Tarba SY, Akhtar P. 2016. A guiding beacon or a burning torch: Role of emerging-market multinationals’ leadership style in organizational ambidexterity and targets’ employee psychological safety in global acquisitions. Paper presented at the *Academy of International Business* conference, New Orleans (USA): June.

2015 conference presentations

Merchant H. 2015. Teaching sustainable strategies to managers: Science, practice, and philosophy. Panel presentation at the *Academy of Management* conference, Vancouver (Canada): August. (With Profs. Divya Bhutani, Andrew Burke, Gregory Dess, Michele Erhenhard, Jeffrey Hicks, Bhaskaran Nair, Aard Groen, Peter Love, Wendy Stubbs, Helen Haugh, and Obi Obganufe)

Merchant H. 2015. Institutional signatures or firm-specific imprints?: Joint venture profiles and the performance panorama in five emerging market groups. Paper presented at the *Academy of International Business* conference, Bengaluru (India): July.

Merchant H. 2015. The dominant role of institutions in creating corporate wealth: Evidence from five emerging market blocks. Paper accepted for presentation at the *Strategic Management Society* Special conference ‘From Local Voids to Local Goods: Can Institutions Promote Competitive Advantage?.’ Santiago (Chile): March.

2014 conference presentations

- Blagoeva D, Jensen PO, Merchant H. 2014. Revisiting the internationalization of services: Taking stock and looking forward. Paper presented at the *Academy of International Business* conference, Vancouver (Canada): June. (Authors listed alphabetically)
- Symeou P, Merchant H. 2014. The impact of home-country effects on firms' international competitiveness: The moderating role of international diversification. Paper presented at the *Strategic Management Society* Special conference on 'Startup and Restart Strategies,' Tel Aviv (Israel): March.

2013 conference presentations

- Merchant H, Trevino L, Zhu J. 2013. Towards an institutions-based understanding of international joint venture performance. Paper presented at the *Academy of International Business* conference, Istanbul (Turkey): July.
- Merchant H. 2013. Taking stock of services research. Paper presented at the 'Service Firms: Thinking Outside the Box' conference organized by Copenhagen Business School, Copenhagen (Denmark): June.
- Merchant H, Trevino L, Zhu J. 2013. Explaining international joint venture performance: A institutional theory perspective. Paper presented at the *Nepalese Academy of Management* conference, Kathmandu (Nepal): March.

2012 conference presentations

- Merchant H. 2012. Value creating strategies for emerging markets. Paper presented at the *Strategic Management Society* conference extension, Vilnius (Lithuania): October.
- Merchant H. 2012. The growth of services: What academics do "to matter"? Paper presented at the *Strategic Management Society* conference, Prague (Czech Republic): October, 2012. (With Profs. Pervez Ghauri, Hussain Rammal, and Elizabeth Rose)
- Merchant, H. 2012. Internationalization of service firms: Issues and opportunities. Panel presentation at the *Academy of International Business* conference, Washington DC: June. (With Profs. Pervez Ghauri, Hussain Rammal, Elizabeth Rose, Sasi Viveca, and Eleanor Westney)

2011 conference presentations

- Merchant H. 2011. Emerging markets: Economic imperatives and societal needs. *European Journal of International Management* Scholar-Practitioner panel presentation at the *Academy of Management* conference, San Antonio TX: August. (With Profs. Gerhard Apfelthaler, Peter Enderwick, Vlad Vaiman, Stefano Pelle (Perfetti VanMelle Group), Ed Maliski (CURE Pharmaceutical))
- Merchant H, Ford L. 2011. Analysis of management studies on emerging markets. Paper presented at the *Academy of Management* conference, San Antonio, TX: August.

2010 conference presentations

- Merchant H. 2010. The characteristics and stock-market performance of international joint ventures across three host-country environments: An extension and empirical validation. Paper presented at the *Academy of International Business* conference, Rio de Janeiro (Brazil): June.

2008 conference presentations

- Merchant H, Gaur A. 2008. International joint ventures and stock market reactions: Impact of strategy, structure and size. Paper presented at the *Academy of International Business* conference, Milan (Italy): June.

2007 conference presentations

- Makhija M, Merchant H. 2007. The effect of political risk on the performance of international joint ventures in emerging markets. Paper presented at the *AIB/JIBS* conference on 'Emerging research frontiers in international business,' Miami (USA): November. Merchant H, Chand M. 2007. DHL Bangladesh: Managing

headquarters-subsidiary relationships. Casestudy presented at the *Administrative Sciences Association of Canada* conference, Ottawa (Canada): June. [**Winner, Administrative Sciences Association of Canada 2007 Honorable Mention Case Award**]

2006 conference presentations

Merchant H, Makhija M. 2006. Explaining the performance of international joint ventures in emerging markets using institutional economics and the resource-based view. Paper accepted for presentation at the *AIB/JIBS* conference on 'Emerging research frontiers in international business,' San Diego, CA: November.

Merchant H. 2006. Competitive pressures and value creation: The case of international joint ventures. Paper accepted for presentation at *Strategic Management Society* conference, Vienna (Austria): October.

Merchant H, Narchi N. 2006. Unicord: The Bumble Bee acquisition. Case-study presented at the *Academy of Management* conference, Atlanta, GA: August. [**Finalist, Academy of Management 2006 Dark Side Case Competition Award**]

Merchant H. 2006. IJV performance in emerging markets and non-emerging markets. Paper presented at the *Academy of International Business* conference, Beijing (China): June.

Merchant H, Abramson N. 2006. Building guanxi between Westport China and Nanjing ZP Chemical Company Limited. Case-study presented at the *Administrative Sciences Association of Canada* conference, Banff (Canada): June.

2005 conference presentations

Merchant H. 2005. How do competitive pressures improve firm performance? Paper presented at the *Academy of International Business* conference, Quebec City (Canada): July.

Merchant H. 2005. Olly Racela in Bangkok. Case-study accepted for presentation at the *Administrative Sciences Association of Canada* conference, Toronto (Canada): May.

Merchant H. 2005. International joint venture performance in BRIC economies: A comparative analysis. Paper presented at the U-Conn CIBER conference on BRIC economies, University of Connecticut, Storrs, CT: April.

Merchant H. 2005. Does competition improve the economic performance of firms? Paper accepted for presentation at the *Organization Science* Winter conference, Steamboat Springs, CO: February.

2004 conference presentations

Merchant H. 2004. Charting the domain of academic work on non-manufacturing firms. Paper presented at the *Academy of International Business* conference symposium on 'Service multinationals: Past trends, present thoughts, and future directions,' Stockholm (Sweden): July.

Merchant H. 2004. Service multinationals: Past trends, present thoughts, and future directions. Panel presentation at the *Academy of International Business* conference, Stockholm (Sweden): July. (With Profs. Jean Boddewyn, Farok Contractor, Peter Enderwick, Sumit Kundu, and Alan Rugman)

Merchant H. 2004. Partner sponsorship and joint venture performance. Paper presented at the *Academy of International Business* conference, Stockholm (Sweden): July.

Merchant H. 2004. A taxonomy of emerging market joint ventures. Paper presented at the *Academy of International Business* conference, Stockholm (Sweden): July. [**Finalist, 2004 AIB Best Paper Award**]

2003 conference presentations

Merchant H. 2003. How much does partner nationality matter to international joint venture performance? Paper accepted for presentation at the *Administrative Sciences Association of Canada* conference, Halifax (Canada): June.

2002 conference presentations

Firm geography, economic geography, and the geography of performance: The case of international joint ventures. Paper presented at the *Academy of International Business* conference, San Juan (Puerto Rico): June.

2000 conference presentations

- Merchant H, Olk P, Henderson G. 2000. The effect of nationality and partner differences in structuring strategic alliances. Paper presented at the *Strategic Management Society* conference, Vancouver (Canada): October.
- Merchant H. 2000. Joint venture configurations in the big emerging markets: An analysis of their performance implications. Paper presented at the *Academy of Management* conference, Toronto (Canada): August.
- Merchant H, Hongcharu B. 2000. Joint venture characteristics across partner nationalities and expected joint venture performance. Paper presented at the *Pacific Basin Finance, Economics and Accounting and the ADSGM International Conference*, Bangkok (Thailand): June.

1999 conference presentations

- Merchant H. 1999. Where does industry heterogeneity manifest?: An empirical analysis of US-based joint venture partners. Paper presented at the *Strategic Management Society* conference, Berlin (Germany): October.

1998 conference presentations

- Merchant H. 1998. The capital market performance of joint venture strategic groups. Paper accepted for presentation at the *Strategic Management Society* conference, Orlando, FL: November.
- Merchant H. 1998. International joint ventures in the non-manufacturing sector: How much economic value do they really create? Paper presented at the *Academy of International Business* conference, Vienna (Austria): October.

1997 conference presentations

- Merchant H. 1997. Configurations of international joint ventures. Paper presented at the *Academy of International Business* conference, Monterrey (Mexico): October.
- Merchant H. 1997. Explaining economic value creation: The case of international joint ventures'. Paper accepted for presentation at the *Academy of Management* conference, Boston, MA: August.
- Merchant H. 1997. A economic geography perspective on the location activity of international joint ventures. Paper presented at the University of Washington CIBER sponsored *Pacific Northwest Management Scholars' Conference*, Seattle, WA: April.

1996 conference presentations

- Merchant H. 1996. The international joint venture performance of firms in the service sector. Paper presented at the *Academy of International Business* sponsored 'Global Perspectives on Cooperative Strategies' conference, London (Canada): March.

1995 conference presentations

- Merchant H, Schendel DE. 1995. When do international joint ventures create shareholder value?. Paper presented at the *Strategic Management Society* conference, Mexico City (Mexico): October.

1994 conference presentations

- Merchant H. 1994. A market analysis of international joint venture announcements. Paper presented at the *Academy of International Business* conference, Boston, MA: November.
- Merchant H. 1994. The expected performance of international joint ventures: An event study approach. Paper presented at the *International Federation of Scholarly Associations of Management (IFSAM)* conference, Dallas, TX: August.

1993 conference presentations

- Merchant H. 1993. The shareholder valuation effects of international joint venture announcements. Paper presented at the *TIMS/ORSA* conference, Phoenix, AZ: November.

1992 conference presentations

Lubatkin M, Merchant H. 1992. Value creation in the Reagan years. Paper presented at the *Academy of Management* conference, Las Vegas, NV: August.

Lubatkin M, Merchant H. 1992. Merger strategies and value creation during the Reagan years. Paper presented at the *Midwest Academy of Management* conference, St. Charles, IL: April.

1991 conference presentations

Lubatkin M, Merchant H. 1991. The convergent validity of some unweighted product-count diversification measures. Paper presented at the *Academy of Management* conference, Miami, FL: August.

Lubatkin M, Merchant H. 1991. The predictive validity of unweighted SIC-based measures of corporate diversification. Paper presented at the *Midwest Academy of Management* conference, Cincinnati, OH: April.

1990 conference presentations

Lubatkin M, Merchant H. 1990. Convergent validity: A comparison of measures of corporate diversity. Paper presented at the *Midwest Academy of Management* conference, Milwaukee, WI: April. [**Winner, 1990 Midwest Academy of Management Best Paper Award**]

ACADEMIC EXPERIENCE

Tenure-track Positions

Professor, Kate Tiedemann College of Business (Global Business), University of South Florida St. Petersburg (USA); 2012 onwards.

Associate Professor, Barry Kaye College of Business (Management Programs), Florida Atlantic University (USA); 2007-2012.

Assistant/Associate Professor, Faculty of Business (Business Policy; International Business), Simon Fraser University (Canada); 1993-2007. [Awarded full professorship, but resigned before it took effect.]

SERVICE TO PROFESSION

Editorships

Editor-in-Chief, *Journal of Asia Business Studies*; February 2014 onwards.

Consulting Editor, *Journal of International Business Studies*; June 2016 onwards.

Senior Associate Editor, *PSU Research Review*; July 2016 onwards.

Area Editor (Strategic Management & International Business), *Canadian Journal of Administrative Sciences*; January 2008 to December 2009.

Area Editor (Strategy & Business Environment), *Journal of Asia Business Studies*; November 2006 to January 2014.

Hemant Merchant / 13

Area Editor (Strategic Management), *International Journal of Emerging Markets*; October 2012 to January 2014. (Resigned to take up the Editor-in-Chief position at *Journal of Asia Business Studies*)

Editorial Boards (Current)

Chavara International Journal of Business Research; 2016 onwards.

Cross-Cultural and Strategic Management; 2015 onwards.

International Journal of Management, Economics and Social Sciences; 2013 onwards.

International Journal of Management Studies and Research; 2008 onwards.

Management and Organization Review; 2013 onwards.

Management International Review; 2010 onwards.

Editorial Boards (Past)

Canadian Journal of Administrative Sciences; 2006, 2007.

Global Strategy Journal; 2011-2013.

International Journal of Emerging Markets; 2013-2015.

Journal of Asia Business Studies; 2006-2014.

Strategic Management Journal; 1995-2013.

Thunderbird International Business Review; 2006-2016.

Guest and Supervising Editorships

Trinugroho I, Angriawan A, Merchant H. (In progress). *Journal of Asia Business Studies* Special issue on 'Business in Asian Emerging Markets.'

Baumann C, Chu W, Merchant H. (In progress). *Journal of Asia Business Studies* Special issue on 'Competitiveness of Asian vis-à-vis Western firms and nations: Concepts, measurements, and explanations.'

Deb M, Merchant H. *Journal of Asia Business Studies* Special Issue on 'Understanding India: A Marketbased Perspective.' (Concluded editorial supervision; Forthcoming 2018).

Pereira V, Malik A, Froese F, Merchant H. *Journal of Asia Business Studies* Special issue on 'National business systems in Asian countries.' (Concluded editorial supervision; 2017).

Deb M, Merchant H. *Journal of Asia Business Studies* Special Issue on 'Branding of emerging nations: A multi-disciplinary perspective.' (Concluded editorial supervision; 2017)

Kundu SK, Merchant H. 2008. *Management International Review* Special Issue on 'Service multinationals: Past, present and future.'

Service to the Academy of International Business

Track Co-chair, IB theory, FDI, and Entry Mode Strategies track. 2017. *Academy of International Business (Southeast)* conference, Washington DC (USA).

Panelist, JIBS Paper Development Workshop. 2017. *Academy of International Business* conference, Dubai (UAE): July.

Track Co-chair, IB theory, FDI, and Entry Mode Strategies track. 2016. *Academy of International Business (Southeast)* conference, Tampa (USA) / Cozumel (Mexico).

Panelist, Doctoral consortium. 2012. *Academy of International Business* conference, Washington DC (USA). (With Profs. Charles Dhanaraj, Michael Hitt, Vikas Kumar, Sumit Kundu, Shige Makino, Rajneesh

Narula, Xavier Martin, Torben Pedersen, S. Raghunath, Alan Rugman, Steve Tallman, and Luis Vives) **Track chair**, Alliances and Inter-firm Relationships track. 2009. *Academy of International Business* conference, San Diego (USA).

Track chair, Alliances and Inter-firm Relationships track. 2008. *Academy of International Business* conference, Milan (Italy).

Panelist, Junior faculty consortium. 2007. *Academy of International Business* conference, Indianapolis (USA). (With Profs. Africa Arino, Farok Contractor, Jean-Francois Hennart, Sumit Kundu, Bent Petersen, Jane Salk, Srilata Zaheer, and Shaker Zahra)

Track chair, Co-evolution of Emerging Markets and MNCs track. 2007. *Academy of International Business* conference, Indianapolis (USA).

Panelist, Doctoral consortium. 2006. *Academy of International Business* conference, Beijing (China). (With Profs. Nakiye Boyacigiller, Joseph Cheng, Tim Devinney, Mingfang Li, Mike Peng, Kannan Ramaswamy, Steve Tallman, and William Wan)

Panelist, Junior faculty consortium. 2005. *Academy of International Business* conference, Quebec City (Canada). (With Profs. Nakiye Boyacigiller, Julio de Castro, Debra Glassman, Michael Hitt, Masaaki Kotabe, Peter Rodriguez, Klaus Uhlenbruck, and Alain Verbeke)

ACADEMIC HONORS

Achievement Awards

Winner, **USF Global Achievement award** (Faculty category) for "...outstanding contributions to the USF System's global mission." 2016.

Research Awards

2017. Best Conference Paper Award, *Academy of International Business Southeast*.

2017. Best 'Global Strategy' Track Paper Award, *Academy of International Business Southeast*.

2007. ASAC 2007 Honorable Mention Case Award, *Administrative Sciences Association of Canada*.

2006. Dark Side Case Competition Finalist Award, *Academy of Management*.

2006. Douglas C. Mackay Outstanding Paper Award in International Business, *Canadian Journal of Administrative Sciences*.

2005. Douglas C. Mackay Outstanding Paper Award in International Business, *Canadian Journal of Administrative Sciences*.

2004. Finalist, Best Paper Award, *Academy of International Business*.

1990. Best Paper Award, *Midwest Academy of Management*.

Research Rankings

10th most prolific author worldwide in terms of publications in *JIBS*, *MIR* and *JWB* (2001-2009), according to Lahiri & Kumar (2012).

4th most prolific author in USA in terms of publications in *JIBS*, *MIR* and *JWB* (2001-2009), according to Lahiri & Kumar (2012).

3rd most prolific author worldwide in terms of publications in *MIR* (2001-2009), according to Lahiri & Kumar (2012).

25th most prolific author worldwide (excluding ties) in terms of publications in six leading International business journals (1996-2006), according to Xu, et al. (2008).

3rd most prolific author worldwide in terms of publications in *MIR* (1996-2006), according to Xu, et al. (2008).

PROFESSIONAL AFFILIATIONS

Academy of Management (1990-2013)

Academy of International Business (1992 onwards).

Strategic Management Society (1993 onwards).

Agenda Item: FL 108

USF Board of Trustees
(June 12, 2018)

Issue: B.S. Biomedical Engineering – CIP 14.0501

Proposed action: Approval

Executive Summary:

The proposed new degree program is a Bachelor of Science in Biomedical Engineering. The purpose of the proposed new Bachelor of Science in Biomedical Engineering (BME) is to meet the rising demand for this newly emerging and rapidly growing field that is at the crossroads of engineering and bio-medicine. This proposed USF degree program will be distinctive as the faculty for the program will hold appointments in both USF's College of Engineering and its Morsani College of Medicine, allowing for continued, direct contact amongst clinicians, faculty, and BSBME students. Having the BS-BME option at USF will not only present a singular opportunity for students to enter into this fast growing, high-demand profession, it will also assist in meeting the growing workforce demand for graduates with unique skillsets at the intersection of engineering, biology and medicine. This cross-fertilization is necessary to meet many current and future demands related to decreasing the high costs of health care, while at the same time, maintaining and improving the quality of medical care delivered. . This multidisciplinary, convergent training is unique among the engineering and medical fields, because it comprises a singular educational opportunity preparing BME majors for employment in various health and bioengineering professions. There are no associated concentrations, tracks or specializations. All students will be rigorously trained as engineers, ready for well-paying jobs in industry; or well prepared for medical or graduate school.

Financial Impact:

Current ENG funds that support the salaries and benefits of the three initial BME faculty (Drs. Jiang, Passaglia, Frisina), come from shifting these monies from the Department of Chemical & Biomedical Engineering (Frisina, Passaglia) and from Emerging Pre-Eminence monies (Jiang). Additional faculty will be added in each year (2-3 new faculty/year), with additional ENG funding.

Strategic Goal(s) Item Supports:

- USF Tampa Strategic Plan Goal 1: Student Success

BOT Committee Review Date: May 22, 2018 ACE

Supporting Documentation Online (please circle): Yes

No

USF System or Institution specific: USF Tampa

Prepared by: Robert Frisina, Ph.D., Professor and Biomedical Engineering Director

Board of Governors, State University System of Florida

Request to Offer a New Degree Program

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

University of South Florida
University Submitting Proposal

Fall 2018
Proposed Implementation Term

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

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

Biomedical Engineering
Academic Specialty or Field

B.S. in Biomedical Engineering
Complete Name of Degree

14.0501
Proposed CIP Code

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 Date

Signature of Chair, Board of Trustees Date Vice President for Academic Affairs Date

Provide headcount (HC) and full-time equivalent (FTE) student estimates of majors for Years 1 through 5. HC and FTE estimates should be identical to those in Table 1 in Appendix A. Indicate the program costs for the first and the fifth years of implementation as shown in the appropriate columns in Table 2 in Appendix A. Calculate an Educational and General (E&G) cost per FTE for Years 1 and 5 (Total E&G divided by FTE).

Implementation Timeframe	Projected Enrollment (From Table 1)	
	HC	FTE
Year 1	50	53
Year 2	125	133
Year 3	225	240
Year 4	325	347
Year 5	400	427

Projected Program Costs (From Table 2)				
E&G Cost per FTE	E&G Funds	Contract & Grants Funds	Auxiliary Funds	Total Cost
\$8,203	\$437,500	0	0	\$437,500
\$5,098	\$2,175,000	0	0	\$2,175,000

Note: This outline and the questions pertaining to each section must be reproduced within the body of the proposal to ensure that all sections have been satisfactorily addressed. Tables 1 through 4 are to be included as Appendix A

and not reproduced within the body of the proposals because this often causes errors in the automatic calculations.

INTRODUCTION

I. Program Description and Relationship to System-Level Goals

A. Briefly describe within a few paragraphs the degree program under consideration, including (a) level; (b) emphases, including majors, concentrations, tracks, or specializations; (c) total number of credit hours; and (d) overall purpose, including examples of employment or education opportunities that may be available to program graduates.

(a) The proposed new degree program is a Bachelor of Science in Biomedical Engineering.

(b) There are two associated tracks/specializations in BME and STEM.

(c) Total credit hours are 126.

(d) Overall Purpose: The purpose of the proposed new Bachelor of Science in Biomedical Engineering (BS-BME) is to meet the rising demand for this newly emerging and rapidly growing field that is at the crossroads of engineering and bio-medicine.

The proposed USF degree program will be distinctive as the faculty for the program will hold appointments in both USF's College of Engineering and its Morsani College of Medicine, allowing for continued, direct contact amongst clinicians, faculty, and BS-BME students. Having the BS-BME option at USF will not only present a singular opportunity for students to enter into this fast growing, high-demand profession, it will also assist in meeting the growing workforce demand for graduates with unique skills at the intersection of engineering, biology and medicine. This cross-fertilization is necessary to meet many current and future demands related to decreasing the high costs of health care, while at the same time, maintaining and improving the quality of medical care delivered. This multidisciplinary, convergent training is unique among the engineering and medical fields, because it comprises a singular educational opportunity, preparing BME graduates for employment in various health and bioengineering professions.

B. Please provide the date when the pre-proposal was presented to CAVP (Council of Academic Vice Presidents) Academic Program Coordination review group. Identify any concerns that the CAVP review group raised with the pre-proposed program and provide a brief narrative explaining how each of these concerns has been or is being addressed.

The pre-proposal was presented to the CAVP Academic Coordinating Group on February 10, 2017 and there were no concerns.

C. If this is a doctoral level program please include the external consultant's report at the end of the proposal as Appendix D. Please provide a few highlights from the report and describe ways in which the report affected the approval process at the university.

N/A

D. Describe how the proposed program is consistent with the current State University System (SUS) Strategic Planning Goals. Identify which specific goals the program will directly support and which goals the program will indirectly support (see link to the SUS Strategic Plan on [the resource page for new program proposal](#)).

The proposed degree program is closely aligned with the strategic goals and plans of the Florida SUS Board of Governors as it will increase student access to an undergraduate degree program

that is in very high demand in Florida and nationally. It will also increase success levels by increasing “the Number of Degrees Awarded in STEM”, in an area of engineering that has top job prospects and salary levels over the next decade. Our proposed undergraduate BME degree program will indirectly impact the SUS-BOG’s Excellence Goal to “Strengthen Quality and Reputation of Academic Programs and Universities” and its Productivity Goal to “Increase Research and Commercialization Activity”. It will also enhance the SUS-BOG’s Productivity Goal of increasing “Levels of Community and Business Engagement” by fostering new startup companies and licensing agreements.

- E. If the program is to be included in a category within the Programs of Strategic Emphasis as described in the SUS Strategic Plan, please indicate the category and the justification for inclusion. Please see the Programs of Strategic Emphasis (PSE) methodology for additional explanations on program inclusion criteria at [the resource page for new program proposal](#).**

The proposed new undergraduate degree program in Biomedical Engineering is an SUS Strategic Plan Program of Strategic Emphasis in the Economic Development – STEM area. More specifically, the BME degree program will fill a high-demand area within the subcategory of medical science and technology.

- F. Identify any established or planned educational sites at which the program is expected to be offered and indicate whether it will be offered only at sites other than the main campus.**

The educational site is on the University of South Florida’s Tampa campus, where the USF College of Engineering and the Morsani College of Medicine are located.

INSTITUTIONAL AND STATE LEVEL ACCOUNTABILITY

II. Need and Demand

- A. Need: Describe national, state, and/or local data that support the need for more people to be prepared in this program at this level. Reference national, state, and/or local plans or reports that support the need for this program and requests for the proposed program which have emanated from a perceived need by agencies or industries in your service area. Cite any specific need for research and service that the program would fulfill.**

There are currently three undergraduate degree programs in CIP 14.0501 in the SUS; however, student demand and workforce needs warrant additional opportunity for a bachelor’s level biomedical engineering education. The proposed new degree program will be distinctive as the faculty for the program will hold appointments in the joint Department of Medical Engineering, from the USF College of Engineering and the USF Morsani College of Medicine. This structure of the joint department allows for continued, direct contact amongst clinicians, faculty, and BS-BME students. Having the BS-BME option at USF presents a singular opportunity for students in the Tampa Bay region to enter into this fast growing, high-demand profession, in an area of engineering in high demand over the next decade, with workforce demand expected to increase by 7% nationally (US Bureau of Labor & Statistics; (<https://www.bls.gov/ooh/architecture-and-engineering/biomedical-engineers.htm>), and by 23.7% between 2017-2025 in the State of Florida (<http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/employment-projections>). The program will meet the growing workforce demand for graduates with unique skills at the intersection of engineering, biology and medicine, which is necessary to meet many current and future demands related to decreasing the current, very high costs of health care, while at the same time, maintaining and improving the quality of healthcare delivered.

B. Demand: Describe data that support the assumption that students will enroll in the proposed program. Include descriptions of surveys or other communications with prospective students.

There is a pent-up demand for this program at USF, as supported by the significant number of inquiries we receive in the USF College of Engineering regarding an undergraduate BME program (128 application inquiries since Fall 2017). USF anticipates excellent applicants for this new degree program, including those from groups who are typically underrepresented in STEM. USF is one of the national leaders in awarding graduate degrees in Engineering to Black students, as cited in *Diverse Issues in Higher Education*, Top 100 Producers of Graduate Degrees, 2017 – African American Engineering Research Doctorates (**USF ranked #12 in the US**) (<http://diverseeducation.com/top100/pages/GraduateDegreeProducers2017.php?dtsearch=&dtdegree=Doctorate\&Res\Schol,%20Other&dtrace=African%20American&dtmajor=Engineering&dtschool=&dtstate=&dtpage=1>) and Hispanic students, as cited in: *Diverse Issues In Higher Education*, Top 100 Producers of Graduate Degrees, 2017 – Hispanic Engineering Research Doctorates (**USF ranked #2 in the US**) (<http://diverseeducation.com/top100/pages/GraduateDegreeProducers2017.php?dtsearch=&dtdegree=&dtrace=Hispanic&dtmajor=Engineering&dtschool=&dtstate=&dtpage=0>). News release citation: <http://news.usf.edu/article/templates/?a=3576>.

The College of Engineering’s Communications and Marketing Officer reports that one of the top inquiries is the request for information on an undergraduate BME program. BME-related course enrollments for the BME minor have doubled and tripled in recent years, with the enrollments from students interested in BME but majoring in another program, since USF currently does not have an undergraduate BME program. For example, BME 4100, Biomedical Engineering, has had an enrollment from approximately 12 students in 2011 to currently 60-100 per semester, with 65 students currently in the Spring 2018 section.

C. If substantially similar programs (generally at the four-digit CIP Code or 60 percent similar in core courses), either private or public exist in the state, identify the institution(s) and geographic location(s). Summarize the outcome(s) of communication with such programs with regard to the potential impact on their enrollment and opportunities for possible collaboration (instruction and research). In Appendix C, provide data that support the need for an additional program.

Name of Institution	CIP Code	2015 Enrollment	2016 Enrollment	2014-2015 Graduates
FGCU-Fort Myers	14.0501	196	180	17
FIU-Miami	14.0501	466	392	66
UF-Gainesville	14.0501	303	357	22

In Fall 2016, Dr. Robert Frisina gave an invited talk at FIU and toured the biomedical engineering facility. He met with the Dean of the College of Engineering, the Chair of the Department of Biomedical Engineering and key faculty. Dr. Frisina spoke with faculty about how USF could effectively start an undergraduate research program, possible collaboration areas in terms of the undergraduate teaching program, the ABET BME labs needed, and research interactions. The visit was quite positive, consistent with the idea that undergraduate biomedical engineering programs in the Florida – SUS are highly underrepresented relative to the demand.

In addition, Dr. Frisina has spoken with UF’s Chair of the J. Crayton Pruitt Family Department of Biomedical Engineering, Christine E. Schmidt, regarding USF moving forward with a new undergraduate BME program.

All of the above referenced interactions have been quite positive and provide evidence that USF's BME program will not have a negative impact on the programs at FIU, FGCU or UF.

- D. Use Table 1 in Appendix A (1-A for undergraduate and 1-B for graduate) to categorize projected student headcount (HC) and Full Time Equivalents (FTE) according to primary sources. Generally undergraduate FTE will be calculated as 30 credit hours per year and graduate FTE will be calculated as 24 credit hours per year. Describe the rationale underlying enrollment projections. If students within the institution are expected to change majors to enroll in the proposed program at its inception, describe the shifts from disciplines that will likely occur.**

Table 1-A attached. Rationale: We will accept 50 applicants the first year; and then ramp up to 100 new students each year; so a total of 400 BME majors at a given time. We do not anticipate any internal transfers due to the structured sequence of BME courses in this major.

- E. Indicate what steps will be taken to achieve a diverse student body in this program. If the proposed program substantially duplicates a program at FAMU or FIU, provide, (in consultation with the affected university), an analysis of how the program might have an impact upon that university's ability to attract students of races different from that which is predominant on their campus in the subject program. The university's Equal Opportunity Officer shall review this section of the proposal and then sign and date Appendix B to indicate that the analysis required by this subsection has been completed.**

USF's College of Engineering is committed to engaging underrepresented and minority high school students into engineering programs. The College engages routinely with teachers, students and parents in Title I schools to attract students from diverse racial, ethnic and socio-economic backgrounds. This BME program will leverage the College's recruitment and outreach programs such as "Bulls I Mentoring", ESTEAM events, Selmon S3 program and course offerings for high school students with a goal to secure a robust pipeline of diverse student population.

The specific steps USF will take to ensure a diverse student body include the following:

- Work closely with the coordinator of minority student recruitment in the College. It should be noted that the University of South Florida's College of Engineering is ranked in the top 10 of universities nationwide in conferring doctoral degrees to African American and Hispanic/Latino students, according to an annual survey in *Diverse Issues in Higher Education* (*US News & World Report*, <http://news.usf.edu/article/templates/?a=3576>).
- Actively recruit applicants from top high schools nationally with excellent underrepresented minority students;
- Attendance at state and national conferences;
- Conduct visitations;
- Offer summer courses at USF; and
- Other successful recruiting techniques.

Since there are only three such BME programs in the Florida SUS, the operation of this program at USF should not impact the FIU student population. Dr. Robert Frisina, the BME faculty member making this proposal, personally visited FIU's BME faculty and the Dean of the College of Engineering to discuss starting a new BME program at USF. Dr. Frisina also spent time with FIU's BME Lab Faculty Director, who helped him with the principles for setting up a BME program with ABET labs at USF. The FIU faculty and Dean were quite positive and helpful.

FAMU does not offer an undergraduate Biomedical Engineering degree.

III. Budget

- A. Use Table 2 in Appendix A to display projected costs and associated funding sources for Year 1 and Year 5 of program operation. Use Table 3 in Appendix A to show how existing Education & General funds will be shifted to support the new program in Year 1. In narrative form, summarize the contents of both tables, identifying the source of both current and new resources to be devoted to the proposed program. (Data for Year 1 and Year 5 reflect snapshots in time rather than cumulative costs.)

As reflected in Table 2, current E+G funds that support the salaries and benefits of the three initial BME faculty (Drs. Jiang, Passaglia, Frisina), come from shifting these monies from the Department of Chemical & Biomedical Engineering (Frisina, Passaglia) and from Emerging Pre-Eminence monies (Jiang). Additional faculty will be added in each year (2-3 new faculty/year).

- B. Please explain whether the university intends to operate the program through continuing education, seek approval for market tuition rate, or establish a differentiated graduate-level tuition. Provide a rationale for doing so and a timeline for seeking Board of Governors' approval, if appropriate. Please include the expected rate of tuition that the university plans to charge for this program and use this amount when calculating cost entries in Table 2.

N/A

- C. If other programs will be impacted by a reallocation of resources for the proposed program, identify the impacted programs and provide a justification for reallocating resources. Specifically address the potential negative impacts that implementation of the proposed program will have on related undergraduate programs (i.e., shift in faculty effort, reallocation of instructional resources, reduced enrollment rates, greater use of adjunct faculty and teaching assistants). Explain what steps will be taken to mitigate any such impacts. Also, discuss the potential positive impacts that the proposed program might have on related undergraduate programs (i.e., increased undergraduate research opportunities, improved quality of instruction associated with cutting-edge research, improved labs and library resources).

The goal is to minimize any negative impacts on existing undergraduate programs. For example, we do not foresee attracting a significant number of students from existing majors in Engineering or Biology. The only reallocation of resources is that two to four existing College of Engineering faculty may transfer to the new Department of Medical Engineering, where this new program will be housed. However, the goal is that the open positions in the initial department (department existing faculty transferred out of) will be replaced, so no negative impact on the College is expected. There is no planned shifting of other resources.

The library resources required for the program are already in place, since we have developed a strong graduate research and teaching program in Biomedical Engineering over the last 15 years.

Potential positive impacts are that a new group of highly-talented, well-qualified engineering students will enter USF, allowing the College an opportunity to raise academic metrics, and have new students who can work in a number of BME-related faculty labs, including those of faculty in the College of Engineering and the Morsani College of Medicine. Conversely, since the Department of Medical Engineering is recruiting new faculty from outside USF, there will be more faculty to serve USF in various ways, and provide research experiences for other engineering and medical students.

- D. Describe other potential impacts on related programs or departments (e.g., increased need for general education or common prerequisite courses, or increased need for required or elective courses outside of the proposed major).**

There is no anticipated impact on other programs and departments.

- E. Describe what steps have been taken to obtain information regarding resources (financial and in-kind) available outside the institution (businesses, industrial organizations, governmental entities, etc.). Describe the external resources that appear to be available to support the proposed program.**

The financing of this new undergraduate BME program, as described above in III.A., and in the attached Tables, is from incremental, discretionary monies, as confirmed by USF's President Genshaft, USF's Provost Wilcox, USF's College of Engineering Dean Bishop, and USF Health's Senior Vice President Lockwood. In addition, we have ongoing advancement and fundraising activities within the Colleges of Engineering and Medicine that include efforts to raise monies for the Department of Medical Engineering and the undergraduate BME program. External fundraising from philanthropists and/or the industrial sector is not required to make this new undergraduate successful.

IV. Projected Benefit of the Program to the University, Local Community, and State

Use information from Tables 1 and 2 in Appendix A, and the supporting narrative for "Need and Demand" to prepare a concise statement that describes the projected benefit to the university, local community, and the state if the program is implemented. The projected benefits can be both quantitative and qualitative in nature, but there needs to be a clear distinction made between the two in the narrative.

Biomedical Engineering is one of the fastest growing professions in the State of Florida, with a projected growth rate of "23 percent through 2024, much faster than the average for all occupations." (<http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/employment-projections>)

Other sources report an impressive growth of 72% over the next decade for BME jobs: (http://money.cnn.com/galleries/2010/pf/jobs/1010/gallery.best_jobs_job_growth.money/mag/index.html).

Biomedical engineers typically need a bachelor's degree in biomedical engineering or bioengineering from an accredited university.

According to Enterprise Florida, Florida is home to over 200 biotech companies specializing in therapeutics, diagnostics, industrial biotechnology and related fields. Florida has one of the largest medical device manufacturing industries and ranks 2nd in the U.S. for the number of FDA-registered medical device establishments (<https://www.enterpriseflorida.com/industries/life-sciences/>).

Medical device companies located in Florida include: Medtronic, Boston Scientific, Beckman Coulter, Oscor, Jabil, ConMed Linvatec and Baxter International. Over 19,000 Floridians work in this industry (<https://www.enterpriseflorida.com/industries/life-sciences/>). In addition, Florida has over 150 pharmaceutical and medicine manufacturing companies that employ nearly 5,200 Floridians. The demand for the graduates of the BS-BME program will be strong in Florida and nationally.

The proposed BS-BME program will also have a positive impact on USF's growing research grant

and contract opportunities. We anticipate attracting students interested in BME who will become active, important participants in undergraduate research opportunities, with some students electing to pursue graduate research or medical education upon undergraduate degree completion. Similar arguments may be made for bolstering USF's growing rankings in intellectual property metrics, i.e., the number and quality of patents since the College of Engineering and the Morsani College of Medicine, lead the way in the number of patents for USF.

V. Access and Articulation – Bachelor’s Degrees Only

- A. If the total number of credit hours to earn a degree exceeds 120, provide a justification for an exception to the policy of a 120 maximum and submit a separate request to the Board of Governors for an exception along with notification of the program’s approval. (See criteria in Board of Governors Regulation 6C-8.014)**

According to the 2017-2018 *Common Course Prerequisites Manual*, the three SUS institutions offering undergraduate programs in the 14.0501 CIP have total credit hours of 128 (FIU), 129 (FGCU) and UF (132). USF is seeking to offer the B.S. Biomedical Engineering degree at 126 total credit hours. In order to prepare undergraduates for the workforce and/or graduate programs, an undergraduate BME program must combine engineering principles with medical and biological sciences. There is very little overlap in the engineering, medical and biological sciences coursework. Also, the prerequisite courses required for this new degree program amount to approximately 40 credit hours.

- B. List program prerequisites and provide assurance that they are the same as the approved common prerequisites for other such degree programs within the SUS (see link to the Common Prerequisite Manual on [the resource page for new program proposal](#)). The courses in the Common Prerequisite Counseling Manual are intended to be those that are required of both native and transfer students prior to entrance to the major program, not simply lower-level courses that are required prior to graduation. The common prerequisites and substitute courses are mandatory for all institution programs listed, and must be approved by the Articulation Coordinating Committee (ACC). This requirement includes those programs designated as “limited access.”**

If the proposed prerequisites are not listed in the Manual, provide a rationale for a request for exception to the policy of common prerequisites. NOTE: Typically, all lower-division courses required for admission into the major will be considered prerequisites. The curriculum can require lower-division courses that are not prerequisites for admission into the major, as long as those courses are built into the curriculum for the upper-level 60 credit hours. If there are already common prerequisites for other degree programs with the same proposed CIP, every effort must be made to utilize the previously approved prerequisites instead of recommending an additional “track” of prerequisites for that CIP. Additional tracks may not be approved by the ACC, thereby holding up the full approval of the degree program. Programs will not be entered into the State University System Inventory until any exceptions to the approved common prerequisites are approved by the ACC.

STATE MANDATED COMMON COURSE PREREQUISITES

Mathematics:

Courses at USF

- MAC 2281 Engineering Calculus I
- MAC 2282 Engineering Calculus II
- MAC 2283 Engineering Calculus III
- MAP 2302 Differential Equations

Courses at a Florida College System

- MAC X311 or MAC X281
- MAC X312 or MAC X282
- MAC X313 or MAC X283
- MAP X302

Natural Sciences:

Courses at USF

Courses at a Florida College System

CHM 2045/L General Chemistry I w/Lab	CHM X045/X045L or CHM X045C or CHS X440/X440L or CHM X095/095L
CHM 2046/L General Chemistry II w/Lab	CHM X046/X046L or CHM X096/X096L
PHY 2048/2048L General Physics I- Calculus Based w/Lab	PHY X048/X048L or PHY X048/X064L
PHY 2049/2049L General Physics II- Calculus Based w/ Lab	PHY X049/X049L or PHY X049/PHY X064L
BSC 2010/2010L Cellular Processes w/Lab	BSC X010/X010L or BSCX2010/BSC X044L
CHM 2210/2210L Organic Chemistry I with Lab	CHM X210/X210L

- C. **If the university intends to seek formal Limited Access status for the proposed program, provide a rationale that includes an analysis of diversity issues with respect to such a designation. Explain how the university will ensure that Florida College System transfer students are not disadvantaged by the Limited Access status. NOTE: The policy and criteria for Limited Access are identified in Board of Governors Regulation 6C-8.013. Submit the Limited Access Program Request form along with this document.**

USF is seeking Limited Access status for this program. Biomedical Engineering is one of the top two most popular engineering majors for women, so we anticipate attracting female applicants in proportions at or exceeding the other engineering majors (<https://www.asee.org/papers-and-publications/publications/college-profiles/15EngineeringbytheNumbersPart1.pdf>, Page 12). Also, USF is notably ranked #8 in the US, for all universities awarding doctorate degrees in engineering, for percentage of women graduates (35.1%) which bodes well for attracting women for our new undergraduate BME program (<https://www.asee.org/papers-and-publications/publications/college-profiles/15EngineeringbytheNumbersPart1.pdf>, Page 23).

Underrepresented ethnic groups are highly underrepresented in STEM fields such as engineering (<https://www.asee.org/papers-and-publications/publications/college-profiles/15EngineeringbytheNumbersPart1.pdf>, Page 13); however, the USF College of Engineering has relatively high numbers of diverse students compared to many other colleges of engineering nationally. USF is one of the national leaders in awarding graduate degrees in Engineering to Black students, as cited in *Diverse Issues in Higher Education*, Top 100 Producers of Graduate Degrees, 2017 - African American Engineering Research Doctorates (**USF ranked #12 in the US**)

(<http://diverseeducation.com/top100/pages/GraduateDegreeProducers2017.php?dtsearch=&dtdegree=Doctorate\&Res\%20Other&dtrace=African%20American&dtmajor=Engineering&dtstate=&dtpage=1>) and Hispanic students, as cited in: *Diverse Issues In Higher Education*, Top 100 Producers of Graduate Degrees, 2017 - Hispanic Engineering Research Doctorates (**USF ranked #2 in the US**) (<http://diverseeducation.com/top100/pages/GraduateDegreeProducers2017.php?dtsearch=&dtdegree=&dtrace=Hispanic&dtmajor=Engineering&dtstate=&dtpage=0>).

News release citation: <http://news.usf.edu/article/templates/?a=3576>.

Consequently, we expect that our new degree program in Biomedical Engineering will have a similar favorable mix of underrepresented minorities, building upon the successes of the USF College of Engineering in related majors such as Chemical, Electrical, Mechanical, Industrial and Civil Engineering. In addition, the intellectual and professional environment in the USF College of Engineering is very favorable for underrepresented minorities in support of our new undergraduate BME Major; specifically, the USF College of Engineering is ranked in the top 20 in the US for all colleges of engineering for the number of Hispanic Professors with Tenure/Tenure Track (<https://www.asee.org/papers-and-publications/publications/college->

[profiles/15EngineeringbytheNumbersPart1.pdf](#), Page 33).

- D. If the proposed program is an AS-to-BS capstone, ensure that it adheres to the guidelines approved by the Articulation Coordinating Committee for such programs, as set forth in Rule 6A-10.024 (see link to the Statewide Articulation Manual on [the resource page for new program proposal](#)). List the prerequisites, if any, including the specific AS degrees which may transfer into the program.**

N/A

INSTITUTIONAL READINESS

VI. Related Institutional Mission and Strength

- A. Describe how the goals of the proposed program relate to the institutional mission statement as contained in the SUS Strategic Plan and the University Strategic Plan (see link to the SUS Strategic Plan on [the resource page for new program proposal](#)).**

The proposed degree program is strongly aligned with the Florida SUS and USF's strategic goals and priorities:

1. It will increase access to STEM degrees as it opens up new avenues; biomedical engineering encompasses all four STEM disciplines.
2. It will increase production of USF graduates in STEM areas.
3. It will meet the goals of creating a workforce trained to meet the challenges of the 21st Century, especially those dealing with an aging population and American health care crisis.
4. It will lead to an increased retention of Florida's brightest and best students who often have to go out of state in order to satisfy their desire to be part of this important field.
5. It will increase USF's research grant funding, contracts and technology transfer (patents), since more highly-qualified students interested in BME will enroll at USF and participate in these strategic activities to help USF move forward in national and international rankings.

- B. Describe how the proposed program specifically relates to existing institutional strengths, such as programs of emphasis, other academic programs, and/or institutes and centers.**

By its nature, Biomedical Engineering is an interdisciplinary subject that involves many branches of science, mathematics/statistics and engineering. A new Bachelor of Science in Biomedical Engineering degree is proposed as part of a new, joint Department of Medical Engineering. This vision includes a unique undergraduate BME program built on interdisciplinary subject matter and a collaboratively-taught curriculum.

The first two years of this program are primarily focused on science and mathematics courses. It will draw from courses currently offered by the USF Departments of Biology, Chemistry, Physics and Mathematics to fulfill these requirements, consistent with the other Engineering undergraduate degree programs at USF. Community college transfer students can fulfill these requirements before they transfer to USF. Due to the large enrollments in these courses at USF, the addition of BS-BME students will have only a minimal impact on the enrollment for these courses.

The expectation is that most, if not all, upper-level courses will be taught by faculty in the Colleges of Engineering (COEN) and Medicine (MCOM). COEN faculty will be lead instructors for most core and some BME/STEM specialization track courses, with MCOM faculty giving guest lectures that relate class topics to modern health care applications, challenges, and translational technology transfer opportunities. For example, a junior-level core course in Biomedical Instrumentation and Signals Analysis would have a lecture series on Fourier

Transforms given by an engineer followed by a lecture given by a cardiologist, illustrating the interpretation of heart rate variability through the use of Fourier analysis of actual ECG data. MCOM faculty will also be lead instructors for some core and specialization BME courses, with COEN faculty giving guest lectures that show how the biological process under study can be understood mathematically. For example, an upper-level undergraduate Physiology for Engineers course would offer a lecture series on the visual system given by a clinical scientist with a lecture on the design principles of retinal prosthetics and their current limitations given by an engineer.

We have initiated discussions with other departments within and outside the College of Engineering regarding cooperation and collaboration in not only course offerings but also in technology transfer and research. Many of the current BME-related faculty in COEN and MCOM are already involved in research and course collaborations with Moffitt Cancer Center, Byrd Alzheimer’s Research Center, College of Public Health, College of Behavioral and Community Sciences, and the College of Pharmacy. The existence and expansion of these collaborative research and education relationships will enable experiential learning opportunities in courses and extracurricular activities. Another key feature of the new BS in BME will be to integrate all aspects of the American Medical Association requirements for admission to U.S. medical schools into our undergraduate BME curriculum, to ensure that the process is seamless for those USF students wishing to attend medical school or other health-related graduate programs.

- C. Provide a narrative of the planning process leading up to submission of this proposal. Include a chronology in table format of the activities, listing both university personnel directly involved and external individuals who participated in planning. Provide a timetable of events necessary for the implementation of the proposed program.**

Narrative of the Planning Process

Phase 1: Prior to 2011

- USF COEN faculty generated a proposal for formal programs between COEN and MCOM in Biomedical Engineering.
- A series of meetings took place and documents were generated that contained significant inputs from COEN and MCOM faculty to move forward with a new Department of Medical Engineering and new undergraduate BME program.

Phase 2: 2012

- Inputs from these same faculty, plus new faculty inputs, were utilized to revise the application for a new undergraduate major in BME, which had been originally conceived in Phase 1
- These COEN faculty submitted this application to COEN Dean to further initiate the undergraduate degree approval process.

Phase 3 2015-present

- Dean Bishop, Senior Vice President and Dean Lockwood, Drs. Jose Zayas-Castro and Philip Marty, sought faculty inputs from the USF College of Engineering and the USF Morsani College of Medicine.
- MCOM and COEN faculty have approved the current proposal.

Chronology of Events Leading to Implementation of this new BME undergraduate degree program Application

Date	Implementation Activity
Mar 13, 2015	Committee formed to plan the new BME program in the new Department of Medical Engineering.
Dec 11, 2015	Proposal presented to COEN Deans who accepted the proposal.
Jan 11, 2016	COEN Dean Bishop presented to USF Tampa College Deans and USF Health

	Deans.
Apr 27, 2016	Dean Bishop presented to USF's President's Cabinet.
Jun 28, 2016	Proposal presented to College of Medicine Faculty Council (FC).
Aug 16, 2016	Medical Engineering committee members met with Faculty Senate (FS) President for input on their approval process.
Aug 24, 2016	Electronic ballot was sent to the 42 voting members of MCOM FC.
Sept 9, 2016	COEN posted the formal proposal, including the BME undergraduate element on the COEN website for all COEN faculty to critique.
Sept 16, 2016	Proposal accepted by MCOM FC.
Oct 10, 2016	BME pre-proposal approved by USF Undergraduate Council.
Oct 14, 2016	Feedback from all COEN departments was submitted by the Chair of the COEN Faculty Gov. Committee to the COEN Dean. Positive responses on the new BME program.
Nov 9, 2016	Proposal approved unanimously by the USF Faculty Senate.
Nov 14, 2016	Pre-proposal cleared the BOG's APPRISe posting period.
Nov 16, 2016	Proposal approved unanimously by the USF System Faculty Senate.
Dec 2016	USF established the new Department of Medical Engineering, including the plan to move forward on the new undergraduate BME program.
Jan 2017	First high-impact faculty member recruited into the new Department of Medical Engineering.
Jan 9, 2017	BME Pre-Proposal approved by APAC.
Feb 10, 2017	BME Pre-Proposal received no comments from the SUS CAVP Workgroup.
July 2017	Search Committee formed to recruit permanent Chair of the Department of Medical Engineering.
August 2017	Search Committee formed to recruit instructors for the new BME program.
Feb 12, 2018	Department and College Committees approve the BME new degree proposal.
Feb 26, 2018	New degree program proposal approved by Undergraduate Council.
March 22, 2018	New degree program proposal approved by APAC.
March 2018	New degree program proposal added to May 22, 2018 ACE Committee Agenda.
March 2018	New degree program proposal added to June 12, 2018 BOT Agenda.

VII. Program Quality Indicators - Reviews and Accreditation

Identify program reviews, accreditation visits, or internal reviews for any university degree programs related to the proposed program, especially any within the same academic unit. List all recommendations and summarize the institution's progress in implementing the recommendations.

The College of Engineering will seek ABET accreditation for the new Biomedical degree program, which is a hallmark, gold standard of all top engineering undergraduate programs, based upon rigorous independent assessment of many quantitative outcomes and metrics.

VIII. Curriculum

- A. Describe the specific expected student learning outcomes associated with the proposed program. If a bachelor's degree program, include a web link to the Academic Learning Compact or include the document itself as an appendix.

Academic Learning Compact

Program Educational Objectives:

1. Produce graduates who will be able demonstrate their professional engineering competence

- in their chosen career by holding positions of increasing responsibility in industry, government, educational institutions or private practice;
2. Produce graduates who will be able to use their broad educational background to foster communications across professional and disciplinary boundaries;
 3. Produce graduates who continue to improve their professional skills, knowledge and understanding through continuing their education, pursuit of advanced degrees and/or pursuit of professional licenses in their chosen profession.

Expected Student Outcomes: Graduates of the program must demonstrate the following:

1. Discipline Specific Knowledge and Skills
 - Outcome 1: Prior to graduation, the student in this program must demonstrate an ability to design a system, component, product or process related to biomedical applications.
 - Outcome 2: Prior to graduation the student must demonstrate an ability to select and apply knowledge of science, mathematics and engineering.
 - Outcome 3: Prior to graduation, the student must demonstrate an ability to design and conduct experiments as well as analyze and interpret data.
2. Critical Thinking Skills
 - Outcome 1: Prior to graduation the student will demonstrate an ability to design a system, component, product or process related to medical applications, while taking into account economic, environmental, social, political, ethical, safety, manufacturability and sustainability constraints.
 - Outcome 2: Prior to graduation, the student will demonstrate an ability to engage in professional development through a commitment to professional quality, timeliness, and continuous improvement.
3. Communication Skills
 - Outcome 1: Prior to graduation, the student must demonstrate an ability to communicate effectively.
 - Outcome 2: Prior to graduation, the student must demonstrate an ability to function effectively as a member of a scientific or technological research team.

B. Describe the admission standards and graduation requirements for the program.

USF is requesting limited access status for the undergraduate Biomedical Engineering program due to the following reasons: 1) limited space, equipment and other instructional facilities, including required laboratories; and 2) the program is of such a nature that in order to demonstrate potential for success in the program, applicants must attain a grade point average as noted below.

Students who enter the University of South Florida as First Time in College (FTIC) identify pre-BME as their major of choice and begin enrolling in the required critical tracking courses to prepare for upper-division coursework. The USF Office of Admissions provides all freshmen admission decisions. (Individual departments have no involvement or influence over freshmen admission decisions). During the fall semester of the sophomore year, pre-BME majors apply for admission to the upper-division BME major, which begins in the spring semester of the sophomore year. The department admits transfer students during the fall, spring, and summer terms.

Sophomores

Current USF students must meet the following minimum requirements to be considered for admission to the upper-division program.

- Minimum 3.5 GPA for the prerequisite courses, as listed in the table below (best

attempt);*

- No more than two attempts allowed for the prerequisite courses listed in the table below (withdrawals included);
- Minimum grade of C in each prerequisite course listed in the table below;
- Completion of the first three semesters of the BME plan of study by the end of the third semester after matriculation to the University;
- Completed BME departmental online application.

*Only the best attempt in each prerequisite course as listed below, is considered for admission into the BME program.

Transfers

Transfer students must meet the following minimum requirements to be considered for admission into the BME program.

- Minimum 2.0 cumulative (overall) GPA;
- Minimum 3.5 GPA in the prerequisite courses listed below;
- Minimum grade of C in each prerequisite course listed in the table below;
- No more than two attempts allowed for the prerequisite courses listed in the table below (withdrawals included);
- Completed BME departmental online application.

Applicants who do not meet the minimum admission requirements as stated above will not be eligible for admission into the BME program.

Transfer applications are referred to the department only after the USF Office of Admissions (including official transcripts) considers them complete. Applications are reviewed periodically and not on a rolling basis. The date of review may vary depending on the number of applications received.

Transfer applicants coming from out-of-state or private Florida institutions will be considered on a space available basis only.

USF Course Prefix	USF Course Name
MAC 2311	Calculus I
MAC 2312	Calculus II
MAC 2313	Calculus III
MAP 2302	Differential Equations
CHM 2045	General Chemistry I
CHM 2045L	General Chemistry I Laboratory
CHM 2046	General Chemistry II
CHM 2046L	General Chemistry II Laboratory
PHY 2048	General Physics I - Calculus Based
PHY 2048L	General Physics I Laboratory
PHY 2049	General Physics II - Calculus Based
PHY 2049L	General Physics II Laboratory
CHM 2210	Organic Chemistry I
CHM 2210L	Organic Chemistry I Lab

Graduation requirements are: 126 credit hours of coursework with 108 hours in the major, in addition to fulfilling all of the College of Engineering University and state requirements.

C. Describe the curricular framework for the proposed program, including number of credit hours and composition of required core courses, restricted electives, unrestricted electives, thesis requirements, and dissertation requirements. Identify the total numbers of semester credit hours for the degree.

TOTAL DEGREE HOURS: 126

TOTAL MAJOR HOURS: 108

Major requirements for the B.S.B.E. Degree:

Major Core (95 credit hours)

Major BME or STEM Specialization Track Courses (13 credit hour)

Math and Science (40 credit hours)

MAC	2281	Engineering Calculus I or MAC 2311 Calculus I
MAC	2282	Engineering Calculus II or MAC 2312 Calculus II
MAC	2283	Engineering Calculus III or MAC 2313 Calculus III
MAP	2302	Differential Equations
BSC	2010	Cellular Processes
BSC	2010L	Cellular Processes Laboratory
CHM	2045	General Chemistry I
CHM	2045L	General Chemistry I Laboratory
CHM	2046	General Chemistry II
CHM	2046L	General Chemistry II Laboratory
CHM	2210	Organic Chemistry I
CHM	2210L	Organic Chemistry Laboratory I
PHY	2048	General Physics I
PHY	2048L	General Physics I Laboratory
PHY	2049	General Physics II
PHY	2049L	General Physics II Laboratory

Basic Engineering (21 credit hours)

EGN	3000	Foundations of Engineering
EGN	3000L	Foundations of Engineering Lab
EGN	3343	Thermodynamics I
EGN	3311	Statics
EGN	3321	Dynamics
EGN	3365	Materials Engineering I or EMA 4003 Introduction to Materials Science
EGN	3373	Introduction to Electrical Systems I
EGN	3443	Probability and Statistics for Engineers

Specialization (31 credit hours)

BME	3032	Biomedical Transport Processes
BME	3053	Computer Programming for Biomedical Engineers
BME	3312	Molecular and Cellular Engineering
BME	4056C	Biomedical Engineering Lab I
BME	4057C	Biomedical Engineering Lab II
BME	4100	Biomedical Engineering
BME	4409	Engineering Physiology
BME	4503	Biomedical Instrumentation
BME	4508	Biomedical Signals and Systems Analysis
BME	4882	Biomedical Engineering Design I
BME	4883	Biomedical Engineering Design II

BME or STEM Specialization Track Courses (13 hours)

Students will choose a focused set of courses in the BME Specialization track or a STEM Specialization track.

BME Specialization Track Course Options:

BME 4332 Cell and Tissue Engineering
 BME 4440 Introduction to Bioastronautics
 BME 4571 Nanomedicine
 BME 5320 Theory and Design of Bioprocesses
 ECH 4264 Transport Phenomena
 ECH 4504 Kinetics and Reaction Engineering
 ECH 5740 Theory and Design of Bioprocesses
 EEE 4260C Bioelectricity
 EEE 4271 Bioelectronics
 EEE 4274 MEMS I: Chemical/Biomedical Sensors and Microfabrication
 EEE 4506 Biomedical Image Processing
 EML 4575 Principles of Fracture Mechanics

STEM Specialization Track Course Options:

ATR 5319 Rehabilitation Considerations for Children
 BSC 3022 Biology of Aging
 BSC 4434 Bioinformatics
 MCB 3020 General Microbiology
 MCB 3410 Cell Metabolism
 PCB 3023 Cell Biology
 PCB 4234 Principles of Immunology
 PCB 4843 Principles of Neuroscience
 PHY 3220 Classical Mechanics
 PHY 4424 Optics
 ZOO 4753 Human Histology and Molecular Pathology of Disease

Technical Writing (3 credit hours)

ENC 3246 Communications for Engineers

D. Provide a sequenced course of study for all majors, concentrations, or areas of emphasis within the proposed program.

Semester 1	Credit Hours	Semester 2	Credit Hours
CHM 2045 General Chemistry I	3	CHM 2046 General Chemistry II	3
CHM 2045L General Chemistry I Laboratory	1	CHM 2046L General Chemistry II Laboratory	1
EGN 3000 Foundations of Engineering	0	ENC 1102 Composition II	3
EGN 3000L Foundations of Engineering Lab	3	MAC 2282 Engineering Calculus II	4
ENC 1101 Composition I	3	PHY 2048 General Physics I - Calculus Based	3
MAC 2281 Engineering Calculus I	4	PHY 2048L General Physics I Laboratory	1
Semester Hours:	14	Semester Hours:	15

Semester 3	Credit Hours	Semester 4	Credit Hours
EGN 3443 Probability & Statistics for Engineers	3	BME 3053 Computer Programming for Biomedical Engineers	3
MAC 2283 Calculus III	4	EGN 3343 Thermodynamics I	3
PHY 2049 General Physics II -	3	EGN 3433 Modeling and Analysis of Engineering Systems or MAP 2302 Differential Equations	3

Semester 3	Credit Hours	Semester 4	Credit Hours
PHY 2049L Physics II Laboratory	1	BSC 2010 Cellular Processes	3
BME 4100 Biomedical Engineering	3	BSC 2010L Cellular Processes Laboratory	1
EGN 3311 Statics	3	General Education Core Social Sciences	3
Semester Hours:		Semester Hours:	
17		16	

Summer	Credit Hours
CHM 2210 Organic Chemistry I	3
CHM 2210L Organic Chemistry Laboratory I	2
ENC 3246 Communication for Engineers	3
Semester Hours:	
8	

Semester 5	Credit Hours	Semester 6	Credit Hours
BME 4409 Engineering Physiology	3	EGN 3321 Dynamics	3
BME 4508 Biomedical Signals and Systems Analysis	3	BME 4056C Biomedical Engineering Lab I	2
EGN 3373 Introduction to Electrical Systems I	3	BME 3032 Biomedical Transport Process	3
BME 4503 Biomedical Instrumentation	3	General Education Humanities and Cultural Diversity	3
General Education Core Humanities	3	EGN 3365 Materials Engineering I or EMA 4003 Introduction to Materials Science	3
Semester Hours:		Semester Hours:	
15		14	

Semester 7	Credit Hours.	Semester 8	Credit Hours
BME 3312 Molecular and Cellular Engineering	3	BME 4883 Biomedical Engineering Design II	3
BME 4057C Biomedical Engineering Lab II	2	BME Specialization Track or a STEM Specialization Track (students choose one track)	7
BME 4882 Biomedical Engineering Design I	3	General Education Ethical Reasoning & Civil Engagement	3
BME Specialization Track or a STEM Specialization Track (students choose one track)	6	Apply for Graduation	
Semester Hours:		Semester Hours:	
14		13	

E. Provide a one- or two-sentence description of each required or elective course.

ATR 5319 Rehabilitation Considerations for Children: Addresses the principles of rehabilitation for children. This course will entail advanced anatomical, physiological and psychological aspects of sports injury in the youth population.

BME 3032 Biomedical Transport Processes: Introduce principles of momentum, mass and heat transport. Mathematical modeling of transport in one dimension and obtain solutions for fluxes and profiles. To utilize them to obtain engineering quantities.

BME 3053 Computer Programming for Biomedical Engineers: Basic programming skills in MATLAB. Use of computer methods to solve biomedical engineering problems. Solution of linear and nonlinear algebraic and differential equations that arise in biomedical engineering. Optimization methods.

BME 3312 Molecular and Cellular Engineering: This course is designed to convey the basics of biological systems and the roles that engineers play in industrial biology to engineering students (primarily) and to students that are majoring in other sciences.

BME 4056C Biomedical Engineering Lab I: Design, implementation and analysis of biomedical experiments, including biomechanics, tissue mechanics, fluid transport, cardiovascular hemodynamics and materials for artificial organs and implants.

BME 4057C Biomedical Engineering Lab II: Design, implementation and analysis of biomedical experiments, including bio-signal data acquisition, processing and analysis, and medical image processing and interpretation.

BME 4100 Introduction to Biomedical Engineering: An overview of biomedical engineering, including material and energy balances on human subjects, biomechanics, biomaterials, cellular and tissue engineering, biomedical imaging, neuroengineering, cardiovascular systems, engineering ethics and product development.

BME 4332 Cell and Tissue Engineering: Engineering principles and molecular cell biology are applied to develop a fundamental understanding of property-function relationships in cells and tissues and exploit them in the rational design of tissue replacements.

BME 4409 Engineering Physiology: General physiology of nerve, muscle, heart, and lung tissue, along with quantitative models of physiological processes at cell, tissue, and/or system level.

BME 4440 Introduction to Bioastronautics: This course will discuss the space environment, impacts of microgravity on human physiology, countermeasures, human factors in spacesuit and spacecraft design, astronaut training, life support systems, mission planning, and private space flight.

BME 4503 Biomedical Instrumentation: Engineering and medical bases of application, measurement and processing of signals to and from living systems. Biomedical transducers for measurements of movement, bio potentials, pressure, flow, concentrations, and temperature are discussed.

BME 4508 Biomedical Signals and Systems Analysis: Application of analytical methods and computational modelling to the analysis of biochemical, bioelectrical, and biomechanical processes.

BME 4571 Nanomedicine: This course will provide a basic knowledge of the principles, technology and applications of nanotechnology in medicine with special emphasis on recombinant DNA technology, protein engineering, drug delivery, biomaterials, MEMs & tissue engineering.

BME 4882 Biomedical Engineering Design I: First part of a two semester Capstone course. Teams work with a client in the development of projects that incorporate various aspects of Biomedical Engineering. Emphasizes formal engineering design principles; engineering ethics, risk analysis, safety in design and FDA regulations are reviewed

BME 4883 Biomedical Engineering Design II: Second part of the two semester Capstone course. Teams work with a client in the development of projects that incorporate various aspects of Biomedical Engineering. Emphasizes formal engineering design principles; engineering ethics, risk analysis, safety in design and FDA regulations are reviewed.

BME 5320 Theory and Design of Bioprocesses: Introduction to biotechnology, including applied

microbiology, enzyme technology, biomass production, bioreactor design, and transport processes in biosystems.

BSC 2010 Cellular Processes: This course deals with biological systems at the cellular and subcellular levels. Topics include an introduction to biochemistry, cell structure and function, enzymes, respiration, mitosis and meiosis, genetics and gene expression.

BSC 2010L Cellular Processes Laboratory: Laboratory portion of Biology I Cellular Processes relating to cellular and subcellular structure and function. Mitosis, meiosis, and Mendelian genetics will be stressed.

BSC 3022 Biology of Aging: An overview of cellular and molecular aspects of the aging process in human systems will be explored through lecture, discussion and virtual formats

BSC 4434 Bioinformatics: This lecture-based, nonrestrictive course covers basics of molecular bioscience data management/analysis. Focus is on general computational methods, their bio-basis, and how to evaluate analysis results. Qualitative algorithm descriptions are included.

CHM 2045 General Chemistry I: Principles and applications of chemistry including properties of substances and reactions, thermochemistry, atomic-molecular structure and bonding, periodic properties of elements and compounds.

CHM 2045L General Chemistry I Laboratory: Laboratory portion of General Chemistry I. Introduction to laboratory techniques; study of properties of elements and compounds; synthesis and analysis of natural and commercial materials.

CHM 2046 General Chemistry II: Principles and applications of chemistry including solutions, chemical thermodynamics, kinetics, equilibria, aqueous chemistry, electrochemistry, and nuclear chemistry.

CHM 2046L General Chemistry II Laboratory: Laboratory portion of General Chemistry II. Continuation of chemistry laboratory.

CHM 2210 Organic Chemistry I: A study of the structures, syntheses and reactions of organic compounds. Fundamental principles of organic chemistry. Lecture.

CHM 2210L Organic Chemistry Laboratory I: Laboratory portion of Organic Chemistry I. Introduction of organic laboratory principles and techniques. Lecture.-lab.

ECH 4264 Transport Phenomena: Mathematical description and solution of fundamental problems in heat, mass and momentum transfer. Estimation of transport coefficients. Application in fluid flow and heat exchange.

ECH 4504 Kinetics and Reaction Engineering: The course introduces design of commercial chemical reactors, emphasizing synthesis of chemical kinetics and transport phenomena.

ECH 5740 Theory and Design of Bioprocesses: Introduction to biotechnology, including applied microbiology, enzyme technology, biomass production, bioreactor design, and transport processes in biosystems.

EEE 4260C Bioelectricity: Bioelectricity, generation and transmission from cells through tissues. Electrical activity in and among cells is explored from historical models through hands-on laboratory experience.

EEE 4271 Bioelectronics: This is the second course in the series covering bioelectrical phenomena and systems. In this course the focus is electronics for biomedical applications, and the objective is to discuss electrical systems pertaining to the human body.

EEE 4274 MEMS I: Chemical/Biomedical Sensors and Microfabrication: The course gives an introduction to MEMS, microfabrication techniques and processes as well as basic design principles of biological and chemical Sensors. The course concentrates on basics of MEMS, different processes involved and principles of sensing.

EEE 4506 Biomedical Image Processing: 2D signal processing: image enhancement; edge detection and image segmentation. Medical imaging: 3D computerized tomography, magnetic resonance imaging; single photon emission computed tomography; positron emission tomography; radiographs.

EGN 3000 Foundations of Engineering: Introduction to the USF College of Engineering disciplines and the engineering profession. Course will provide you with knowledge of resources to help you succeed. Course topics include academic policies and procedures, study skills, and career planning.

EGN 3000L Foundations of Engineering Lab: Introduction to Engineering and its disciplines incorporating examples of tools and techniques used in design and presentation. Laboratory exercises will include computer tools, engineering design, team projects, and oral and written communication skills.

EGN 3311 Statics: Principles of statics, mechanical equilibrium, forces, moments, and plane trusses.

EGN 3321 Dynamics: Dynamics of discrete particles; kinematics and kinetics for rigid bodies.

EGN 3343 Thermodynamics I: Axiomatic introduction to thermodynamic concepts of energy, entropy, work and heat. Properties of ideal and real substances. Applications: power production and refrigeration, phase equilibria.

EGN 3365 Materials Engineering or EMA 4003 Introduction to Material Science: Structure and property relationships in engineering materials, i.e., metal, ceramic and polymer systems. Environmental effects are also treated.

EGN 3373 Introduction to Electrical Systems I: A course in AC and DC linear circuit analysis. Transient and steady-state analysis. Polyphase circuits.

EGN 3443 Probability and Statistics for Engineers: An introduction to the basic concepts of statistical analysis with special emphasis on engineering applications.

EML 4575 Principles of Fracture Mechanics: Introduction to failure and fracture of linear and nonlinear engineering materials, as well as designing against fracture in modern materials.

ENC 3246 Communications for Engineers: Focuses on writing concerns of engineers. Deals with the content, organization, format, and style of specific types of engineering documents. Provides opportunity to improve oral presentations.

MAC 2281 Engineering Calculus I or MAC 2311 Calculus I: Differentiation, limits, differentials, extremes, indefinite integral.

MAC 2282 Engineering Calculus II or MAC 2312 Calculus II: Definite integral, trigonometric functions, log, exponential, series, applications.

MAC 2283 Engineering Calculus III or MAC 2313 Calculus III: Techniques of integration, numerical methods, analytic geometry, polar coordinates, Vector algebra, applications.

MAP 2302 Differential Equations: First order linear and nonlinear differential equations, higher order linear equations, applications.

MCB 3020 General Microbiology: Structure and function of bacteria, archaea, viruses, and eukaryotic microbes.

MCB 3410 Cell Metabolism: This course will provide a broad framework and overview of major metabolic pathways that occur in living cells with emphasis on integration and regulation of those pathways.

PCB 3023 Cell Biology: Cell Biology is the study of living properties of cells and encompasses a broad area of the life sciences that includes cellular physiology and life cycle, organelle structure and function, and biomolecular structure and function.

PCB 4234 Principles of Immunology: Emphasis is on organization and functions of vertebrate immune system. Basic cellular and molecular mechanisms of immune responses in health and disease are addressed as well as the principles and applications of immunological methods.

PCB 4843 Principles of Neuroscience: Study of the mammalian brain's structure and function, with an emphasis on human neuroanatomy, neuropharmacology, and neurophysiology. Topics include brain imaging, dementia, mechanisms of learning/memory, and neuropathological processes.

PHY 2048 General Physics I: First semester of a two-semester sequence of calculus-based General Physics which includes a study of mechanics, wave motion, sound, thermodynamics, geometrical and physical optics, electricity and magnetism) for students majoring in Physics, Chemistry and Engineering.

PHY 2048L General Physics I Laboratory: First semester of a two-semester sequence of general physics (mechanics, wave motion, sound, thermodynamics, geometrical and physical optics, electricity, and magnetism) and laboratory for physics majors and engineering students.

PHY 2049 General Physics II: Second semester of calculus based general physics. Topics studied include wave mechanics, electricity and magnetism, and optics.

PHY 2049L General Physics II Laboratory: Second semester of general physics and laboratory for physics majors and engineering students.

PHY 3220 Classical Mechanics: Topics covered: Newtonian mechanics, oscillatory motion, gravitation, Lagrangian and Hamiltonian Dynamics, Central-Force Motion, Dynamics of a System of Particles, Dynamics of Rigid Bodies, and Non-linear and coupled oscillations.

PHY 4424 Optics: Reflection, refraction, dispersion, interference, diffraction and polarization.

ZOO 4753 Human Histology and Molecular Pathology of Disease: The study of cellular and molecular mechanisms underlying various disease states of the human body present in the context of traditional pathology.

- F. For degree programs in the science and technology disciplines, discuss how industry-driven competencies were identified and incorporated into the curriculum and indicate whether any industry advisory council exists to provide input for curriculum development and student assessment.**

The initial curriculum was developed in the Department of Chemical and Biomedical Engineering, which receives curriculum feedback and recommendations from its external industrial advisory group, comprised of members from relevant industrial companies, such as: Ostara, USA, Tampa Electric Company, Engineering System Inc., Jabil Circuit, Gordon L. Miller Consulting, Process Engineering Group, Mosaic, Osco Inc., Delta Q Consultants, Inc., Nextera Energy, Hatch Associates Consultants, US Synergetic.

The current Department of Medical Engineering has a national advisory group composed of experienced, senior biomedical engineers who provide additional inputs. Four of the advisory board members are members of one or more of the National Academies.

- G. For all programs, list the specialized accreditation agencies and learned societies that would be concerned with the proposed program. Will the university seek accreditation for the program if it is available? If not, why? Provide a brief timeline for seeking accreditation, if appropriate.**

The College of Engineering will seek the Accreditation Board for Engineering and Technology (ABET) accreditation for the new Biomedical Engineering degree program. ABET accreditation is granted after the first group of students graduate from the program. Specifically, once we have a completed transcript of a graduate to submit (assuming January 2021), we will ask ABET for a new program review. This will determine the timeline going forward, which will likely involve submission of the Self-Study in July 2021, and then the evaluation visit would occur in Fall 2021, with accreditation results provided the next spring. Prior to the evaluation visit, we will have a Mock Visit consultant review the program. The new BME program would then join the programs from our existing Engineering departments that currently have ABET accreditation.

- H. For doctoral programs, list the accreditation agencies and learned societies that would be concerned with corresponding bachelor's or master's programs associated with the proposed program. Are the programs accredited? If not, why?**

N/A

- I. Briefly describe the anticipated delivery system for the proposed program (e.g., traditional delivery on main campus; traditional delivery at branch campuses or centers; or nontraditional delivery such as distance or distributed learning, self-paced instruction, or external degree programs). If the proposed delivery system will require specialized services or greater than normal financial support, include projected costs in Table 2 in Appendix A. Provide a narrative describing the feasibility of delivering the proposed program through collaboration with other universities, both public and private. Cite specific queries made of other institutions with respect to shared courses, distance/distributed learning technologies, and joint-use facilities for research or internships.**

This new degree program will be offered on the USF Tampa campus.

IX. Faculty Participation

- A. Use Table 4 in Appendix A to identify existing and anticipated full-time (not visiting or**

adjunct) faculty who will participate in the proposed program through Year 5. Include (a) faculty code associated with the source of funding for the position; (b) name; (c) highest degree held; (d) academic discipline or specialization; (e) contract status (tenure, tenure-earning, or multi-year annual [MYA]); (f) contract length in months; and (g) percent of annual effort that will be directed toward the proposed program (instruction, advising, supervising internships and practica, and supervising thesis or dissertation hours).

The first block in the table lists existing faculty in the Department of Medical Engineering (Prof. Jiang). A total of 10 additional faculty will be needed by Year 5 to run the Department. It is anticipated that 9 of these faculty will come from new hires; the second block lists those who will be hired in Year 1. It is anticipated that the other 3 faculty will transfer from within the College of Engineering (COEN) to the Department. The third block lists COEN faculty who have currently been invited to transfer; the fourth block lists COEN faculty with BME research interests who may be invited in the future. Many of these faculty will participate in the proposed program by teaching required or specialization BME courses until new faculty are hired. It is anticipated that they also will participate by supervising research done by BME students or for senior projects.

- B. Use Table 2 in Appendix A to display the costs and associated funding resources for existing and anticipated full-time faculty (as identified in Table 4 in Appendix A). Costs for visiting and adjunct faculty should be included in the category of Other Personnel Services (OPS). Provide a narrative summarizing projected costs and funding sources.**

As reflected in Tables 2 and 4, current E&G funds that support the salaries and benefits of the existing Medical Engineering faculty member (Dr. Jiang) and three internal COE transfers (invited: Drs. Frisina, Passaglia, and TBD) come from existing College of Engineering E&G monies. There are no costs anticipated for visiting or adjunct faculty.

- C. Provide in the appendices the abbreviated curriculum vitae (CV) for each existing faculty member (do not include information for visiting or adjunct faculty).**

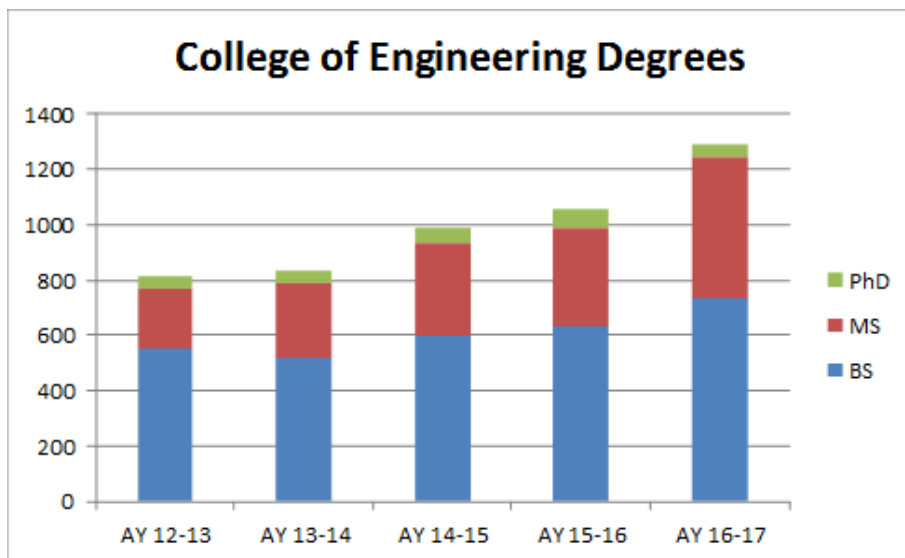
Attached.

- D. Provide evidence that the academic unit(s) associated with this new degree 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, as well as qualitative indicators of excellence.**

This is a new department/new academic unit; however, the new faculty are highly experienced in carrying out Biomedical Engineering academic programs in previous units/departments. USF's College of Engineering's SCH have gone up in an accelerated manner in the past 5 years, with record numbers of degrees granted at multiple levels. External grant funding of existing and invited faculty (Drs. Frisina, Jiang and Passaglia) for grants they are Principal Investigator (PI) exceed \$14 million.

College of Engineering Degrees

Term	BS	MS	PhD	Total
AY 11-12	504	227	53	784
AY 12-13	553	214	49	816
AY 13-14	519	267	49	835
AY 14-15	597	337	57	991
AY 15-16	630	361	62	1053
AY 16-17	736	504	50	1290



Student Credit Hours

	AY 12-13	AY 13-14	AY 14-15	AY 15-16	AY 16-17
Undergraduate	49,361	52,674	58,996	73,145	80,082
Graduate	13,918	14,338	16,606	18,675	21,198
College Total	63,279	67,012	75,602	91,820	101,280

Grant support for BME Faculty:

Granting Agency: NIH-National Institute on Aging (NIA):

Project Title: "Aging Auditory System: Presbycusis & its Neural Bases"

NIH Impact Priority Score=10, Percentile=1%; Grant #: P01 AG009524-22

P.I. and Core Director (C.D.): Robert Frisina, Ph.D.

P.D. and C.D.: Joseph Walton, Ph.D.

P.D.: David Eddins, Ph.D.

Total Costs for Years 21-25: \$9,100,000.

Start Date: 3-15-16; Duration: 5 years.

Aims: Determine and characterize the neural and molecular bases of age-related hearing loss in humans and animal models to move towards better technological and biotherapeutic translational research interventions.

Granting Agency: NIH-Nat. Inst. on Deafness & Communication Disorders (NIDCD)

Project Title: "Enabling Microsystem Technologies for Advanced Drug Delivery"

NIH Impact Priority Score=14, Percentile=1%; Grant #: R01 DC014568-03

MPI: Robert Frisina, Ph.D.

MPI: David Borkholder, Ph.D.

Co-I: Joseph Walton, Ph.D.

Total Costs: \$3,000,000.

Start and End Dates: 4/01/15 - 3/31/20

Aims: Develop novel microsystems and programmable micropumps for local drug delivery to targeted organ systems, starting with drug delivery to the inner ear to prevent or treat hearing, deafness and balance problems.

Granting Agency: England- Action on Hearing Loss-Royal National Inst. for the Deaf

Project Title: "mGlu7 Allosteric Modulators for the Treatment of Hearing Loss"

USF PI: Robert Frisina, Ph.D.

USF Co-I: Joseph Walton, Ph.D.

Start and End Dates: 6/01/16 – 3/31/19

Total Costs (USF): \$212,000.

Aims: Develop and test new drugs to modulate the synaptic mechanisms of glutamate transmission in the auditory system to prevent or treat hearing loss and tinnitus due to noise-overexposure and aging.

Granting Agency: **NIH - Nat. Inst. on Aging (NIA) and Nat. Inst. on Deafness & Communication Disorders (NIDCD)**

Project Title: "Aging and Speech Communication Conference"

NIH Impact Priority Score=14, Percentile=1%; Grant #: R13 AG057190-01

PI: Robert Frisina, Ph.D.

Total Costs: \$40,000.

Start and End Dates: 7/01/17 – 6/30/18

Aims: Help support an international conference on age-related hearing loss and speech communication in the elderly.

Granting Agency: **NIH - National Institute of Biomedical Imaging and Bioengineering (NIBIB)**

Project Title: "A Multimodal Imaging System and Targeted Nanoprobes for Image-Guided Treatment of Breast Cancer"

Grant #: R01 EB020601

PI: Huabei Jiang, Ph.D.

Total Costs: \$2,594,082.

Start and End Dates: 09/15/2016 – 06/30/2020

Aims: Develop innovative new diagnostic and treatment nanoprobes imaging systems for breast cancer therapies.

Granting Agency: **NIH - National Eye Institute (NEI)**

Project Title: "Continuous measurement and control of intraocular pressure in normal and glaucomatous eyes"

Grant #: R01 EY027037

PI: Christopher Passaglia, Ph.D.

Total Costs: \$1,426,711.

Start and End Dates: 08/01/2016 – 07/31/2020

Aims: Investigate the causes and effects of glaucoma using Novel technologies for inducing ocular hypertension in animal models.

PENDING

Granting Agency: **NIH/NIDCD**

Project Title: "Elucidation of Under-Investigated Biological Mechanisms of Age-Related Hearing Loss"; NIH Priority Score: 30; NIH percentile: 17%

Grant #: R21 DC017039-01

PI: Robert Frisina, Ph.D.

Dates: 4/01/18 – 3/31/20

Total Costs (USF): \$412,500

Aims: Investigate autophagy pathways in the inner ear to prevent or treat acquired hearing loss, focusing upon age-related hearing loss.

X. Non-Faculty Resources

- A. Describe library resources currently available to implement and/or sustain the proposed program through Year 5. Provide the total number of volumes and serials available in this discipline and related fields. List major journals that are available to the university's students. Include a signed statement from the Library Director that this subsection and subsection B have been reviewed and approved.

USF libraries have books, e-journals, digital collections, and other materials for supporting a successful program in Biomedical Engineering. The table below provides a select list of resources to which USF students have access on the specific topic of 'biomedical engineering' based on an OCLC collection evaluation. The totals do not include aggregated databases such as IEEE Xplor, Web of Science, etc., all of which will include additional material relevant to the field. Inclusion of related topics would enlarge these totals even further.

OCLC Collection Evaluation								
Subject	Totals	Articles	Audiobooks	Books	Computer Files	Journals/Magazines	Videos	Internet Resources
Medicine Totals	29,806	8	120	24,304	20	4,719	513	7
Biomedical Engineering	719	0	0	666	0	52	0	0
Engineering & Technology Totals	103,812	6	36	96,071	60	7,240	297	32
	133618	14	156	120375	80	11959	810	39

USF libraries maintains print and online subscriptions to leading journals in the biomedical engineering field, including the top 40 based on Scimago Journal Rankings:

Nature Biotechnology	Nanomedicine: Nanotechnology, Biology, and Medicine
Nature Nanotechnology	Nanotoxicology
Nano Today	Journal of Materials Chemistry B
Current Opinion in Biotechnology	Journal of Neural Engineering
Annual Review of Biomedical Engineering	Biomaterials Science
ACS Synthetic Biology	Journal of the Royal Society Interface
Frontiers in Neuroinformatics	European Cells and Materials
Open Bioinformatics Journal	Biofabrication
International Journal of Robust and Nonlinear Control	IEEE Reviews in Biomedical Engineering
Osteoarthritis and Cartilage	Nanomedicine
Lab on a Chip - Miniaturisation for Chemistry and Biology	IEEE Transactions on Biomedical Engineering
Biosensors and Bioelectronics	Journal of Biomechanics
Polymer Chemistry	Journal of Nanobiotechnology
Additive Manufacturing	Tissue Engineering - Part A
Advanced healthcare materials	International Journal for Numerical Methods in Biomedical Engineering
Acta Biomaterialia	IEEE Transactions on Neural Systems and Rehabilitation Engineering
Bioconjugate Chemistry	Annals of Biomedical Engineering
Polymer Reviews	Frontiers in Neuroengineering
Tissue Engineering - Part B: Reviews	Tissue Engineering - Part C: Methods
Nanomedicine and Nanobiotechnology	Cell Transplantation

- B. Describe additional library resources that are needed to implement and/or sustain the program through Year 5. Include projected costs of additional library resources in Table 2 in Appendix A. Please include the signature of the Library Director in Appendix B.**

No additional Library resources needed.

- C. Describe classroom, teaching laboratory, research laboratory, office, and other types of space that are necessary and currently available to implement the proposed program through Year 5.**

The initial departmental space has been allocated by the USF President and Provost in the amount of 10,000 square feet on the 7th floor of the ISA building to include departmental offices, conference room, reception area, two undergraduate ABET BME labs, and BME research labs for three senior Medical Engineering faculty.

- D. Describe additional classroom, teaching laboratory, research laboratory, office, and other space needed to implement and/or maintain the proposed program through Year 5. Include any projected Instruction and Research (I&R) costs of additional space in Table 2 in Appendix A. Do not include costs for new construction because that information should be provided in response to X (E) below.**

No additional space or labs, beyond what is noted in X.C., are needed to carry out the requested new degree program in Biomedical Engineering.

- 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. Table 2 in Appendix A includes only Instruction and Research (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.**

The proposed BME program is not expected to increase the overall enrollment of the College and USF, as explained in detail above (III.D.) so, we do not anticipate any increased costs in non-I&R activities.

- F. Describe specialized equipment that is currently available to implement the proposed program through Year 5. Focus primarily on instructional and research requirements.**

The funding, \$3 million, for the main specialized equipment needed for the proposed BME degree program has been allocated by the USF President and Provost in conjunction with the construction and equipping of the BME student labs in the ISA 7th floor space. This funding and renovation includes all of the ABET lab equipment and Department of Medical Engineering office and conference room furniture and equipment. The current BME faculty (Frisina, Jiang, Passaglia) each have multi-million dollar labs and specialized equipment to support the research needs. BME students will have extensive access to the well-equipped labs of the College of Engineering and USF's Morsani College of Medicine BME faculty and researchers. Specialty areas of BME excellence at USF, where faculty have well-equipped labs, include nanomedicine, orthopedics, prosthetics, biomechanics, neuroengineering, tissue engineering, regenerative medicine, cardiac bioengineering, cancer, biomedical imaging, and others.

G. Describe additional specialized equipment that will be needed to implement and/or sustain the proposed program through Year 5. Include projected costs of additional equipment in Table 2 in Appendix A.

The funding, \$3 million, for the main specialized equipment needed for the proposed BME program has been allocated by the USF President and Provost in conjunction with the construction and equipping of the BME Student Labs in the ISA 7th floor space. Consequently, as new faculty join the Department of Medical Engineering, in support of the new BME program, they will bring additional equipment to supplement labs listed in X.F.

H. Describe any additional special categories of resources needed to implement the program through Year 5 (access to proprietary research facilities, specialized services, extended travel, etc.). Include projected costs of special resources in Table 2 in Appendix A.

These types of additional resources are not needed.

I. Describe fellowships, scholarships, and graduate assistantships to be allocated to the proposed program through Year 5. Include the projected costs in Table 2 in Appendix A.

There are no fellowships or scholarships for undergraduate students in this new BME program. Graduate assistantships associated with this new BME program are awarded in the form of Teaching Assistantships, in support of the undergraduate BME courses. BME students will be of high quality, based upon our admissions standards, so they will be quite competitive for university, regional and national scholarships, based upon both merit and financial need.

J. Describe currently available sites for internship and practicum experiences, if appropriate to the program. Describe plans to seek additional sites in Years 1 through 5.

These are optional, not a requirement of the program but they are desirable, and available at local, regional and national BME-related companies, some of which will be represented on our Departmental Advisory Board. A new Industrial Department Advisory Board will soon be formed in conjunction with the new BME program. Current College of Engineering departments all have successful industrial departmental advisory boards, and the new Industrial Advisory Board to support the new BME program will be similar.

APPENDIX A

TABLE 1-A
 PROJECTED HEADCOUNT FROM POTENTIAL SOURCES
 (Baccalaureate Degree Program)

Source of Students (Non-duplicated headcount in any given year)*	Year 1		Year 2		Year 3		Year 4		Year 5	
	HC	FTE	HC	FTE	HC	FTE	HC	FTE	HC	FTE
Upper-level students who are transferring from other majors within the university**	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Students who initially entered the university as FTIC students and who are progressing from the lower to the upper level***	50	53.33	110	117.33	195	208.00	280	298.67	340	362.67
Florida College System transfers to the upper level***	0	0.00	5	5.33	10	10.67	15	16.00	20	21.33
Transfers to the upper level from other Florida colleges and universities***	0	0.00	5	5.33	10	10.67	15	16.00	20	21.33
Transfers from out of state colleges and universities***	0	0.00	5	5.33	10	10.67	15	16.00	20	21.33
Other (Explain)***	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Totals	50	53.33	125	133.33	225	240.00	325	346.67	400	426.67

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

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

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

APPENDIX A
TABLE 2
PROJECTED COSTS AND FUNDING SOURCES

Instruction & Research Costs (non-cumulative)	Year 1				Year 5				Subtotal E&G, Auxiliary, C&G Funds				
	Funding Source				Funding Source								
	Reallocated Base* (E&G)	Enrollment Growth (E&G)	Other New Recurring (E&G)	New Non-Recurring (E&G)	Contracts & Grants (C&G)	Auxiliary Funds	Subtotal E&G, Auxiliary, C&G Funds	Continuing Base** (E&G)		New Enrollment Growth (E&G)	Other*** (E&G)	Contracts & Grants (C&G)	Auxiliary Funds
Faculty Salaries and Benefits	75,000	0	150,000	0	0	0	\$225,000	1,500,000	0	0	0	0	\$1,500,000
A & P Salaries and Benefits	0	0	65,000	0	0	0	\$65,000	125,000	0	0	0	0	\$125,000
USPS Salaries and Benefits	0	0	0	0	0	0	\$0	0	0	0	0	0	\$0
Other Personal Services	0	0	0	0	0	0	\$0	0	0	0	0	0	\$0
Assistantships & Fellowships	0	0	37,500	0	0	0	\$37,500	450,000	0	0	0	0	\$450,000
Library	0	0	0	0	0	0	\$0	0	0	0	0	0	\$0
Expenses	0	0	10,000	100,000	0	0	\$110,000	100,000	0	0	0	0	\$100,000
Operating Capital Outlay	0	0	0	0	0	0	\$0	0	0	0	0	0	\$0
Special Categories	0	0	0	0	0	0	\$0	0	0	0	0	0	\$0
Total Costs	\$75,000	\$0	\$262,500	\$100,000	\$0	\$0	\$437,500	\$2,175,000	\$0	\$0	\$0	\$0	\$2,175,000

*Identify reallocation sources in Table 3.

**Includes recurring E&G funded costs ("reallocated base," "enrollment growth," and "new recurring") from Years 1-4 that continue into Year 5.

***Identify if non-recurring.

Faculty and Staff Summary

	Year 1	Year 5
Total Positions	3,24	3,24
Faculty (person-years)	1	1
A & P (FTE)	0	0
USPS (FTE)		

Calculated Cost per Student FTE

	Year 1	Year 5
Total E&G Funding	\$437,500	\$2,175,000
Annual Student FTE	53	427
E&G Cost per FTE	\$8,203	\$5,097.66





APPENDIX A

**TABLE 4
ANTICIPATED FACULTY PARTICIPATION**

Faculty Code	Faculty Name or "New Hire" Highest Degree Held Academic Discipline or Speciality	Rank	Contract Status	Initial Date for Participation in Program	Mos. Contract Year 1	FTE Year 1	% Effort for Prg. Year 1	PY Year 1	Mos. Contract Year 5	FTE Year 5	% Effort for Prg. Year 5	PY Year 5
A	Huabei Jiang, Ph.D.	Professor	Tenured	Spring 2019	9	0.75	0.13	0.10	9	0.75	0.13	0.10
	Medical Engineering, Physics											
C	New Hire, M.D./Ph.D.	Professor	Tenured	Spring 2019	12	1.00	0.13	0.13	12	1.00	0.13	0.13
	Medical Engineering											
C	New Hire, Ph.D.	Professor	Tenured	Spring 2019	9	0.75	0.13	0.10	9	0.75	0.13	0.10
	Medical Engineering											
C	New Hire, Ph.D.	Instructor	Non-Tenure	Fall 2018	12	1.00	1.00	1.00	12	1.00	1.00	1.00
	Medical Engineering											
C	New Hire, Ph.D.	Instructor	Non-Tenure	Fall 2018	12	1.00	1.00	1.00	12	1.00	1.00	1.00
	Medical Engineering											
A	Robert Frisina, Ph.D.	Professor	Tenured	Fall 2018	9	0.75	0.13	0.10	9	0.75	0.13	0.10
	Chemical & Biomedical Eng											
A	Christopher Passaglia, Ph.D.	Assoc. Prof.	Tenured	Fall 2018	9	0.75	0.13	0.10	9	0.75	0.13	0.10
	Chemical & Biomedical Eng											
A	Mark Jaroszeski, Ph.D.	Assoc. Prof.	Tenured	Fall 2018	9	0.75	0.13	0.10	9	0.75	0.13	0.10
	Chemical & Biomedical Eng											
A	Piyush Koria, Ph.D.	Assoc. Prof.	Tenured	Fall 2018	9	0.75	0.13	0.10	9	0.75	0.13	0.10
	Chemical & Biomedical Eng											
A	William Lee, Ph.D.	Professor	Tenured	Fall 2018	9	0.75	0.13	0.10	9	0.75	0.13	0.10
	Chemical & Biomedical Eng											
A	Nathan Gallant, Ph.D.	Assoc. Prof.	Tenured	Fall 2018	9	0.75	0.13	0.10	9	0.75	0.13	0.10
	Mechanical Engineering											
A	Drew Hoff, Ph.D.	Professor	Tenured	Fall 2018	9	0.75	0.13	0.10	9	0.75	0.13	0.10
	Electrical Engineering											
A	Stephen Saldow, Ph.D.	Professor	Tenured	Fall 2018	9	0.75	0.13	0.10	9	0.75	0.13	0.10
	Electrical Engineering											
D	Stephanie Carey, Ph.D.	Res. Prof.	Non-Tenure	Fall 2018	12	1.00	0.13	0.13	12	1.00	0.13	0.13
	Mechanical Engineering											
	Total Person-Years (PY)							2.23				2.23
Faculty Code												
			Source of Funding									
A	Existing faculty on a regular line		Current Education & General Revenue					0.9				0.9
B	New faculty to be hired on a vacant line		Current Education & General Revenue					0.00				0.00
C	New faculty to be hired on a new line		New Education & General Revenue					2.23				2.23
D	Existing faculty hired on contracts/grants		Contracts/Grants					0.13				0.13
E	New faculty to be hired on contracts/grants		Contracts/Grants					0.00				0.00
			Overall Totals for					3.24				3.24

APPENDIX B

Please include the signature of the Equal Opportunity Officer and the Library Director.

 _____ Signature of Equal Opportunity Officer	 _____ Date
 _____ Signature of Library Director	 _____ Date

This appendix was created to facilitate the collection of signatures in support of the proposal. Signatures in this section illustrate that the Equal Opportunity Officer has reviewed section II.E of the proposal and the Library Director has reviewed sections X.A and X.B.

APPENDIX C
Board of Governors, State University System of Florida
 Request Form: Limited Access Status for an Academic Program
 In Accordance with BOG Regulations
 6.001 – General Admissions and 8.013 - Limited Access

University:	University of South Florida Tampa	Degree(s) offered:	B.S.
Program:	Biomedical Engineering	Six digit CIP code:	14.0501

1. Will the entire program be limited access or only a specific track?

The entire program will be limited access, including the required BME Specialization and STEM Specialization tracks (student chooses one track).

2. If only one track is limited access, please specify the name of the track.

N/A

3. Please specify:

The total number of new students anticipated to enroll in the program each academic year: 100

The total number of students anticipated to enroll in the program each academic year: 400

4. When do you propose to initiate limited access? (please specify the effective term and year) Fall 2018

5. What is the justification for limiting access?

USF is requesting limited access status for the undergraduate Biomedical Engineering program due to the following reasons:

- 1) limited space, equipment and other instructional facilities, including required laboratories for accreditation; and
- 2) the program is of such nature that in order to demonstrate potential for success in the program, applicants must attain a grade point average of Minimum 3.5 GPA for the BME Major prerequisite courses, listed below in answer to #6.

6. By what means will access be limited? Please provide a description of the program’s admissions requirements and procedures. Additionally, please indicate how these requirements and procedures ensure equal access for Florida College System Associate of Arts degree graduates in competing for available space in the program.

Students who enter the University of South Florida as First Time in College (FTIC) identify pre-BME as their major of choice and begin enrolling in the required critical tracking courses to prepare for upper-division coursework. The USF Office of Admissions provides all freshmen admission decisions. (Individual departments have no involvement or influence over freshmen admission decisions). During the fall

semester of the sophomore year, pre-BME majors apply for admission to the upper-division BME major, which begins in the spring semester of the sophomore year. The department admits transfer students during the fall, spring, and summer terms.

Sophomores

Current USF students must meet the following minimum requirements to be considered for admission to the upper-division program.

- Minimum 3.5 GPA for the prerequisite courses, as listed in the table below (best attempt);*
- No more than two attempts allowed for the prerequisite courses listed in the table below (withdrawals included);
- Minimum grade of C in each prerequisite course listed in the table below;
- Completion of the first three semesters of the BME plan of study by the end of the third semester after matriculation to the University;
- Completed BME departmental online application.

*Only the best attempt in each prerequisite course as listed below, is considered for admission into the BME program.

Transfers

Transfer students must meet the following minimum requirements to be considered for admission into the BME program.

- Minimum 2.0 cumulative (overall) GPA;
- Minimum 3.5 GPA in the prerequisite courses listed below;
- Minimum grade of C in each prerequisite course listed in the table below;
- No more than two attempts allowed for the prerequisite courses listed in the table below (withdrawals included);
- Completed BME departmental online application.

Applicants who do not meet the minimum admission requirements as stated above will not be eligible for admission into the BME program.

Transfer applications are referred to the department only after the USF Office of Admissions (including official transcripts) considers them complete. Applications are reviewed periodically and not on a rolling basis. The date of review may vary depending on the number of applications received.

Transfer applicants coming from out-of-state or private Florida institutions will be considered on a space available basis only.

USF Course Prefix	USF Course Name
MAC 2311	Calculus I
MAC 2312	Calculus II
MAC 2313	Calculus III
MAP 2302	Differential Equations
CHM 2045	General Chemistry I
CHM 2045L	General Chemistry I Laboratory
CHM 2046	General Chemistry II
CHM 2046L	General Chemistry II

	Laboratory
PHY 2048	General Physics I - Calculus Based
PHY 2048L	General Physics I Laboratory
PHY 2049	General Physics II - Calculus Based
PHY 2049L	General Physics II Laboratory
CHM 2210	Organic Chemistry I
CHM 2210L	Organic Chemistry I Lab

7. Present the current race and gender profiles of the students in the program. Discuss the impact of the proposed action on the race and gender profiles and cite sources used to inform the discussion. What strategies, should they be necessary, will be used to promote diversity in the program?

The program is new, so there is no current race and gender profile.

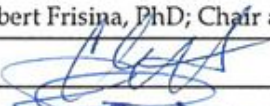

Biomedical Engineering is one of the top two most popular engineering majors for women, so we anticipate attracting female applicants in proportions at or exceeding the other engineering majors (<https://www.asee.org/papers-and-publications/publications/collegeprofiles/15EngineeringbytheNumbersPart1.pdf> Page 12). Also, USF is notably ranked #8 in the US, for all universities awarding doctorate degrees in engineering, for percentage of women graduates (35.1%); which bodes well for attracting women for our new undergraduate BME program (<https://www.asee.org/papers-and-publications/publications/college-profiles/15EngineeringbytheNumbersPart1.pdf> Page 23). Underrepresented ethnic groups are highly underrepresented in STEM fields such as engineering (<https://www.asee.org/papersandpublications/publications/college-profiles/15EngineeringbytheNumbersPart1.pdf> Page 13); however, the USF College of Engineering has relatively high numbers compared to many other colleges of engineering nationally. USF is one of the national leaders in awarding graduate degrees in Engineering to Black students, as cited in *Diverse Issues in Higher Education*, Top 100 Producers of Graduate Degrees, 2017 – African American Engineering Research Doctorates (USF ranked #12 in the US) (<http://diverseeducation.com/top100/pages/GraduateDegreeProducers2017.php?dtsearch=&dtdegree=Doctorate\Res\Schol,%20Other&dtrace=African%20American&dtmajor=Engineering&dtstate=&dtpage=1>) and Hispanic students, as cited in: *Diverse Issues In Higher Education*, Top 100 Producers of Graduate Degrees, 2017 – Hispanic Engineering Research Doctorates (USF ranked #2 in the US) (<http://diverseeducation.com/top100/pages/GraduateDegreeProducers2017.php?dtsearch=&dtdegree=&dtrace=Hispanic&dtmajor=Engineering&dtstate=&dtpage=0>). News release citation: <http://news.usf.edu/article/templates/?a=3576>. Consequently, we expect that our new degree program in Biomedical Engineering will have a similar favorable mix of underrepresented minorities, building upon the successes of the USF College of Engineering in related majors such as Chemical, Electrical, Mechanical, Industrial and Civil Engineering. In addition, the intellectual and professional environment in the USF College of Engineering is very favorable for underrepresented minorities in support of our new undergraduate BME Major; specifically, the USF College of Engineering is ranked in the top 20 in the US for all

colleges of engineering for the number of Hispanic Professors with Tenure/Tenure Track (<https://www.asee.org/papers-andpublications/publications/collegeprofiles/15EngineeringbytheNumbersPart1.pdf> Page 33).

In addition, The College of Engineering continues to be committed to engaging underrepresented and minority high school students into engineering programs. The College engages routinely with teachers, students and parents in Title I schools to attract students from diverse racial and ethnic and socio-economic backgrounds. This BME major will leverage the College’s recruitment and outreach programs such as "Bulls I Mentoring", ESTEAM events, Selmon S3 program and course offerings for high school students with a goal to secure a robust pipeline of diverse student population. Another specific step USF will take to ensure a diverse student body will be working closely with the coordinator of minority student recruitment in the USF College of Engineering. USF will actively recruit applicants from top high schools nationally with excellent underrepresented minority students, including attendance at state and national conferences, and visitations and summer courses at USF, and other successful recruiting techniques for these student populations.

8. Are the graduates of the program in high demand? If so, and if the program is to be limited due to lack of adequate resources, provide a justification for limiting access to the program rather than reallocating resources from programs with low market demand.

Yes, graduates are in high demand (see full data in the accompanying full BME Major Proposal). There are no programs in the USF College of Engineering with low market demand, and these existing programs are currently under-staffed relative to their student enrollments; so no reallocation is possible.

Request Initiated by:	Robert Frisina, PhD; Chair and BME Director
EEO Officer’s Signature:	
Provost’s Signature:	 3/5/18
University Board of Trustees Approval Date (please include a copy of the UBOT agenda with this form)	

Appendix D

Bachelor of Science in Biomedical Engineering Academic Learning Compact

Department/College: Medical Engineering/College of Engineering

Degree Designation: Bachelor of Science in Biomedical Engineering

USF Mission Statement: The University of South Florida's mission is to deliver competitive undergraduate, graduate, and professional programs, to generate knowledge, foster intellectual development, and ensure student success in a global environment.

Program Objectives: The Biomedical Engineering (BME) major is intended to provide students with an understanding of key concepts in engineering, medicine and biology, and how these concepts can be applied to a wide range of healthcare and biomedical problems. In addition to major requirements, students must satisfy the basic requirements of the College of Engineering and the University of South Florida.

The Bachelor of Science in Biomedical Engineering furthers the professional goals of the students enrolling in this major by teaching the quantitative and statistical techniques used in practical applications of engineering concepts to solve medical and biological problems related to better healthcare. Students learn techniques for testing new biomedical devices, systems and drugs for innovative advances and quantitative analyses of health outcomes, including benefit/cost analyses, product valuation and project feasibility studies.

Identification of Core Student Learning Outcomes: Upon completion of the BS in BME, students will have demonstrated:

Critical Thinking Skills

- Critical thinking and analytical abilities, including the capability to engage in inductive, deductive and quantitative reasoning and to construct sound arguments

Communication Skills

- Create and deliver effective oral presentations
- Develop effective written presentations
- Contribute effectively to group discussions

Content/Discipline Skills:

- Proficiency in the "vocabulary" of biomedical engineering, including core engineering principles
- Understanding the basic models of product, device and drug development and evaluation
- Hypothesis testing and reporting
- Engineering applications – benefit/cost analysis, new product and drug economic impact measurement, project feasibility analysis and business valuation techniques, entrepreneurship, tech transfer, patenting, ethics.

Assessment of Student Learning Outcomes: Student learning outcomes are assessed through a variety of mechanisms:

Critical Thinking Skills

Critical thinking skills are assessed centrally as part of the General Education Assessment process conducted by the Office of Division Support. Critical thinking is a fundamental

component of all biomedical engineering and, as such, is assessed in several core courses where students are required to understand and utilize quantitative models to explain a wide range of biomedical and health related engineering outcomes.

Communication Skills

Written communication skills are assessed centrally as part of the General Education Assessment process conducted by the Office of Division Support; oral communication skills are assessed in the General Education program. In addition, upper level courses in the BS in Biomedical Engineering rely on written essay exams and oral classroom presentations.

Content/Discipline Skills

Content/discipline skills are assessed at the department level. Foundation knowledge/skills/abilities are assessed in the BME Core courses (similar to the existing BS degrees in the College of Engineering) while knowledge/skills/abilities specific to the new major are assessed via classroom exams, presentations and written assignments

University of South Florida Biomedical Engineering Semester Plan - Appendix E

Biomedical Engineering – CIP 14.0501

*Total Credit Hours = 126

Semester 1	Cr.	Semester 2	Cr.
CHM 2045 General Chemistry I	3	CHM 2046 General Chemistry II	3
CHM 2045L General Chemistry I Laboratory	1	CHM 2046L General Chemistry II Laboratory	1
EGN 3000 Foundations of Engineering	0	ENC 1102 Composition II	3
EGN 3000L Foundations of Engineering Lab	3	MAC 2282 Engineering Calculus II	4
ENC 1101 Composition I	3	PHY 2048 General Physics I - Calculus Based	3
MAC 2281 Engineering Calculus I	4	PHY 2048L General Physics I Laboratory	1
Semester Hours: 14		Semester Hours: 15	

Semester 3	Cr.	Semester 4	Cr.
EGN 3443 Probability & Statistics for Engineers	3	BME 3053 Computer Programming for Biomedical Engineers	3
MAC 2283 Calculus III	4	EGN 3343 Thermodynamics I	3
PHY 2049 General Physics II -	3	EGN 3433 Modeling and Analysis of Engineering Systems or MAP 2302 Differential Equations	3
PHY 2049L Physics II Laboratory	1	BSC 2010 Cellular Processes	3
BME 4100 Biomedical Engineering	3	BSC 2010L Cellular Processes Laboratory	1
EGN 3311 Statics	3	General Education Core Social Sciences	3
Semester Hours: 17		Semester Hours: 16	

Summer	Cr.
CHM 2210 Organic Chemistry I	3
CHM 2210L Organic Chemistry Laboratory I	2
ENC 3246 Communication for Engineers	3
Semester Hours: 8	

Semester 5	Cr.	Semester 6	Cr.
BME 4409 Engineering Physiology	3	EGN 3321 Dynamics	3
BME 4508 Biomedical Signals and Systems Analysis	3	BME 4056C Biomedical Engineering Lab I	2
EGN 3373 Introduction to Electrical Systems I	3	BME 3032 Biomedical Transport Process	3
BME 4503 Biomedical Instrumentation	3	General Education Humanities and Cultural Diversity	3
General Education Core Humanities	3	EGN 3365 Materials Engineering I or EMA 4003 Introduction to Materials Science	3
Semester Hours: 15		Semester Hours: 14	

Semester 7	Cr.	Semester 8	Cr.
BME 3312 Molecular and Cellular Engineering	3	BME 4883 Biomedical Engineering Design II	3
BME 4057C Biomedical Engineering Lab II	2	BME Specialization Track or a STEM Specialization Track (students choose one track)	7
BME 4882 Biomedical Engineering Design I	3	General Education Ethical Reasoning & Civil Engagement	3
BME Specialization Track or a STEM Specialization Track (students choose one track)	6	Apply for Graduation	
Semester Hours: 14		Semester Hours: 13	

Appendix F - Curriculum Vitae

 NAME: Jiang, Huabei

 eRA COMMONS USER NAME (credential, e.g., agency login): hbjiang

 POSITION TITLE: Professor and Director of USF Center for Advanced Biomedical Imaging

 EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Univ. of Electronic Sci. & Tech. of China, Chengdu	BS	07/1984	Electrical Engineering
Univ. of Electronic Sci. & Tech. of China, Chengdu	PhD	07/1988	Electronic Physics
Dartmouth College, Hanover, NH	PhD	05/1995	Biomedical Engineering

A. Personal Statement

I have extensive experience in biomedical optical/photoacoustic imaging, with training and expertise in both complex inverse computations and instrumentation design/development. I have made pioneering contributions to the development of photoacoustic tomography (PAT), diffuse optical tomography (DOT), fluorescence molecular tomography (FMT), and bioluminescence tomography (BLT). As PI on numerous DOD- and NIH-funded grants, I have led research that are responsible for the first applications of CW based DOT to detection of breast cancer, epilepsy, and osteoarthritis and the first application of PAT to epilepsy detection. I have successfully administered these projects, and produced considerable publications from each project. The current application builds on my prior work, particularly on the photoacoustic imaging/optical coherence tomography/ultrasound imaging instrumentation, software development, and experimental validation.

1. X. Dai, H. Yang, T. Shan, H. Xie, S. Berceli, H. Jiang, "Miniature Endoscope for Multimodal Imaging", *ACS Photonics*, 4 (1), pp 174–180 (2017).
2. X. Dai, L. Xi, C. Duan, H. Yang, H. Xie, H. Jiang, "Miniature probe integrating optical-resolution photoacoustic microscopy, optical coherence tomography, and ultrasound imaging: proof-of-concept," *Optics Letters*; 40(12), 2921-4 (2015).
3. M. S. Singh and H. Jiang, Elastic property attributes to photoacoustic signals: an experimental phantom study, *Optics Letters*; 39(13), 3970-3973 (2014).
4. L. Xi, C. Duan, H. Xie, and H. Jiang, Miniature probe combining optical-resolution photoacoustic microscopy and optical coherence tomography for in vivo microcirculation study, *Appl. Opt.* **52**, 1928-1931(2013).

B. Positions and Honors

Positions and Employment

1990-1992	Research Scientist, Center for Research in Electro-Optics and Lasers (CREOL), Orlando, FL
1996-1997	National Institutes of Health Postdoctoral Fellow, School of Chemical Engineering, Purdue University, West Lafayette, IN
1997-2001	Assistant Professor, Dept. of Physics & Astronomy, Clemson University, Clemson, SC
2001-2003	Associate Professor, Dept. of Physics & Astronomy, Clemson University, Clemson, SC
2003-2004	Professor, Dept. of Physics & Astronomy, Clemson University, Clemson, SC
2005-2016	Professor, Dept. of Biomedical Engineering, University of Florida, Gainesville, FL
2008-2016	J. Crayton Pruitt Family Professor/Endowed Chair, Dept. of Biomedical Engineering, University of Florida, Gainesville, FL
2017-	Professor, Dept. of Medical Engineering, University of South Florida, Tampa, FL

2018- Director, USF Center for Advanced Biomedical Imaging, Tampa, FL

Other Experience and Professional Memberships

1999- Member, DOD Breast Cancer Research Program Review Panel
 2001- Member, NIH Study Section (2001-present)
 2010- Member, NIH College of CSR Reviewers (2010-present)
 2004-2006 Guest Associate Editor, Med. Phys.
 2007-2013 Associate Editor, IEEE Trans. Biomed. Engineering
 2008-2013 Topical Editor, Applied Optics
 2012- Editor-in-Chief, X-Acoustics: Imaging and Sensing
 2015- Associate Editor, Journal of Medical Imaging
 2015- Associate Editor, Scientific Reports
 2014- Associate Editor, Photonics

Honors

1994, 1995 Alma Hass Milham Fellow in Biomedical Engineering, Dartmouth College
 1995 Distinguished Fellow, Dartmouth College
 1997 Individual National Research Service Award, National Institutes of Health (NIH)
 1998 Ralph E. Powe Junior Faculty Enhancement Award, Oak Ridge Associated Universities
 1998 Shannon Award, National Institutes of Health (NIH)
 1999, 2000, 2002 Award for Faculty Excellence, Board of Trustees, Clemson University
 1999-2003 Career Development Award, Department of Defense (DOD)
 2005 Fellow, Optical Society of America (OSA)
 2007 Fellow, American Institute for Medical and Biological Engineering (AIMBE)
 2008 Fellow, International Society for Optical Engineering (SPIE)
 2011 UF Research Foundation Professorship Award, University of Florida

C. Contribution to Science

1. My early publications directly addressed the fact that finite element method based reconstruction algorithm is able to simultaneously reconstruct both tissue absorption and scattering coefficients using frequency-domain or CW diffusing light measurements, which formed the foundation of diffuse optical tomography. I served as the primary investigator in these studies.
 - a. Keith D. Paulsen and Huabei Jiang, "Spatially-varying optical property reconstruction using a finite element diffusion equation approximation", *Medical Physics* **22**, 691-702(1995).
 - b. Huabei Jiang, Keith D. Paulsen, Ulf L. Osterberg, Brian W. Pogue and Michael S. Patterson, "Simultaneous reconstruction of absorption and scattering maps in turbid media from near-infrared frequency-domain data", *Optics Letters* **20**, 2128-2130(1995).
 - c. Huabei Jiang, Keith D. Paulsen and Ulf L. Osterberg, Brian W. Pogue and Michael S. Patterson, "Optical image reconstruction using frequency-domain data: simulations and experiments", *J. of Optical Society of America A* **13**, 253-266(1996).
 - d. N. Iftimia, H. Jiang, "Quantitative optical image reconstruction of turbid media by using direct-current measurements", *Appl. Opt.* **39**, 5256-5261(2000).
2. In addition to the contributions described above, with a team of collaborators, for the first time I documented the possibilities of in vivo imaging breast cancer, epilepsy, and osteoarthritis using DOT in both 2D and 3D.
 - a. H. Jiang, Y. Xu, N. Iftimia, J. Eggert, K. Klove, L. Baron, L. Fajardo, "Three-dimensional optical tomographic imaging of breast in a human subject", *IEEE Trans. Med. Imaging* **20**, 1334-1340(2001).
 - b. H. Jiang, N. Iftimia, Y. Xu, J. Eggert, L. Fajardo, K. Klove, "Near-infrared optical imaging of the breast with model-based reconstruction", *Academic Radiology* **9**, 186-194(2002).
 - c. Y. Xu, N. Iftimia, H. Jiang, L. Key, M. Bolster, "Three-dimensional diffuse optical tomography of bones and joints", *J. Biomed. Opt.* **7**, 88-92(2002).
 - d. Qiang Wang, Xiaoping Liang, Zhao Liu, Qizhi Zhang, Paul R. Carney, and Huabei Jiang, "Visualizing localized dynamic changes during epileptic seizure onset in vivo with diffuse optical tomography", *Med. Phys.* **35**, 216-224(2008).

3. Quantitative PAT is able to provide tissue absorption coefficient, which allows for extraction of functional parameters such as hemoglobin and oxygen saturation in high resolution. My lab is responsible for the first demonstration of quantitative PAT and a series of subsequent development of advanced methods for quantitative PAT. I also documented the first application of PAT to seizure detection *in vivo*.
- Z. Yuan, H. Jiang, "Quantitative photoacoustic tomography: Recovery of optical absorption coefficient of heterogeneous media", *Appl. Phys. Lett.* **88**, 213301-1-3(2006).
 - Lu Yin, Qiang Wang, Qizhi Zhang and Huabei Jiang, "Tomographic imaging of absolute optical absorption coefficient in turbid media using combined photoacoustic and diffusing light measurements", *Opt. Lett.* **32**, 2556-2558(2007).
 - Q. Zhang, Z. Liu, P. R. Carney, Z. Yuan, H. Chen, S. N. Roper, & H. Jiang, "Noninvasive imaging of epileptic seizures *in vivo* using photoacoustic tomography", *Phys. Med. Biol.* **53**, 1921-1931(2008).
 - Liangzhong Xiang, Lijun Ji, Tao Zhang, Bo Wang, Jianjun Yang, Qizhi Zhang, Max S. Jiang, Junli Zhou, Paul R. Carney, Huabei Jiang, Non-Invasive Real-Time Tomographic Imaging of Epileptic Foci and Networks, *NeuroImage* **66**, 240-248 (2013).

Complete List of Published Work in aminer:

<http://aminer.org/profile/542aceccdabfae646d589aa6>

D. Research Support

On Going Research Support

ACTIVE

W81XWH-12-1-0387 (Walter) 09/15/2012 – 09/14/2017 0.6 calendar

US Dept. of Defense \$64,001

Optical Imaging of Dystrophic and Damaged Muscles

The goal of this project is to develop a novel near infrared (NIR) imaging technique to differentiate damaged muscle cells from rescued and normal muscle tissue.

FDCT/026/2014/A1 (Yuan) 04/15/2015 – 04/14/2018 0.1 Calendar

Science and Technology Development Fund of Macao \$4,900

Development of Functional Multimodal Optical Imaging Techniques for Clinical Screening of Breast Cancer

Assist in developing the software and hardware of a novel photoacoustic imaging system.

R01 EB 020601 07/01/2016 – 06/30/2021 3 Calendar

NIH \$631,696

A Multimodal Imaging System and Targeted Nanoprobes for Image-Guided Treatment of Breast Cancer

The goal of this project is to develop a novel dual photoacoustic and fluorescence endoscopic imaging approach that combines tumor targeted optical imaging probes with advanced microelectromechanical systems (MEMS) based photoacoustic and fluorescence tomography instrumentation for detecting breast cancer.

Completed Research Support

MEMS Based Intraoperative Photoacoustic Imaging

PI

R21 CA161394 (NIH)

04/10/2012 – 03/31/2015

The goals of this project were to develop a MEMS based dual-frequency photoacoustic tomography system for intraoperative tumor imaging, validate and optimize the system using phantom and *in vivo* experiments and evaluate the efficacy of the system in guided resection of mouse mammary tumors.

Targeted Two-Photon Photodynamic Therapy Triads

Co-PI

Sensopath Technologies Contract

09/28/2012 – 02/28/2015

The goal of this project was the development and testing of a prototype instrument that can carry out image-guided TPPDT with defined optical margins

Noninvasive Functional and Cellular Imaging of Epilepsy

PI

R01 NS069848-01

05/01/10 - 01/30/2015

The goal of this project is to develop diffuse optical tomography (DOT) technology for localizing epileptic focus and to evaluate DOT as a noninvasive tool for surgical planning in animal models.

Advanced Ultrasound Ablation Therapy for Atrial Fibrillation Co-PI
R01 EB008999 03/01/09 – 02/28/2014

The goal of this project is to implement reconstruction strategy for tomographic temperature imaging during ultrasound ablation therapy.

Photoacoustic Imaging of Epilepsy PI
DOD Contract 04/01/09 – 03/31/2014

The goal of this project is to develop enabling photoacoustic imaging technology for seizure detection/localization in animal models.

Targeted Nanoparticles for Intraoperative Optical Imaging of Breast cancer Margins Co-PI
R01 CA133722 09/01/2008 – 08/30/2014

The goal of this project was to synthesize nanoparticles for identification of breast cancer margins using fluorescence imaging.

Combined Photoacoustic and Diffuse Optical Tomography PI
Bankhead-Coley (00094216) 09/01/2011 – 08/31/2012

The goal of this project is to engineer a novel human breast imaging system that uses safe near infrared light and sound waves to diagnose breast cancer.

Mapping Ictal Discharges Using Photoacoustic Tomography Site-PI
Cornell University (15030313) 06/01/2014 – 05/31/2015

The main goal of this project is to develop the PAT devices, hardware setup, and photoacoustic imaging data analysis for the research.

Endobronchial Photoacoustic Microscopy for Staging of Lung Cancer PI
US Army Med. Res. Ac. (W81XWH-14-1-0183) 06/01/2014 – 05/31/2016

The goal of this project is to develop an endobronchial probe for detecting lung cancer in its early stages using photoacoustic microscopy to create a more accurate and minimally invasive method for lung biopsies.

NAME: Frisina, Robert Dana

eRA COMMONS USER NAME (credential, e.g., agency login): RFrisina

POSITION TITLE: Professor & BME Director, Chemical & Biomedical Engineering Department; Director – Global Ctr. Hearing & Speech Research

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, include postdoctoral*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Hamilton College, Clinton, NY	A.B.	05/77	Exp. Psychology Economics,
Syracuse University, College of Engineering, NY	Ph.D.	10/83	Bioengineering Neuroscience,
University of Rochester Medical School, NY	Postdoctoral	11/83-8/85	Sensory Neuroscience Biophysics

A. Personal Statement

The goals of the proposed research are to advance knowledge of novel cochlear drug ototoxicity prevention strategies. Specifically, a series of inter-related biomedical engineering and tissue engineering experiments are carried out to determine critical interactions, as well as shed new light on optimization of combinatorial drugs with sound stimulation to prevent cisplatin ototoxicity. To make optimal progress, it is highly advantageous to have a multidisciplinary team of investigators, including biomedical engineers, hearing scientists, and tissue engineers, working directly together. My role as the biomedical engineering and hearing science Co-Investigator, is to help coordinate the activities of the integration of the new drug techniques to the biological testing parts of the project; participate in project meetings, help to conduct multidisciplinary, inter-project data analyses and publications; follow all institutional and federal reporting requirements and guidelines; and assist with submission of annual NIH Progress Reports. I have benefited from receiving my PhD in sensory neuroscience and bioengineering, and subsequently publishing in many areas of the neurophysiology, anatomy and molecular biology of the auditory system, including high-throughput gene discovery in the cochlea (auditory inner ear) and central auditory system, and articles on novel methodologies for analyzing these data to discover aging changes in auditory anatomy and gene expression. As the senior biomedical engineering researcher on the current grant submission, I provide the expertise to analyze new findings in terms of what we know about relations between drug protection effectiveness and delivery optimization. Being the Director of our research team at the University of South Florida- Tampa, has given me excellent experiences to continue to play successful roles in multidisciplinary research programs such as that of the present submission. Over the past 2 decades I have been able to lead several interdisciplinary research efforts in the areas of the hearing sciences, neuroengineering, relations of hearing loss with co-morbid medical conditions, genetics, inner ear drug delivery and the aging auditory system, from formulation stages through publication phases. This has resulted in over 120 peer-reviewed articles and book chapters/reviews, boding well for successful implementation of the current interdisciplinary grant in my role as Co-PI.

B. Positions and Honors

Positions and Employment

1985 – 1987 Assistant Professor of Brain Research, University of Rochester Medical Center
 1985 – 1991 Assistant Professor of Surgery, University of Rochester Medical Center
 1987 – 1991 Assistant Professor of Physiology, University of Rochester Medical Center
 1988 – 1992 Director of Research, Otolaryngology Division of Dept. of Surgery, Univ. of Rochester
 1991 – 1996 Associate Professor of Physiology, University of Rochester Medical Center
 1991 – 1999 Associate Professor of Surgery, University of Rochester Medical Center

- 1988 – 2010 Charter Member of the Advisory Group, International Center for Hearing and Speech Research, National Technical Institute for the Deaf, Rochester Institute of Technology
- 1993 – Present Adjunct Professor Comm. Sciences, National Technical Institute for the Deaf & Univ. Buffalo
- 1992 – 2010 Associate Chair for Research, Otolaryngology Dept., University of Rochester Med. School
- 1999 – 2010 Professor Otolaryngology, Neurobiology & Biomedical Engineering, U. Roch. Med. School
- 2003 – 2010 Research Professor in Biological Sciences, Rochester Institute of Technology
- 2010 – Present Professor of Chemical & Biomedical Engineering, University of South Florida
- 2010 – Present Director of Biomedical Engineering, University of South Florida
- 2011 – Present Director – Global Center for Hearing & Speech Research, Colleges of Engineering and Behavioral & Community Sciences, University of South Florida
- 2016 – Present Chair, Medical Engineering Dept. University of South Florida

Other Experience and Professional Memberships

- 1985 - Present *Ad hoc* grant reviewer for Behavioral and Neuroscience Division, National Science Fn.
- 1987 *Ad hoc* grant reviewer for the Neurobiology Section, Veterans Administration
- 1990 – 2003 Tech. Committees: Psychological & Physiological and Speech Acoustics, Acoust. Soc. Am.
- 1990 – 2009 Scientific Fellow, Am. Academy Otolaryngology, Head & Neck Surgery
- 1994 – Present Fellow, Acoustical Society of America
- 1994 – Present *Ad hoc* grant reviewer for Neurologic, Mental & Behavioral Disorders Section, Arizona Disease Control Research Commission
- 1996 – 1999 Assoc. Editor for Auditory Neuroscience & Physiological Acoustics, J. Acoustical Soc. Am.
- 1997 – Present Editorial Board, Hearing Research
- 1997 – Present NIH: National Institute on Aging, ad hoc Member of Special Emphasis Study Sections, and of Neurobiology of Aging Study Section
- 1999 - Present NIH: Nat. Inst. Deafness & Comm. Dis., ad hoc Member, Special Emphasis Study Sections
- 2000 - Present NIH: NIA, NIDCD, Chairman of Special Emphasis Study Sections
- 2002 *Ad hoc* grant reviewer for Nova Scotia Health Research Foundation, Neuroscience Division
- 2008 *Ad hoc* grant reviewer for Int. Grant Agency, Ministry of Health, Czech Republic

Selected Honors

- 1976 Rhodes Scholar Nominee, Bennet Scholar, NSF Undergrad. Res. Intern, Phi Beta Kappa
- 1977 – 1978 Root Fellow in Science, Syracuse Univ. Graduate Scholar, Summa Cum Laude
- 1978 – 1981 NSF Graduate Fellow in Physiology, Honorary Syracuse Univ. Graduate Fellow
- 1983 – 1986 Individual NIH National Research Service Award in Sensory Biophysics (NIH Score: 1%)
- 1988 – 1993 NIH FIRST Award in Communicative & Neurosensory Disorders, NIDCD
- 2011 Member, National Academy of Inventors
- 2015 Fellow, American Institute of Medical and Biological Engineering (AIMBE)
- 2017 Distinguished University Professor; 3/year of ~2,000 Faculty, at the University of South Florida

C. Contributions to Science

NIH Instructions: Also provide a URL to a full list of your published work as found in a publicly available digital database such as SciENcv or My Bibliography.

Contributions include over 300 publications: A) over 85 peer-reviewed journal articles

(<http://www.ncbi.nlm.nih.gov/myncbi/collections/mybibliography/>); B) over 40 books/review articles/book chapters; C) over 200 published abstracts- national and international scientific and clinical research meetings.

Please note: *Asterisks indicate publications where Dr. Frisina’s trainee is an author (*name italicized*).

1. Medical Co-Morbidities and the Aging Auditory System:

The influences of medical conditions on sensory processing remains controversial and an under-studied area of basic and clinical enquiry. For example, as more and more cancer treatments are successful, sensory deficits resulting from the chemotherapy and radiation dosages become very important issues for cancer survivorship. I am fortunate to be the lead auditory investigator working with one of the top groups in the world on testicular cancer survivorship under the auspices of a large NIH grant (R01 CA157823); Frisina et al., 2016; Travis et al. 2014). We have also initiated gene therapy studies to help reduce the side-effects of inner ear damage as a result of cisplatin chemotherapy-induced hearing loss, with some very promising initial results in mouse models using growth factor genes (Chen et al. 2001; Bowers et al. 2002). In addition, we have

observed, using both human clinical research paradigms and animal model experiments that diabetes has a negative impact on hearing in adult diabetics (Frisina et al. 2006; Vasilyeva et al. 2009).

Frisina[^], R.D., H.E. Wheeler[^], S.D. Fossa, S. Kerns, H.D. Sesso, D.R. Feldman, R. Hamilton, D.J. Vaughn, C.J. Beard, C. Fung, A. Budnick, A. Weinzerl, E. Johnson, L.H. Einhorn, N.J. Cox, M.E Dolan, L.B. Travis. (2016) Comprehensive Characterization of Cisplatin-Related Hearing Loss and Tinnitus: Implications for Improved Management and Therapeutics. J. Clinical Oncology, 34. [Impact Factor ~25] [^]=1st authors.

Travis, L.B., Fossa, S.D., Sesso, H.D., **Frisina, R.D.**, Herrmann, D.N., Beard, C.J., Feldman, D.R., Pagliaro, L.C., Miller, R.C., Vaughn, D.J., Einhorn, L.H., Cox, N.J., Dolan, M.E. (2014) Chemotherapy-Induced Peripheral Neuropathy and Ototoxicity: A Paradigm for Translational Genomics. J. Nat. Cancer Inst. 106(5): 1-11. [Impact Factor ~14]

***Frisina, R.D.**, Singh, A., Bak, M., Bozorg, S., Seth, R., Zhu, X. (2011) F1 (CBA x C57) mice show superior hearing in old age relative to their parental strains: Hybrid vigor or a new animal model for "Golden Ears"? Neurobiology of Aging. 32: 1716-1724. (PMCID: PMC2891213) [Impact Factor ~6]

*Bowers, W.J., Chen, X., Guo, H., Frisina, D.R., Federoff, H.J., **Frisina, R.D.** (2002) Neurotrophin-3 transduction attenuates cisplatin spiral ganglion neuron ototoxicity in the cochlea. Molecular Therapy 6:12-18. [Impact Factor ~7]

2. Molecular Genetics of Age-related Hearing Loss- Presbycusis:

Although over 100 genes have been identified that cause a child to be born deaf, until very recently, no human genes had been strongly linked to age-related hearing loss (ARHL- rapidly becoming the most prevalent form of permanent hearing loss), and only a relatively few genes in animal models of ARHL. I have had the privilege of leading an interdisciplinary group of talented researchers for the past 25 years, where we have focused upon multidisciplinary investigations (both human and animal model) of the perceptual and biological bases of hearing loss, with many focusing upon ARHL. Our molecular genetic studies of ARHL are a good example of our productive multidisciplinary approach involving both clinical research and animal experimentation. We took a lead role in identifying the first gene to be strongly associated with ARHL in humans, in conjunction with me serving as Mentor for a 5-year NIH K Award for Dr. Dina Newman (K01-AG026394; completed); who came to us from the well-known human genetics group at the Univ. of Chicago (Newman et al. 2012). We have also conducted the largest gene discovery study to date for ARHL in animal models; yielding discovery of a number of candidate genes involved in ARHL, at both ear (cochlea) and brain levels (central auditory system- midbrain [inferior colliculus]; Tadros et al. 2007a,b, 2008, 2014; D'Souza et al. 2008; Christensen et al. 2009; Tra et al. 2011). These candidate gene studies can lead to molecular targets for hearing loss drug discovery, both preventative and curative. This is of utmost importance, as there are still no FDA-approved drugs to prevent or treat permanent hearing loss, including ARHL; or any drugs worldwide, despite the high-prevalence of hearing loss and deafness globally (over 1 in 10 persons).

Newman, D.L., Fisher, L.M, Ohmen, J., Parody, R., Fong, C-T., Frisina, S.T., Mapes, F., Eddins, D.A., Frisina, D.R., **Frisina, R.D.**, Friedman, R.A. (2012) GRM7 association with age-related hearing loss and its extension to additional features of presbycusis. Hear. Res. 294: 125-132. [Impact Factor ~4]

*Tadros, S.F., D'Souza, M., Zhu, X., **Frisina, R.D.** (2014) Age-related gene expression changes for antioxidants in the CBA mouse cochlea. Plos One. 9:e90279, 1-9. [Impact Factor ~4]

*Tadros, S.F., D'Souza, M., Zhu, X., **Frisina, R.D.** (2008). Apoptosis-related genes change their expression with age and hearing loss in the mouse cochlea. Apoptosis 13: 1303-1321. (PMCID: PMC2829878) [Impact Factor ~4]

*Tadros, S.F., D'Souza, M., Zettel, M.L., Zhu, X., Lynch-Erhardt, M., **Frisina, R.D.** (2007) Serotonin 2B Receptor: Upregulated with Age and Hearing Loss in Mouse Auditory System. Neurobiology of Aging, 28:1112-1123. [Impact Factor ~6]

3. Biomedical Engineering- Development of Inner Ear Microsystem Drug Delivery Paradigms:

In our field of hearing loss treatments, due to recent noteworthy progress in identifying molecular targets for novel drug interventions in animal models, there is now a strong need for local drug delivery options for the inner ear (auditory and vestibular/balance), so as to have the option of avoiding systemic side effects for many potential pharmacological candidate compounds. I was fortunate to serve as Mentor on a 5-year NIH K25 Award to recruit a top microsystems engineer into our field of hearing loss and deafness research (K25-DC008291; completed): Dr. David Borkholder, who received his PhD in Microelectronics from Stanford. Due to progress for our peer-reviewed publications on inner ear microsystems development (some are listed below, &

see Dr. Frisina's publication URL, above), we recently received an NIH Priority Score of 14 (percentile=1%) on a new R01 grant to continue our inner microsystem drug delivery R&D work for 5 more years (R01 DC014568).

Borkholder, D.A., Zhu, X., **Frisina, R.D. (2014)** Round Window Membrane Intracochlear Drug Delivery Enhanced by Induced Advection. *J. Controlled Release*. 174:171–176. [Impact Factor ~8]

*Haghpanahia, M., Gladstone, M.B., Zhu, X., **Frisina, R.D.**, Borkholder, D.A. (2013) Noninvasive Quantification of Transport through the Murine Cochlea Using Micro-Computed Tomography. *Annals Biomedical Engineering*. 41: 2130-2142.

Johnson, D.G., **Frisina, R.D.**, Borkholder, D.A. (2011) In-Plane Biocompatible Microfluidic Interconnects for Implantable Microsystems. *IEEE Transactions on Biomedical Engineering*. 58: 943-948. (PMID: 21147591)

*Borkholder, D.A., Zhu, X., Hyatt, B.T., Archilla, A.S., Livingston, W.J., **Frisina, R.D. (2010)** Murine Intracochlear Drug Delivery: Reducing Concentration Gradients within the Cochlea. *Hearing Res*. 268: 2-11. (PMID: 20451593; PMCID: PMC2933796) [Impact Factor ~4]

4. Hormonal Influences on Age-related Hearing Loss- Translational Pathways to Drug Discovery:

Our breakthrough studies here have revealed that hormonal systems can have profound impact on sensory processing, in particular auditory coding. Carrying out the largest clinical research study of the effects of hormone-replacement therapy (HRT) on post-menopausal women is a good example; we discovered that HRT hurt hearing in aging women. We have discovered that sex hormones, and the main hormone for Na⁺ and K⁺ regulation- aldosterone, can have detrimental or helpful effects on hearing, depending on the particular factors, timing or hormone levels involved (Tadros et al. 2005; Guimaraes et al. 2004, 2006; Thompson et al. 2006; Price et al. 2009; Ding et al. 2014). So, with this new knowledge, hormonal regulation becomes another translational target (either systemic or local drug routes of administration) for hearing loss drug discovery efforts. Indeed, we have recently filed a patent for an innovative drug combination of aldosterone with another compound involved in regulation of neurodegenerative disorders to slow down the progression of ARHL (Patent Pending). Indeed, in terms of prevalence, ARHL is the top neurodegenerative and top communication disorder of our aged population; and along with arthritis and cardiovascular diseases, 1 of the top 3 chronic medical conditions of the elderly.

Frisina[^], R.D., Ding[^], B., X. Zhu, J.P. Walton. (2016– On Line) Age-Related Hearing Loss: Prevention of Threshold Declines, Cell Loss and Apoptosis in Spiral Ganglion Neurons. *Aging*. [Impact Factor ~7] [^]=1st auth.

*Ding, B., **R.D. Frisina**, X. Zhu, Y. Sakai, B. Sokolowski, J.P. Walton (2014) Direct control of Na⁺-K⁺-2Cl⁻ co-transport protein (NKCC1) expression with aldosterone. *Am. J. Physiol.- Cell Physiol. Endocrinol. Metabolism*. 306 (1): C66-75. (PMID: 24173102) [Impact Factor ~4]

*Charitidi, K., **Frisina, R.D.**, Vasilyeva, O.N., Zhu, X., Canlon, B. (2010) Expression patterns of estrogen receptors in the central auditory system change in prepubertal and aged mice. *Neuroscience*. 170: 1270-1281. (PMID: 20736049; PMCID: PMC3133947)

*Guimaraes, P., Frisina, S.T., Mapes, F., Tadros, S.F., Frisina, D.R., **Frisina, R.D. (2006)** Progesterone Negatively Affects Hearing in Aged Women. *Proc. National Academy Sciences - PNAS*. 103: 14246-9. (PMCID: PMC1560930) [Impact Factor ~10]

5. Neural Mechanisms of Age-related Hearing Loss:

One of our major auditory research focal efforts has been at uncovering the molecular and neural mechanisms of ARHL, under the auspices of an NIH Program Project grant that we have had since 1991 (P01 AG009524), upon which I am the PI. Over 150 publications have resulted (articles, chapters, abstracts) where we have discovered age-related declines in auditory system processing circuitry mediating age-linked sound temporal processing deficits (e.g., Walton et al. 1995, 1997, 1998, 2002; Frisina & Frisina 1997; Frisina 2001; Simon et al. 2004; Frisina & Walton, 2006; Williamson et al. 2014); declines in the efferent feedback system that helps the auditory brainstem centers control sound information processing through the cochlea (so called medial olivocochlear bundle- MOC; Kim et al. 2002; Jacobson et al. 2003; Varghese et al. 2005; Zhu et al. 2007; Frisina et al. 2007); and characterization of changes in intracellular calcium-binding regulatory proteins in the aging auditory system that can contribute to age-dependent neurodegeneration and/or Ca⁺⁺ excitotoxicity (Kelley et al. 1992; Frisina et al. 1995; Zettel et al. 1997, 2001, 2003; O'Neill et al. 1997). An additional study on age-related declines in voltage-gated K⁺ channels in the superior olivary complex of the auditory brainstem (SOC; Zettel et al. 2007), has contributed to the development of the first drug to treat ARHL that has made it to Phase 2 FDA clinical trials; and we (University of South Florida- Tampa) are serving as the lead test site on this multi-center, international drug trial (Frisina PI; Autifony- Clarity FDA Clinical Trial, 2015).

*Williamson, T.T., Zhu, X., Walton, J.P., **Frisina, R.D. (2014)** Auditory Brainstem Gap Responses Start to Decline in Middle Age Mice: A Novel Physiological Biomarker for Age-Related Hearing Loss. Cell & Tissue Research. October, DOI 10.1007. [Impact Factor ~4]

*Tang, X., Zhu, X., Ding, B., Walton, J.P., **Frisina, R.D.**, Su, J. (2014) Age-related Hearing Loss: GABA, Nicotinic acetylcholine and NMDA Receptor Expression Changes in Spiral Ganglion Neurons of the Mouse Cochlea. Neuroscience. 259, 184-193.

Zettel, M.L., Zhu, X., O'Neill, W.E., **Frisina, R.D. (2007)** Age-related Declines in Kv 3.1b Expression in the Mouse Auditory Brainstem Correlate with Functional Deficits in the Medial Olivocochlear Efferent System. J. Assoc. Res. Otolaryngology – JARO, 8:280-293. (PMCID: PMC2538355).

*Zhu, X., Vasilyeva, O.N., Kim, S-H., Jacobson, M., Romney, J., Waterman, M.S., Tuttle, D., **Frisina, R.D. (2007)** Auditory efferent system declines precede age-related hearing loss: Contralateral suppression of otoacoustic emissions in mice. J. Comparative Neurology, 503: 593-604. [Impact Factor ~4]

D. Research Support

Ongoing Research Support

NIH/NIA, P01 AG009524-22 Frisina (PI) 06/01/91 - 2/28/21

Project Title: "Aging Auditory System: Presbycusis & its Neural Bases"

Aims: Multidisciplinary determination and characterization of the perceptual, neural and molecular bases of age-related hearing loss in humans and animal models. Four projects and three cores.

Role: Principal Investigator, Project and Core Leader

NIH/NIDCD, R01 DC014568-03 Frisina (PI) 4/01/15 – 3/31/20

Project Title: "Enabling Microsystem Technologies for Advanced Drug Delivery"

Aims: Develop novel microsystems and programmable micropumps for local drug delivery to targeted organ systems, starting with drug delivery to the inner ear to prevent or treat hearing, deafness and balance problems. *Role:* Principle Investigator

England- Action on Hearing Loss-Royal National Inst. for the Deaf 5/01/16 – 2/28/19

Project Title: "mGlu7 Allosteric Modulators for the Treatment of Hearing Loss"

Aims: Develop and test new drugs to modulate the synaptic mechanisms of glutamate transmission in the auditory system to prevent or treat hearing loss and tinnitus due to noise-overexposure and aging.

Role: Principle Investigator

NIH/NIA/NIDCD, R13 AG057190-01, Frisina (PI) 7/01/17 – 6/30/18

Project Title: "Aging and Speech Communication Conference"

Aims: Help support an international conference on age-related hearing loss and speech communication in the elderly. *Role:* Principle Investigator

PENDING

NIH/NIDCD, R21 DC017039-01 Frisina (PI) 4/01/18 – 3/31/20

Project Title: "Elucidation of Under-Investigated Biological Mechanisms of Age-Related Hearing Loss"

NIH Priority Score: 30; Percentile = 17%

Aims: Investigate autophagy pathways in the inner ear to prevent or treat acquired hearing loss, focusing upon age-related hearing loss. *Role:* Principle Investigator

NAME: Christopher Passaglia

eRA COMMONS USER NAME (agency login): passaglia.chris

POSITION TITLE: Associate Professor

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of Iowa, Iowa City, IA	B.S.E.	05/1990	Biomedical Engineering
Syracuse University, Syracuse, NY	Ph.D.	05/1997	Bioengineering and Neuroscience
Northwestern University, Evanston, IL	Postdoc	07/1997	Biomedical Engineering

A. Personal Statement

My research lab is federally funded to train students of all levels to conduct experiments that are presently directed at studying intraocular pressure (IOP) fluctuations, aqueous fluid dynamics, retinal structure, and visual function in normal and glaucomatous rats using novel devices that we have created for continuous IOP measurement and control. I have 20+ years of experience using electrophysiological (electroretinograms, visual evoked potentials, optic nerve recordings, and patch clamp recordings), computational, and behavioral techniques on rats and many other animals [1-5]. I have spent the last 10+ years applying these techniques towards understanding the causes and effects of glaucoma, an eye disease that is increasingly thought to have a vascular component in some patients. I have a solid record of scientific accomplishment, which has garnered national awards at every stage of my academic career. As PI, I have supervised several graduate and postdoctoral students who have produced multiple peer-reviewed manuscripts and forged careers of their own in academia or biomedical industry.

1. Passaglia CL, McSweeney ME, Stewart KM, Kim E, Mole EJ, Powers MK, Barlow RB (1997) Visual performance of horseshoe crabs: role of underwater lighting. *Biological Bulletin* 193:205-207. PMID: 9390387.
2. Passaglia CL, Troy JB, Rüttiger L, Lee BB (2002) Orientation sensitivity of ganglion cells in primate retina. *Vision Research* 42:683-694. PMID: 11888534.
3. Werner B, Cook P, Passaglia CL (2008) Whole-cell recordings of light evoked excitatory synaptic currents in the retinal slice. *Journal of Visualized Experiments* 17, pii:771, doi: 10.3791/771. PMID: 18579656.
4. Freeman DF, Heine WF, Passaglia CL (2010) Single-unit in vivo recordings from the optic chiasm of rat. *Journal of Visualized Experiments* 38, pii:1887, doi:10.3791/1887. PMID: 20364119.
5. Tang X, Tzekov R, Passaglia CL (2016) Retinal crosstalk in the mammalian visual system. *Journal of Neurophysiology* 115:3018-3029. PMID: 26984426.

B. Positions and Honors

Positions

1989-1990	Undergraduate Research Assistant, Cardiovascular Image Processing Lab, University of Iowa Supervisor: David J. Skorton, M.D.
1991-1992	Graduate Research Assistant, Bioengineering and Neuroscience Dept., Syracuse University Supervisor: Robert L. Smith, Ph.D.
1993-1997	Graduate Research Assistant, Bioengineering and Neuroscience Dept., Syracuse University Supervisor: Robert B. Barlow, Ph.D.
1998-2003	Postdoctoral Research Fellow, Biomedical Engineering Dept., Northwestern University

Supervisor: John B. Troy, Ph.D.

2004-2011 Assistant Professor, Biomedical Engineering Dept., Boston University.
 2012- Associate Professor, Chemical and Biomedical Engineering Dept., University of South Florida
 2013- Adjunct Associate Professor, Dept. of Ophthalmology, University of South Florida

Honors

1997 The Capranica Award in Neuroethology, The Capranica Foundation.
 1998 Donald B. Lindsley Prize in Behavioral Neuroscience, Society for Neuroscience.
 1999-2002 NIH National Research Service Award, EY06908-01
 2004 Vision Research Award, The Karl Kirchgessner Foundation
 2005-2007 Smith Family New Investigator Award, The Medical Foundation.
 2006-2011 NSF CAREER Award
 2014 Thomas R. Lee Award, BrightFocus Foundation

C. Contributions to Science

Neural basis of visual behavior

A basic question that drives much vision research is determining what the eye tells the brain. My graduate work [5,6] answered this question for the lateral eyes of horseshoe crabs. I did this by videotaping with an underwater camera what crabs see while swimming in the ocean and inputting the video to a realistic cell-based computer model of the crab's eyes. I also validated model simulations by recording the spike trains of single optic nerve fibers with an underwater microelectrode simultaneously attached to the crabs. The work showed that the spatiotemporal properties of the eye are designed to detect objects of behavioral interest to the animal and to communicate those objects to the brain with characteristic patterns of optic nerve activity. To date, the horseshoe crab eye and its contribution to visually-guided behavior remains the most thoroughly understood neural system in the animal kingdom thanks to this work and the century of crab research upon which the model was built. As PI [7,8] my lab has expanded on the work by using the relatively simple crab eye and crab eye model as a framework for understanding image processing strategies that are shared or uniquely imparted by the more complex circuits of the vertebrate retina. The work has provided insight into the functional organization of the biological clock located in the crab's brain and the circadian messages it sends to the crab's eye. We found that clock output is rich in temporal structure, consisting of multi-cellular bursts of efferent spikes that occur every few seconds and cluster in time to form strings of spike bursts that are separated by a minute or two of silence, and that this multilayered structure is important for driving diurnal rhythms in the visual response properties of retinal neurons. The work has also revealed that the crab eye exhibits surprisingly similar computational strategies as the vertebrate eye. We found that the retina adapts to luminance and contrast without need for a myriad of horizontal, bipolar, and amacrine cell circuits. It does not even have excitatory synapses, attesting to the evolutionary importance of the adaptive processes to vision.

6. Passaglia CL, Dodge FA, Herzog ED, Jackson BS, Barlow RB (1997) Deciphering a neural code for vision. Proceedings of the National Academy of Sciences 94:12649-12654. PMID: 9356504.
7. Passaglia CL, Dodge FA, Barlow RB (1998) Cell-based model of the *Limulus* lateral eye. Journal of Neurophysiology 80:1800-1815. PMID: 9772240.
8. Liu JS, Passaglia CL (2011) Spike firing pattern of output neurons of the *Limulus* circadian clock. Journal of Biological Rhythms 26:335-344. PMID: 21775292.
9. Valtcheva T, Passaglia CL (2015) Contrast adaptation in the *Limulus* lateral eye. Journal of Neurophysiology 114:3234-3241. PMID: 26445869.

Non-classical receptive field of retinal ganglion cells

It is well known that retinal ganglion cells in the vertebrate eye are excited by a stimulus in a central region of their receptive field and antagonized by the same stimulus in surrounding regions. Less clear has been the impact of stimuli outside the classical center-surround receptive field as remote patterns have been reported to elicit a diversity of spike firing behaviors. My postdoctoral work [9,10] provided one of the first quantitative descriptions of the spatial and temporal properties of the non-classical receptive field of mammalian ganglion cells. I did this by recording spike trains from the optic tract of anesthetized cats. A nonlinear mechanism was found which integrates signals from two pools of rectifying subunits that are widely distributed over the retina. One pool has large excitatory subunits that increase the mean firing rate, sharpen spatial tuning, and make

responses more sustained. The other pool has small inhibitory subunits with opposite effects on cat ganglion cells, decreasing their mean rate and enhancing their transient response. The findings gave functional context to *in vitro* work by other researchers that concurrently revealed the retinal circuitry underlying the non-classical receptive field.

10. Passaglia CL, Enroth-Cugell C, Troy JB (2001) Effects of remote stimulation on the mean firing rate of cat retinal ganglion cells. *Journal of Neuroscience* 21:5794-5803. PMID: 11466451.
11. Passaglia CL, Freeman DK, Troy JB (2009) Effects of remote stimulation on the modulated activity of cat retinal ganglion cells. *Journal of Neuroscience* 29:2467-2476. PMID: 19244521.

Signal and noise contributions to retinal information transmission

Neurons fire spikes erratically due to the signal being transmitted and noise that accompanies it. To decipher the encoded signal, knowledge about the statistical properties of the noise is needed and that knowledge has typically been obtained by counting spikes fired in successive time bins. In the visual system the variance in spike count was found to depend on stimulus contrast, which implies that discharge noise is multiplicative in nature. Yet, numerous studies have reported that the variance in amplitude of ganglion cells responses to a periodic stimulus is independent of stimulus contrast. My postdoctoral work [11-13] also examined how signal and noise contribute to retinal spike trains and how much information those spike trains could encode. I did this by recording ganglion cell responses from the optic tract of anesthetized cats and performing power spectral analyses and information theoretic analyses on their spike output. I discovered that spike discharge noise is indeed multiplicative but that it can be treated as additive if only a specific subset of temporal frequency components is considered. That subset corresponds to frequencies below 20Hz, which is interesting because visual cortical cells respond best to those signal frequencies. Spike train variability would thus appear additive to the visual system and could be removed by ensemble averaging. The finding may have general relevance for sensory communication as auditory cortical cells also respond best to signal frequencies below 20Hz.

12. Passaglia CL, Troy JB (2004) Information transmission rates of cat retinal ganglion cells. *Journal of Neurophysiology* 91:1217-1229. PMID: 14602836.
13. Passaglia CL, Troy JB (2004) Impact of noise on retinal coding of visual signals. *Journal of Neurophysiology* 92:1023-1033. PMID: 15071086.
14. Troy JB, Bohnsack DL, Chen J, Guo X, Passaglia CL (2005) Spatiotemporal integration of light by the cat X-cell center under photopic and scotopic condition. *Visual Neuroscience* 22:493-500. PMID: 16212706.

Receptive field properties of retinal neurons

To understand the causes of ocular diseases like glaucoma researchers employ animal models in which experimental techniques are used to chronically elevate intraocular pressure and slowly kill off retinal ganglion cells. One of the most popular is the rodent model of experimental glaucoma, but a problem with the model for vision research is that the normal physiological properties of rat ganglion cells are rather poorly understood. As PI [14-16] my lab has been quantitatively characterizing their spike discharge statistics, spatiotemporal receptive field structure, and adaptive processes. We have found that rat ganglion cells show additive noise below 20Hz as described above for cat, that they resemble X-, Y-, and W-type ganglion cells of other mammals in some but not all respects, and that they can adapt to remarkably small fluctuations in luminance. This database of normal ganglion cell function is necessary for evaluating the effects of glaucoma on rat retinal physiology and relevant to the myriad of studies that use rats for vision research. In the course of investigating rat ganglion cell physiology, we also looked at a seemingly sophisticated property of ganglion cells in salamanders known as the "omitted stimulus response" [17]. The complex response was considered evidence that ganglion cells can not only signal temporal input patterns to the brain but also violations in the patterns. We found that the behavior can instead be attributed to a fairly simple thresholding mechanism.

15. Freeman DK, Heine WF, Passaglia CL (2008) The maintained discharge of rat retinal ganglion cells. *Visual Neuroscience* 18:1-10. PMID: 18634718.
16. Freeman DK, Grana G, Passaglia CL (2010) Luminance adaptation to low-contrast stimuli in retinal ganglion cells. *Journal of Neurophysiology* 104:704-12. PMID: 20538771.
17. Heine WF, Passaglia CL (2011) Spatial receptive field properties of rat retinal ganglion cells. *Visual Neuroscience* 28:403-17. PMID: 21944166.

18. Werner B, Cook PB, Passaglia CL (2008) Complex temporal response patterns with a simple retinal circuit. *Journal of Neurophysiology* 100: 1087-97. PMID: 19066519.

Novel tools for glaucoma induction and intraocular pressure monitoring

Existing methods of glaucoma induction in animals all target fluid outflow pathways of the eye for damage. Since aqueous humor continues being produced but cannot escape, there is a buildup of intraocular pressure that gradually causes retinal ganglion cell to die. While the induction methods work, they have finite success rate, offer no control over pressure amplitude or dynamics, and cannot be reversed. These limitations hamper our ability to investigate the causes and effects of the disease. Tracking intraocular pressure history presents further challenges as data are usually collected by hand with a tonometer, which requires time and skill to operate so pressure readings are sporadic and noisy as a result. To address these longstanding limitations, we have developed a wireless pressure sensor and pressure-controlled pump [18,19]. We have shown that the devices can continuously record intraocular pressure for weeks-to-months or set and hold pressure at any level desired by the user. The devices monitor and regulate intraocular pressure via a fine fluid-filled cannula that is implanted in the anterior chamber of the eye such that the tip does not retract or scrape ocular tissues even though the eye and animal freely move. For the first time, the one-of-a-kind technologies give glaucoma researchers and clinicians complete round-the-clock control of the intraocular pressure history to which an eye is exposed with high accuracy, near-zero failure rate, and unlimited duration.

19. Bello SA, Malavade S, Passaglia CL. (2017) Development of a smart pump for monitoring and controlling intraocular pressure. *Annals of Biomedical Engineering*. 45: 990-1002. PMID: 27679446.
20. Bello SA, Passaglia CL (2017) A wireless pressure sensor for continuous monitoring of intraocular pressure in conscious animals. *Ann Biomed Eng*. 45:2592-2604. PMID: 28812168

A full list of published work can be found at:

<http://www.ncbi.nlm.nih.gov/myncbi/browse/collection/47448382/?sort=date&direction=descending>

D. Research Support

Ongoing

PI: Passaglia

Source: NIH R01 EY027037-01A1

Dates: 08/01/16 – 07/31/20

Title: Continuous measurement and control of intraocular pressure in normal and glaucomatous eyes

Description: The research aims are to study effects of chronic ocular hypertension on intraocular pressure variability, ocular fluid dynamics, retinal structure and function, and visual sensitivity of rats using a novel intraocular pump and pressure sensor that we have created.

Responsibilities: Provide scientific training, guidance, and management of the project

Recently Completed

PI: Passaglia

Source: NIH R21 EY023376-01A1

Dates: 04/01/14 - 03/31/17

Title: A novel method of glaucoma induction and regulation

Description: The research aims are to create a wireless smart pump that can autonomously regulate IOP and to use the device to chronically elevate pressure in rat eyes.

Responsibilities: Provide scientific training, guidance, and management of the project

PI: Passaglia

Source: BrightFocus Foundation

Dates: 07/01/14 - 06/30/17

Title: An implantable system for intraocular pressure measurement

Description: The research aims are to create a wireless batteryless sensor that can continuously record IOP and to use the device to monitor pressure variations in rat eyes over a long period of time.
Responsibilities: Provide scientific training, guidance, and management of the project

E

NAME: Jaroszeski, Mark J.

eRA COMMONS USER NAME (credential, e.g., agency login): MARKJA

POSITION TITLE: Associate Professor of Chemical & Biomedical Engineering

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of South Florida College of Engineering, Tampa, FL	B.S.	05/1990	Chemical Engineering
University of South Florida College of Engineering, Tampa, FL	M.S.	05/1990	Chemical Engineering
University of South Florida College of Engineering, Tampa, FL	Ph.D.	12/1993	Engineering Science
University of South Florida College of Medicine	Postdoc	10/1996	Biomedical Sciences

NOTE: The Biographical Sketch may not exceed five pages. Follow the formats and instructions below.**A. Personal Statement**

This proposed R01 will measure, characterize, and correlate tissue impedance changes resulting from *in vivo* electroporation with the biological responses and use that data to devise a real time feedback control algorithm to improve delivery. I have extensive experience in applying electroporation *in vivo*. This experience began in 1992 and related to delivering molecules to B16 murine melanomas established in C57Bl/6 mice. Part of the electroporation research is dependent upon constructing electrodes to suit the particular tumor/tissue because there are very few commercially available electrodes. I have extensive expertise at constructing these types of electrodes. I routinely make them for colleagues at USF and other Universities as well as for a handful of other investigators around the world. Currently, I am an inventor on 27 US patents that relate to electrodes and the methods to use them *in vivo*. I also have substantial experience at making custom pulse generation equipment, because commercially available equipment has limited capability or is not available. Experience in making electrodes and pulsing equipment has enabled the integration of impedance measurement electronics into the delivery process which provides control over when the measurements are made, which electrodes (in multielectrode systems) are used for measurements, and what frequencies are used to determine impedance. Such an instrument was first developed in my lab and was improved upon in a recently completed R21 grant (1R21AR061136, Jaroszeski, PI) that focused on determining the feasibility of using impedance to control *in vivo* electroporative delivery to skin. Thus, I am confident that we can modify the hardware and software of this system for this proposed R01 study.

In addition creating electroporation tools, I have considerable hands on experience with animal models and applying the electroporation for both DNA and drug delivery. I have grown tumor cells, harvested, and injecting them to produce tumors for the following tumor models: melanoma, hepatocellular carcinoma, prostate cancer, rhabdomyosarcoma, renal cell carcinoma, and osteosarcoma, pancreatic cancer, breast cancer, and a few others. Many of these models required surgical access to implant tumors. Normal tissues that have been the target for delivery are: skin in mice, rats, guinea pigs; muscle in mice and rats; cardiac muscle in pigs (during surgery); and liver in rats and mice. Most of the delivery experiments required follow up in the form of routine tumor measurements, histologic sampling, and blood analysis. This has resulted in 60 publications, most

involve application of the technique in animal models as well as a clinical trial. Therefore, I feel that I have more than adequate animal model experience to actively direct and help conduct the delivery experiments in this study as well as the data analysis for the planned experiments.

B. Positions and Honors

Positions

Associate Professor (2002-present), Department of Chemical & Biomedical Engineering, University of South Florida, Tampa, FL

Research Assistant Professor (1996-2002), Department of Surgery, Div. of Surgical Research, Univ. of South Florida College of Medicine, Tampa, FL

Honors

2006 University of South Florida USF Outstanding Undergraduate Teaching Award for the 2005-2006 academic Year.

1993 Recipient of the University of South Florida Outstanding Dissertation of the Year Award for "Mechanically Facilitated Cell-Cell Electroporation"

1987 Lifetime Member of the Tau Beta Pi Engineering Honor Society

C. Contribution to Science

In Vivo Delivery of Chemotherapeutic Agents to Tumors using Electroporation. I was part of a small handful of researchers worldwide that were performing *in vivo* electroporation during the early 1990's because the collective view was that there was much potential for such a generic physical molecular delivery tool. Most of my work in the 1990's was conducted jointly with 2 colleagues at USF and was focused on developing basic electrodes and pulsing protocols (dose of DC electricity) to deliver chemotherapeutic agents to tumors in animal models. Other groups in the world (2 in France and 1 in Slovenia) were performing similar studies at about the same time. The resulting proof of principal studies showed that electroporation could be safely conducted *in vivo* in animal models and could result in very strong antitumor effects. My involvement these first studies covered the full spectrum of experimental activities. I made electrodes and modified instrumentation because absolutely none were available specifically for *in vivo* use at that time. I also grew tumor cells, harvested them, and induced tumors. These were primarily B16F10 murine melanoma cells used to produce subcutaneous melanomas in C57BL/6 mice. In subsequent experiments, other tumor types were induced to provide *in vivo* tumor models. In these studies I was also actively involved in the treatment process by either inserting/applying electrodes to tumors after injecting a chemotherapeutic agent or by applying pulses while a colleague injected and positioned and electrode. I also made follow-up tumor measurements on several thousand animals. These first drug delivery studies were translated into clinical trials for the delivery of bleomycin to melanomas and basal cell carcinomas at USF. These were the first *in vivo* electroporation clinical trials in the US (second published in the world). My role in these was to make sure that the electrodes, developed at USF, and instrumentation were suitable for the tumors treated for each patient. I also operated the pulse generating equipment during all patient treatment and recorded electrical data during the process. I participated in the follow up of each tumor with a USF colleague and clinical staff. There was considerable initial skepticism from the scientific and medical communities when this work was ongoing. This skepticism gradually diminished due to work done at USF, the studies performed by a few other key groups in the world, and a growing number of researchers in the field by the late 1990's. It is now reasonably well accepted.

a. Heller, R., Jaroszeski, M. J., Leo-Messina, J., Perrott, R., Van Voorhis, N., Reintgen, D., and Gilbert, R. (1995) Treatment of B16 mouse melanoma with the combination of electropermeabilization and chemotherapy. *Bioelectrochemistry and Bioenergetics* 36:83-87.

b. Heller, R., Jaroszeski, M., Glass, F., Messina, J., Rapaport, D., DeConti, R., Fenske, N., Gilbert, R., Mir, L. M., and Reintgen, D. (1996) Phase I/II trial of cutaneous and subcutaneous malignancies using electrochemotherapy. *Cancer* 77(5):964-971. PubMed PMID: 8608491

c. Glass, L. F., Fenske, N. A., Jaroszeski, M., Perrott, R., Harvey, D. T., Reintgen, D. S., and Heller, R. (1996) Bleomycin-mediated electrochemotherapy of basal cell carcinoma. *Journal of the American Academy of Dermatology* 34(1):82-6. PubMed PMID: 8543699

d. Jaroszeski, M. J., Messina, J., Perrott, R., Van Voorhis, N., Gilbert, R., and Heller, R. (1996) Enhanced effects of treating B16 melanoma with multiple treatment electrochemotherapy. *Melanoma Research* 6:427-433. PubMed PMID: 8915314

In Vivo Delivery of DNA to Normal Tissues Using Electroporation. *In vivo* DNA delivery studies were initiated during the drug delivery work mentioned above because it was clear that there are many more applications for gene delivery relative to drug delivery. The first paper from this work was published in 1996 and focused on the delivery reporter genes to normal rat liver. My role in this study included creating the electrode, performing surgery for liver access, delivering DNA, and harvesting tissue for analysis. This was the second known paper that employed *in vivo* electroporation for DNA delivery. Work on *in vivo* electroporation for gene delivery continued with applications to many animal models. Some were tumor bearing and others focused on normal tissues. It was clear from multiple animal models and tissue types that the electric pulse parameters for DNA delivery were highly dependent on tissue. They also varied with electrode type. This was contrary to drug delivery (small molecule) data that required similar pulse parameters for most neoplastic tissues. Thus, optimal, or best, electrical parameters for DNA delivery were harder to identify and varied quite a bit. One novel variation in the application of electroporation has been recently investigated. It is the use corona charge and nonthermal plasma as a noncontact method for electrically treating tissues (or electroporating). This avoids the insertion of electrodes into tissue (needles) or the placement of electrodes on the target tissue surface; thus, it reduces invasiveness. It was successfully used to deliver reporter genes to skin and was also capable of inducing cellular and humoral responses when DNA encoding an antigen was delivered. It has been the focus of 3 separate R21 grants (Jaroszeski, PI) and multiple publications beginning in 2009. In the past two years other groups have been investigating the same plasmas for delivery; one has a published paper. After performing these aforementioned studies, it is clear that DNA can be delivered using either DC pulses and plasmas/charged streams equally well.

a. Heller, R., Jaroszeski, M., Atkin, A., Moradpour, D., Gilbert, R., Wands, J., and Nicolau, C. (1996) *In vivo* gene electroinjection and expression in rat liver. *Federation of European Biochemical Societies (FEBS) Letters* 389:225-228. PubMed PMID: 8766704

b. Heller, R., Cruz, Y., Heller, L., Gilbert, R., and Jaroszeski, M.J., (2010) Electrically Mediated Delivery of Plasmid DNA to the Skin, using a Multielectrode Array. *Human Gene Therapy* 21:357-362. PubMed PMID: 19839722; PubMed Central PMCID: PMC2865213.

c. Connolly, R.J., Hoff, A.M., Gilbert, R., and Jaroszeski, M.J. (2015) Optimization of a plasma facilitated DNA delivery method. *Bioelectrochemistry* 13;103:15-21 Epub Oct. 13, 2014. PMID:25455213 PMCID:PMC4346600.

d. Jaroszeski, M.J., Harvey-Chapman, T., Hoff, A., Atkins, R., and Connolly, R.J. (2017) Direct current helium plasma for *in vivo* delivery of plasmid DNA encoding erythropoietin to murine skin. *Plasma Medicine*, 7(2):1–11 (in press)

In Vivo Impedance Spectroscopy to Monitor and Control In vivo Electroporation. It became clear about a decade after the first *in vivo* gene electroporation papers were published, that electroporative gene delivery could be tuned to any tissue. It was also clear that real clinical applications would emerge as the number of clinical trials was increasing year by year (currently there are about 140 clinical trials for *in vivo* electroporation completed and ongoing –clinicaltrials.gov). However, different pulsing parameters appear to be optimal for different tissue types and tumor types (for gene delivery). Furthermore, animal study results from nearly all researchers show considerable variation when the same pulsing parameters were used in the same tissue/tumor type. Pulsing parameters have historically been empirically determined to arrive at conditions that result in the best mean expression results that of course have a corresponding degree of dispersion. Such data distributions may mean that some animals do not receive adequate delivery. There could be many factors that influence this; however, making sure that each animal receives optimal electrical treatment is likely to reduce variability and increase delivery/expression. There has been no attempt, to the best of our knowledge, to adjust pulsing parameters to compensate for variation that occurs from animal to animal (ultimately patient to patient). A measurable parameter that can be related to the degree of electroporation could be used to customize pulse delivery to improve results. It appears that impedance spectroscopy can be used as such a parameter to modify pulsing parameters in real time so that a desired level of electroporation is achieved. Two papers have been published, below, that reflect our early work. These and some additional preliminary data helped secure a funded R21 study 1R21AR061136 (Jaroszeski, PI) that was completed in late 2014. This grant strictly focused on determining if impedance could be measured and used to guide electrical treatment in skin. Much of the resulting data appear in this proposed R01 study as preliminary data. One paper has been submitted in revised form for publication (below). Two others are in various stages in the publication process. From this work, it is clear that in murine skin, changing pulsing parameters in real time

during electroporation can improve the biological response (DNA expression levels) compared to using fixed pulsing parameters for all animals. This proposed study focuses on delivery to muscle which is a common target for gene therapies and also addresses questions that were unanswered by the completed R21 study for skin.

- a. Rey, J. I., Connolly R. J., Jaroszeski, M.J., Hoff, A.M., Lewellyn, J.A., and Gilbert, R. (2009). Piezoelectric Nature of Tissues: Electrostrictive Forces on vesicles with compartmentalized permittivity and conductivity conditions. *IEEE Transactions on Dielectrics and Electrical Insulation* 16(5): 1280-1287
- b. Connolly, R.J., Rey, J. I., Jaroszeski, M.J., Hoff, A.M., Lewellyn, J.A., and Gilbert, R. (2009). Effectiveness of non-penetrating electroporation applicators to function as impedance spectroscopy electrodes. *IEEE Transactions on Dielectrics and Electrical Insulation* 16(5): 1348-1355.
- c. Atkins, R.M, Fawcett, T. J., Gilbert, R., Hoff, A. M., Collolly, R.J., Brown, D. W., Lewellyn, J.A., and Jaroszeski, M.J. (2017) Impedance spectroscopy as an indicator for successful in vivo electric field mediated gene delivery in a murine model. *Bioelectrochemistry* 115:33-40. PMID: 28237705

The public URL to a full list of my published work is: <https://www.ncbi.nlm.nih.gov/sites/myncbi/mark.j.jaroszeski.1/bibliography/40928163/public/?sort=date&direction=descending>

D. Research Support

Ongoing Research Support

None (Jaroszeski, PI) 06/01/15-12/31/16
 State of Florida High Tech Corridor
 Skin surface charging to inhibit hair growth
 The focus of this study is to develop a plasma based system for hair removal.

Completed

1R21AR061136 (Jaroszeski ,PI) 02/17/11-8/30/15
 NIH/NIAMS
 Impedance Changes as an indicator of Successful
 Skin Electroporative DNA Delivery
 The focus of this study is to identify tissue impedance changes that correlate with successful electroporation and use those measureable changes to improve the electroporation process in skin.

1R21AI090561-01 (Jaroszeski, PI) 07/05/10-06/30/13
 NIH/NIAID
 Topical Charge Driven DNA Delivery to the Skin
 This grant will investigate a combination of transdermal delivery and intradermal delivery in one delivery process driven by charge deposited on the surface of a small volume of DNA solution located on the skin surface

1R21AI079706-01A2 (Jaroszeski, PI) 08/05/10-07/31/13
 NIH/NIAID
 Development of Streamed Ion Deposition for Efficient Plasmid DNA Delivery
 This grant will investigate the feasibility of a novel method for delivering DNA to the skin. The method involves a traditional intradermal injection (standard hypodermic needle) of DNA into the skin followed by the application of plasma charge to the surface of the injected skin as a means for delivering DNA.

NAME Koria, Piyush		POSITION TITLE Associate Professor in Department of Chemical & Biomedical Engineering at University of South Florida	
eRA COMMONS USER NAME (credential, e.g., agency login) PKORIA			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
Indian Institute of Technology, Kanpur, India University at Buffalo, (SUNY), Amherst, NY, USA	B-Tech PhD	05/2000 02/2007	Chemical Engineering Chemical & Biological Engineering
Massachusetts General Hospital & Harvard Medical School, Shriners Hospital for Children	Postdoctoral	08/2010	Surgery & Biomedical Engineering

A. Personal Statement

As a collaborator in this proposed research my role will be to assist the PI with the cells toxicity studies. I have a broad background in areas of cellular and molecular biology, protein engineering and expression and cellular and tissue engineering. The current focus of research of my lab is the development of protein based therapeutics for regenerative medicine. We routinely perform cell viability and toxicity assays in my lab using a variety of primary human cells as well as cell lines such as keratinocytes, neuronal cell lines and several lung cancer cell lines. I received my PhD from University at Buffalo, SUNY, in the department of Chemical & Biological Engineering, under the tutelage of Dr. Stelios T. Andreadis. My PhD work focused on the development and application of complex three dimensional tissue engineered skin model systems for studying barrier disruption, epidermal morphogenesis and regeneration. While in graduate school I also elucidated two molecular mechanisms involved in cell adhesion and migration. Following my graduate work I joined Dr. Martin Yarmush's lab at Massachusetts General Hospital, Harvard Medical School and Shriners Hospital for Children. Here, I acquired experience in protein expression and purification and developed a novel nanoparticles based on elastin like peptides (ELP) fusions.

1. Monfort DA, **Koria P**. Recombinant elastin based nanoparticles for targeted gene therapy. *Gene Therapy*. **2017** Jul 5 [Epub ahead of print].
2. Leonard A and **Koria P**. Growth factor functionalized biomaterial for drug delivery and tissue regeneration. *Journal of Bioactive and Compatible Polymers*, **2017** May 5th [Epub ahead of print].
3. McCarthy B and **Koria P**. Elastin-like-Peptide based fusion proteins for osteogenic factor delivery in Bone Healing. *Biotechnology Progress*. **2016** Jul 8;32(4):1029-37.
4. Johnson T and **Koria P**. Expression and Purification of Neurotrophin-Elastin-like peptides fusion proteins for Neural Regeneration. *BioDrugs* **2016** Apr; 30(2): 117-27.
5. Iglesias R and **Koria P**. Leveraging growth factor induced macropinocytosis for targeted treatment of lung cancer. *Medical Oncology* **2015**, Dec, 32(12): 259.

B. Positions and Honors

Positions and Employment

1999-1999	Summer Intern, Duncan Fertilizers, Kanpur, India
2000-2001	Teaching Assistant, Department of Chemical & Biological Engineering, University at Buffalo, SUNY, Amherst, USA 2000-2001
2001-2007	Research Assistant, Bioengineering Laboratory, Department of Chemical & Biological Engineering, University at Buffalo, SUNY, Amherst, USA

2007-2010	Research Fellow, Center for Engineering in Medicine, Department of Surgery, Massachusetts General Hospital & Harvard Medical School, Shriners Hospital for Children
2010-2016	Assistant Professor, Department of Chemical & Biomedical Engineering, University of South Florida
2016-	Associate Professor, Department of Chemical & Biomedical Engineering, University of South Florida

Honors

1996	574 rank among more than 100,000 students in Joint Entrance Examination (JEE) for admission to the Indian Institutes in Technology, in India
2002	Best Poster Presentation Award, Graduate Research Symposium, Department of Chemical & Biological Engineering, University at Buffalo.
2003	Outstanding Scientific Poster, Engineering Tissue Growth International Conference and Exposition, Pittsburgh, PA
2003	Outstanding Poster in Cell Biology, Center for Advanced Molecular Biology and Immunology (CAMBI), University at Buffalo
2006	Best Poster Presentation Award, Graduate Research Symposium, Department of Chemical and Biological Engineering, University at Buffalo, SUNY
2009	Shriner's Fellow, Shriners Hospital for Children, Boston, MA

C. Contribution to Science

- My early work focused on mechanisms of epidermal stratification and wound healing and led to several novel and unique discoveries in the field of tissue engineering, cell biology and regenerative medicine. They include the identification of key metabolic pathways in epidermal stratification; the implication of C/EBP- β in up-regulation of integrin alpha-5 and keratinocyte migration by KGF; and the novel discovery that JNK regulates cell-cell adhesion versus migration by regulating binding of alpha-catenin to adherens junctions versus actin cytoskeleton.
 - Koria P**, Brazeau D, Kirkwood K, Hayden P, Klausner M and Andreadis ST. Gene expression profile of tissue engineered skin subjected to acute barrier disruption. *Journal of Investigative Dermatology*, **2003** Aug;121(2):368-82.
 - Koria P** and Andreadis ST. Epidermal Morphogenesis: the transcriptional program of human keratinocytes during stratification. *Journal of Investigative Dermatology*, **2006** Aug;126(8):1834-41. Epub 2006 Apr 27. PMID: 16645587.
 - Koria P** and Andreadis ST. Keratinocyte growth factor up-regulates integrin α_5 through CCAAT/enhancer binding protein beta. *American Journal of Physiology Cell Physiology*, **2007** Sep;293(3):C1020-31. Epub 2007 Jun 27. PMID:17596295
 - Lee MH^{*}, **Koria P**^{*}, Qu J and Andreadis ST. JNK phosphorylates β -catenin and regulates adherens junctions. *FASEB J.* **2009** Nov; 23(11):3874-83. Epub 2009 Aug 10. ^{*}=Equal Contributors. PMID: PMC2774999
- In addition to the contributions listed above, I am also actively involved in biomaterials research specifically in the development of protein based materials for tissue engineering and wound healing. These peptide based materials are based on elastin like peptides that can self-assemble into different nanostructures for drug delivery or tissue engineering applications. Using these peptides I have developed and demonstrated the efficacy of growth factor containing nanoparticles in the healing of a variety of tissues such as bone, nerves and chronic wounds. Recently, we have demonstrated for the first time that ELPs induce fibroblast proliferation which is dependent on cell surface heparan sulfate proteoglycans. The novel aspect of this work is that these materials have no biological signals embedded in them. We further demonstrate that materials with the desired mitogenic activity can be developed with relative ease through the inclusion of hydrophobic or charged residues. Fibroblast proliferation is a key step in wound healing but it needs to be modulated as high fibroblast proliferation leads to fibrosis while very little proliferation leads to chronic wounds. Thus, this work enables us to design novel sustainable and cost effective biomaterials for chronic wound healing, where the material is not only useful for drug delivery but also has unique biological property conducive to wound healing.

- a. McCarthy B and **Koria P**. Elastin-like-Peptide based fusion proteins for osteogenic factor delivery in Bone Healing. *Biotechnology Progress*. **2016** Jul 8;32(4):1029-37.
 - b. Johnson T and **Koria P**. Expression and Purification of Neurotrophin-Elastin-like peptides fusion proteins for Neural Regeneration. *BioDrugs* **2016** Apr; 30(2): 117-27.
 - c. Yuan Y and **Koria P**. Proliferative activity of Elastin-like-Peptides Depends on Charge and Phase transition. *Journal of Biomedical Materials Research Part A* **2015** Oct 31. [Epub ahead of print]
 - d. **Koria P**, Yagi H, Kitagawa Y, Megeed Z, Nahmias Y, Sheridan R and Martin L. Yarmush. Self-assembling elastin like peptides growth factor chimeric nanoparticles for the treatment of chronic wounds. *Proceedings of the National Academy of Sciences USA*. **2011** Jan 18; 108(3):1034-9. Epub 2010 Dec 30.
3. I have developed growth factor-ELP fusion protein nanoparticles that selective deliver a payload to cells via macropinocytosis. The selectivity is obtained by growth factor induced macropinocytosis only in high growth factor receptor expressing cells. We have shown selective delivery of pro-apoptotic peptides as well as viruses in high growth factor expressing cells.
 - a. Monfort DA, **Koria P**. Recombinant elastin based nanoparticles for targeted gene therapy. *Gene Therapy*. 2017 Jul 5 [Epub ahead of print].
 - b. Iglesias R and **Koria P**. Leveraging growth factor induced macropinocytosis for targeted treatment of lung cancer. *Medical Oncology* **2015**, Dec, 32(12): 259.
 4. Moreover, with collaborators I have also been involved in the development of nanostructured self-assemblies such as gold-nanorod assemblies and electro-spun fibrous mats. Our study was the first that reported creation of fibrous mats from peptide based materials using only water as the solvent. This is particularly important for tissue engineering applications as most electrospinning studies involve the use of toxic solvents thereby rendering the resulting fibrous mats as unsafe for transplantation.
 - a. Cheemalapati S, Ladanov M, Pang Bo, Yuan Y, **Koria P**, Xia Y and Pyayt A. Dynamic Visualization of Photothermal Properties of Gold Nanocages Assemblies Using Thermoresponsive Elastin like Poly-Peptides. *Nanoscale*, **2016** Sep. 2nd [Epub ahead of print].
 - b. Huang HC, Yang Y, Nanda A, **Koria P** and Rege K. Synergistic Administration of Photothermal Therapy and Chemotherapy to Cancer Cells using Polypeptide-based Degradable Plasmonic Matrices. *Nanomedicine (Lond)*. **2011** Apr;6(3):459-73. PMID:PMC3559185
 - c. Huang-Chiao Huang, **Koria P**, Sarah M. Parker, Luke Selby, Zaki Megeed and Kaushal Rege. Optically responsive gold nanorod polypeptide assemblies. *Langmuir* **2008**, 24 (24): 14139-4. PMID: PMC2888953
 - d. Khadka DB, Niesen MI, Devkota J, Koria P and Haynie, DT. Unique electrospun fiber properties obtained by blending elastin-like peptides and highly ionized peptides. *Polymer* **2014**, Apr; 55(9). 2163-2169.
 5. Using tools in microfluidics, I have fabricated a microdevice that allows us to monitor dendritic cell migration in a chemokine gradient in real time. We successfully observed the migration of dendritic cells derived from a myeloid leukemia cell line (MUTZ-3) in a soluble chemokine (CCL-19) gradient. Our experiments suggest the utility of microdevices in monitoring dendritic cell chemotaxis in real time and getting important information regarding migration speeds and distances previously not available from conventional chemotaxis assays. This kind of data is useful for building mechanistic mathematical models of dendritic cell chemotaxis that may give us novel insights to the process of dendritic cell chemotaxis. Additionally, I was also involved in research focused on the application of microfluidics for separation of lymphocytes and monitoring inflammation in burn patients. This developed platform will likely be an important component of near patient molecular diagnostics and personalized medicine.
 - a. **Koria, P**, Bhushan A, Irimia D and Yarmush ML. Microfluidic device for examining directional sensing in dendritic cell chemotaxis. *Nanolife* **2012**, 2(2): 1250011-19. PMID:PMC3782312
 - b. Rosenbach AE, **Koria P**, Goverman J, Kotz KT, Gupta A, Yu M, Fagan SP, Irimia D, Tompkins RG. Microfluidics for T- lymphocyte cell separation and inflammation monitoring in burn patients. *Clin Transl Sci*. **2011** Feb;4(1):63-8.

Complete List of Published Work in MyBibliography:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/piyush.koria.1/bibliography/41316825/public/?sort=date&direction=ascending>

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

National Institutes of Health R21AR068013-01A1 Date of Project-07/2016-06/2018
Protease resistant growth factor formulations for chronic wound healing
Total Costs: \$ 343,575
Role: PI

Completed Research Support

USF Research & Innovation Proposal Enhancement Grant (PEG) Dates of Project: 05/2015-04/2016
Protease resistant growth factor formulations for chronic wound healing
Total direct costs: \$25,000
Role: PI

Moffitt Cancer Center ACS-IRG Dates of Project – 07/14-06/15
Dual targeting of the growth factor and macropinocytotic pathway in lung cancer
Total direct costs: \$ 30,000
To develop targeted chemotherapy for lung cancer
Role: PI

USF Research & Innovation New Researcher Grant (NRG) Dates of Project: 04/2014-03/2015
Light responsive bioactive materials derived from recombinant proteins
Total direct costs: \$9,000
Role: PI

New Faculty Start Up Funds, University of South Florida Koria (PI)
Startup package to establish research laboratory 08/05/10-08/14/13
Role: PI

Shriners Fellowship #8502 Koria (PI)
Postdoctoral Fellowship awarded by Shriners Hospital for Children 01/01/09-12/31/10
KGF-ELP nanoparticles for Wound Repair & Regeneration
Role: PI

William E. Lee III
 Professor
 Department of Chemical & Biomedical Engineering
 University of South Florida
 Tampa, FL 33620
 813-974-2136
wlee2@usf.edu

Professional Preparation

University of South Florida	Tampa, FL	Chemical Engineering	B.S./M.S. (5 yr program) 1978
University of Cincinnati	Cincinnati, OH	Chemical Engineering	Ph.D. 1984

Appointments

University of South Florida	1984 – present (full time faculty member – Dept. of Chemical & Biomedical Engineering)
Patient Safety Center (Tampa VA)	2007 – present (research associate)
Procter & Gamble Company (Cincinnati)	1978 – 1984 (engineer)

Publications

1. Lee, W.E. III. Forensic engineering studies using exemplars and surrogates in vehicular impact cases. *J National Academy of Forensic Engineers* 27(1): 41-50, 2010.
2. Gonzalez-Blohm, S.A., Doulgeris, J.J., Aghayev, K., Lee III, W.E., Laun, J., and Vrionis, F.D. In vitro evaluation of a lateral expandable cage and its comparison with a static device for lumbar interbody fusion. A biomechanical investigation. *J. Neurosurg. Spine* 20(4): 387-394, 2014.
3. Doulgeris, J.J., Gonzalez-Blohm, S.A., Aghayev, K., Shea, T. Lee, W.E. III, Hess, D. and Vrionis, F.D. Axial rotation mechanics in a cadaveric lumbar spine model: a biomechanical analysis. *Spine J.* 14(7): 1272-1279, 2014.
4. Gonzalez-Blohm, S.A., Doulgeris, J.J., Aghayev, K., Lee III, W.E., Laun, J., and Vrionis, F.D. In vitro evaluation of a lateral expandable cage and its comparison with a static device for lumbar interbody fusion. A biomechanical investigation. *J. Neurosurg. Spine* 20(4): 387-394, 2014.
5. Doulgeris, J.J., Gonzalez-Blohm, S.A., Aghayev, K., Shea, T. Lee, W.E. III, Hess, D. and Vrionis, F.D. Axial rotation mechanics in a cadaveric lumbar spine model: a biomechanical analysis. *Spine J.* 14(7): 1272-1279, 2014.
6. Lee, W.E. III, Gonzalez-Blohm, S.A., Doulgeris, J.J., Laun, J., Filis, A., and Vrionis, F.D. Lumbar intervertebral disc injuries in low velocity rear-end collisions: the current evidence. *Ann. Orthopedics Rheum.* 2(4): 1036-1046, 2014.
7. Doulgeris, J.J., Aghayev, K., Gonzalez-Blohm, S.A., Del Valle, M., Lee, W.E. III, and Vrionis, F.D. Biomechanical comparison of interspinous stabilization and bilateral pedicle screw system as posterior augmentation for extreme lateral interbody fusion. *Clinical Biomech.* 30(2): 205-210, 2015.
8. Shea, T.M., Doulgeris, J.J., Gonzalez-Blohm, S.A., Lee, W.E. III, and Vrionis, F.D. Balancing rigidity and safety of pedicle screw fixation via a novel expansion mechanism in a severely osteoporotic model. *Biomed Research Intl* Vol 2015 ID318405, 2015.
9. Lee, W.E. III. Forensic engineering analysis – Biomechanics is an engineering discipline. *J National Academy of Forensic Engineers* 33(6): 23-31, 2016.

10. Lee, W.E. III and Lloyd, J.D. Biomechanical, epidemiologic, and forensic considerations of pediatric head injuries. In: Forensic Epidemiology: Principles and Practices (Freeman, M.D. and Zeegers, M.P, editors), Elsevier, 2016. pp 231-259.

Synergistic Activities

1. Development of measurement techniques to measure both linear and angular acceleration during various human activities (2015 – present)
2. Development of measurement protocols to measure creativity and related topics in engineering and other disciplines (developed with Engineering and Visual & Performing Arts faculty) (2016 – present)
3. Development of programs to allow engineering students to pursue interests and training in the Visual & Performing Arts (2000 – 2010).
4. Development of measurement protocols to measure aspects of Multiple Intelligence theory to engineering students (and subsequent implications for engineering education) (2017 – present).
5. Group 4a (Undergraduate Education) and Group 4 (Engineering Education) chair and co-chair (1988 – 1992).

Nathan D. Gallant, Ph.D.

Associate Professor, Department of Mechanical Engineering
 University of South Florida, Tampa, FL 33620
 Tel: (813) 974-5840; Email: ngallant@usf.edu

A. Professional Preparation

Georgia Institute of Technology	Mechanical Engineering	B.S., 1999
Georgia Institute of Technology	Mechanical Engineering	M.S., 2003
Georgia Institute of Technology	Mechanical Engineering	Ph.D., 2004
National Institute of Standards and Technology	Biomaterials	2005-2008

B. Appointments

Aug. 2014 - present	Associate Professor, Department of Mechanical Engineering, University of South Florida
Jul. 2012 - present	Interdisciplinary Professor, Department of Chemical and Biomedical Engineering, University of South Florida
Aug. 2008 – Aug 2014	Assistant Professor, Department of Mechanical Engineering, University of South Florida
Jan. 2005 - Jul. 2008	National Research Council Post Doctoral Fellow, National Institute of Standards and Technology
Aug 1999 - Dec. 2004	Graduate Research Assistant, Georgia Institute of Technology

C. Publications (24 total publications in peer-reviewed journals)Publications most closely related to the proposed project:

1. Akintewe, O.O., DuPont, S.J., Elineni, K.K., Cross, M.C., Toomey, R.G., and **Gallant, N.D.** Shape-changing hydrogel surfaces trigger rapid release of patterned tissue modules. *Acta Biomaterialia* 11:96-103 (2015).
2. Mohan, G. and **Gallant, N.D.** Elastic surface chemistry gradients for high-throughput modulation of cell-adhesive interfaces. *Journal of Biomedical Materials Research Part A* (in press, DOI: 10.1002/jbm.a.35349).
3. Elineni KK and **Gallant ND.** Regulation of cell adhesion strength by peripheral focal adhesion distribution. *Biophysical J.* 101(12):2903-2911 (2011).
4. Moore, N.M., Lin, N.J., **Gallant, N.D.**, and Becker, M.L. Synergistic proliferation and osteogenic differentiation activity of human bone marrow stromal cells on BMP-2 derived and RGD peptide concentration gradients. *Acta Biomaterialia* 7(5):2091-2100 (2011).
5. Moore, N.M., Lin, N.J., **Gallant, N.D.**, and Becker, M.L. The use of immobilized osteogenic growth peptide on gradient substrates synthesized via click chemistry to enhance MC3T3-E1 osteoblast proliferation. *Biomaterials* 31(7):1604-1611 (2010).

Other significant publications:

1. Onen O, Ahmad AA, Guldiken R, and **Gallant ND.** Surface modification of acoustic wave biosensors for enhanced specificity. *Sensors.* 12(9):12317-12328 (2012).
2. Elineni, K.K. and **Gallant, N.D.** Microtubules mechanically regulate cell adhesion strengthening via cell shape. *Cellular and Molecular Bioengineering* 7(1):136-144 (2014).
3. Acharya AP, Dolgova NV, Moore, NM, Xia CQ, Clare-Salzler MJ, Becker ML, **Gallant ND,** and Keselowsky BG. The modulation of dendritic cell integrin binding and activation by RGD peptide density gradient substrates. *Biomaterials.* 31(29): 7444-7454 (2010).
4. **Gallant ND,** Lavery KA, Amis EJ, and Becker ML. Universal gradient substrates for "click" biofunctionalization. *Advanced Materials.* 19(7): 965-969 (2007).

5. **Gallant ND**, Michael KE, and García AJ. Cell adhesion strengthening: Contributions of adhesive area, integrin binding and focal adhesion assembly. *Molecular Biology of the Cell*. 16: 4329-4340 (2005).

D. Synergistic Activities

1. *Symposium Organizer*

I have organized and chaired 9 sessions at professional meetings over the last 5 years including a “Stimuli Responsive Biomaterials” symposium for the Society for Biomaterials. I will be moderating an expert panel discussion on “Additive Biomanufacturing” at the 2015 Society for Biomaterials meeting.

2. *Supervision of Undergraduate Research*

This summer, a deaf Biomedical Sciences REU had a 3-month first-time “hands-on” experience engaging in cutting-edge research on material-directed regeneration of inner ear sensory cells essential to hearing. The last five years (2009-14), I supervised the research activities of 13 undergraduate students at USF. Two won NSF Graduate Research Fellowships. Over four years (2005-08) at NIST I supervised the research activities of Summer Undergraduate Research Fellowship recipients. Two of these projects produced journal publications, with the undergraduate as the first author on one paper.

3. *Outreach to H. B Plant High School Biomedical Science Class*

For 4 years I have hosted an immersive biomaterials summer program, recruiting primarily from a unique biomedical sciences program at nearby Plant High School. The program is a team effort to develop hands-on lab activities and narrated videos appropriate to the level and resources at public high schools.

4. *Outreach to Home Schooled Students*

I hosted 32 students (ages 5-13) from the Homeschool Around Temple Terrace (HATT) organization for small group presentations of my lab’s research. This was a unique opportunity to inspire homeschooled kids who do not have access to even simple research labs so they develop aspirations of higher education and STEM disciplines.

5. *New Bioengineering Course Development*

I developed two new courses: (1) Cellular & Tissue Engineering introduces students to cell biology concepts as mechanical and chemical engineering systems and stimulates discussions of the considerations central to engineering tissues. This course attracts graduate and advanced undergraduate students from multiple engineering and science disciplines. (2) Biomaterials & Biocompatibility introduces graduate students to biomaterial structure-function relationships and the body’s natural responses to biomaterial implantation.

E. Collaborators & Other Affiliations

1. *Collaborators and Co-Editors*: Matthew L. Becker (U Akron), Utkan Demirci (Stanford), Rasim O. Guldiken (USF), Patricia Kruk (USF), Ryan G. Toomey (USF), Alex A. Volinsky (USF), Jiang Zhe (U Akron)

2. *Graduate and Postdoctoral Advisors*

Ph.D. advisor: Andres J. Garcia (Georgia Institute of Technology)

Postdoctoral advisor: Eric J. Amis (National Institute of Standards and Technology)

3. *Thesis Advisor and Postgraduate-Scholar Sponsor*.

Total number of graduate students advised: 13; postdocs: 0

Former PhD students: Kranthi Kumar Elineni, Ph.D. 2011; Cynthia Nwachukwu, MSBME 2010; Zhixin Wang, MSME 2011; Asad Ahmad, MSME 2011; Karen Mann, MSBME 2012; Ana Rioja MSBME 2012

Current Ph.D. students: Ms. Greeshma Mohan (BME), Ms. Kemi Akintewe (BME), Mr. Joel Cooper (ME), Ms. Asma Sharfeddin (ME), Ms. Sarah McMaster (ME), Ms. Maritza Muniz-Maisonet (CHE), Ms. Nicole Febles (BME)

Andrew M. Hoff
Electrical Engineering Department
ENB 118 College of Engineering
University of South Florida
Tampa, FL 33620
813 974 4958
hoff@usf.edu

(a)-Professional Preparation:

University of California at Irvine	Irvine, CA	Biology	B.S. 1980
University of California at Irvine	Irvine, CA	Physics	B.S. 1982
Pennsylvania State University	University Park, PA	Elect. Engineering	Ph.D. 1988

(b) Appointments:

Professor Electrical Engineering, (USF)	2011 - present
Associate Professor EE, (USF)	2000 – 2011
Director Metrology, USF Center for Microelectronics Research	1998 – 2000
Research Professor – I-4 Corridor Education and Research	1995 – 1998
Assistant Professor EE (USF)	1988 –1995

(c). Products

(i)—Five products closely related to the proposed project:

1. **A.M. Hoff** and R. Gilbert, “Instrumentation to Facilitate Learning in a First Bio-potentials Course,” ASEE Annual Conference, 2013.
2. **A.M. Hoff** and R. Gilbert, “Bioelectrical Instrumentation: Connections within Interdisciplinary Engineering Education,” ASEE Annual Conference, 2012.
3. Connolly, R.J., Rey, J. I., Jaroszeski, M.J., **Hoff, A.M.**, Llewellyn, J.A., and Gilbert, R., “Effectiveness of non-penetrating electroporation applicators to function as impedance spectroscopy electrodes.” IEEE Trans. Dielectr. Electr. Insul. 16(5): 1348-1355, (2009).
4. R. Gilbert, A. Llewellyn, and **A. Hoff**, “Exploring Tissue Response to Field Mediated Plasmid DNA Delivery,” Electrochemical Society Transactions, 35, 7, 2011.
5. **A.M. Hoff**, R. Connolly, T. Chapman, J. A. Llewellyn, R. Gilbert, K. Ugen, and M. J. Jaroszeski, “Charge-based Delivery of Molecules to Skin Using Atmospheric Plasmas,” Electrochemical Society Transactions, 2013.

(ii)—Five other significant products:

1. M. Barger, R. Gilbert, **D. Hoff**, E. Roe, "STEM Works because of Talent, Training, Time and Tools," Technician Students", AC 2012-3364, ASEE Annual Conference, 2012.
2. E. I. Oborina and **A. M. Hoff**, "Noncontact interface trap determination of SiO2-4H-SiC structures," Journal of Applied Physics, vol. 107, p. 013703, 2010.
3. M. Barger, M. Lesiecki, R. Simington, R. Gilbert, M. Carreras, N. Sandburg, and **A. M. Hoff**, "Community College - Industry Partnership To Develop An Automated Training Platform," ASEE Annual Conference, 2007.
4. E. A. Roe, **A. M. Hoff**, M. Barger, and R. Gilbert, "Impact of a NSF ATE funded

High School Science and Technology Outreach Program: Evaluation of H.S.T.I. Materials," ASEE Annual Conference, 2005.

5. **A. M. Hoff**, R. Gilbert, R. Heller, M. J. Jaroszeski, "Electro-manipulation device and method," US 7,769,440 B2, August 3, 2010.

(d) Synergistic Activities

Technology Outreach Activities

High School Technology Initiative (HSTI) 1999-2007. NSF DUE 0202373, A. Hoff, M. Barger, R. Gilbert. Developing curriculum resources for High School and Community College Teachers. As a direct result of this project, HSTI has interacted with 558 teaching professionals from 20 states through its outreach and dissemination activities. HSTI has trained over 450 teachers on the effective use of its content. HSTI content continues to be refined and augmented.

Development and delivery of specialized in-plant professional advancement curricular materials as part of a State of Florida Workforce Development Strategy in the generic areas of high technology and IC processing to Florida industry, A. Hoff and R. Gilbert.

Bioelectricity Course Development

A Bioelectricity course templated after that established by Plonsey and colleagues at Duke, was developed and offered for the past 8 years to graduate students in EE and BME programs and to undergraduates in EE. A laboratory, added 5 years ago permits students to acquire bioelectric signals from their own bodies. EMG, ECG, and EEG basics are covered. I've published these activities for ASEE at the national conference. Enrollment has grown to 30 students.

Corona-Based Bio-Technology

Corona and Plasma Charging with Impedance Spectroscopy for Drug and DNA Delivery to Tissue, M. Jaroszeski, A. Hoff, R. Gilbert.

Service Activities

ABET Coordinator for USF Department of Electrical Engineering Spring 2010 on--, A. Hoff. Officer and Member of Executive committee, ECS Electronics and Photonics Division, 2004-. ECS Electronics and Photonics Division Chair, 2013-2015. Electrochemical Society Elect. and Photonics Div. Immediate Past Chair, 2015-present.

 NAME: Sadow, Stephen E.

 eRA COMMONS USER NAME (credential, e.g., agency login): ssadow

 POSITION TITLE: Professor of Electrical Engineering

 EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Western New England College, Springfield, MA	BSEE	05/1983	Electrical Engineering
Polytechnic University (now NYU), Brooklyn, NY	MSEE	01/1988	Electrical Engineering
University of Maryland, College Park	Ph.D.	12/1993	Electrical Engineering

A. Personal Statement

I have worked in both academia and government since completing my PhD in 1993 and have the necessary expertise, expertise and leadership skills to carry out the proposed research project. After joining academia I pioneered the development of SiC for advanced electronic applications for nearly a decade. This ultimately led me to biomedical applications which is the primary focus of my research today. My research has been multi-disciplinary for most of my research career, where I have leaned heavily on my training in electrophysics to contribute to the fields of optoelectronics, RF and Microwaves, semiconductor materials, surface science and, most recently, biomedical engineering. Through visiting research experiences, I have engaged in cutting-edge research in electronic materials and surface science in Europe and, recently, brain-machine-interfaces in Brazil. At the University of South Florida I initially focused my biomedical research on fully understanding the interaction with SiC, and all of its technologically relevant forms, with the biological world via in-vitro and in-vivo studies. Once definitive proof was in hand that SiC displayed outstanding interaction with the biological systems we studied, my focus shifted to the development of several in-vivo devices based on SiC materials. Most notably during this time I was invited to join a DARPA project, led by Dr. Pancrazio of UT Dallas which resulted in an even greater understanding of the various issues involving the use of man-made materials in the central nervous system. Not only did this research result in several joint publications, including a book chapter in my most recent book on SiC biotechnology, it solidified our team where we have continued to collaborate to develop SiC for implantable neural interfaces. My research interests are in the development of SiC for advanced long-term, implantable biomedical devices with the goal of demonstrating that the extremely robust SiC material system is an ideal candidate for these applications. I was granted a joint appointment in the USF College of Medicine in 2009 based on this work and recently left this position to become a member of the Biomedical Engineering Faculty at USF. I continue to serve on the local Adcom of the IEEE Engineering in Medicine and Biology Society after serving as chair in 2012-2015 and am advising several students, both in Electrical Engineering and Biomedical Engineering, due to my multi-disciplinary research and interests.

- a. S. E. Sadow, Editor ***Silicon Carbide Biotechnology: A Biocompatible Semiconductor for Advanced Biomedical Devices and Applications***, © 2011 Elsevier LTD, UK ISBN 0-12385-906-9.

B. Positions and Honors
Positions and Employment

1988-1996 Senior Electronics Engineer, Army Research Laboratory, Adelphi, MD
 1997-2001 Asst. Professor, Mississippi State University, ECE Department, Starkville, MS
 2001-2005 Assoc. Professor, University of South Florida Electrical Engineering Department, Tampa, FL
 2006 - Professor, University of South Florida Electrical Engineering Department, Tampa, FL

Other Experience and Professional Memberships

Spring, Fall 1994 Visiting Scientist, University of Erlangen-Nürnberg, Germany, 1994.

August 1996	Visiting Scientist, Royal Institute of Technology , Kista, Sweden.
Summer 1997	Sumer Faculty Research Associate, Air Force Res. Labs, Dayton, OH
May-June 2001, 2002	Visiting Professor, Institut d'Electronique Fondamentale Univ. Paris-Sud.
May-June 2004, 2005	Visiting Professor, Max Planck Institute, Stuttgart, Germany.
2007-2008	Visiting Professor (sabbatical), IMM/CNR, Catania, Italy.
Summer 2009	Faculty research associate, Naval Surf. Warfare Cen., Dahlgren, VA
July 2010	Visiting Professor, IMEM/CNR, Parma/Trento, Italy
2012-2015	Visiting Professor, Univ. of Sao Paulo, Sao Carlos, BR (Science w/out Borders)
Oct. 2014-	Visiting Professor, IMEM Consiglio Nazionale delle Ricerche, Parma, IT
May-June 2017	Visiting Professor, University of Grenoble INP, Grenoble, FR

Honors

2011 IEEE Engineering Educator of the Year, State of Florida
National Academy of Inventors (founding chapter USF 2009, national chapter charter member 2010)
USF Faculty Senate, 2005-2008
Senior Member IEEE, Past Chair, EMBS Chapter, Florida West-Coast Section
Eta Kappa Nu - The Electrical Engineering Honor Society.

C. Contribution to Science

1. I began my research career in the field of microwave optoelectronics, which involved utilizing scientific methods from two large disciplines. I discovered that working at the interface between disciplines was a very effective way to make significant innovative contributions, a philosophy that I have carried forward to this day. I discovered during the time that I was working on my doctorate that a novel semiconductor material, Silicon Carbide (SiC), was suitable for very high power electronic applications. Being very interested in working in this area I shifted my focus to SiC, initially through the detailed experimental and theoretical study of point defects in SiC crystals. I realized that the key to the technology was to be able to grow SiC films that I could both study scientifically as well as develop to address technology needs. During the first decade of my SiC activity I pioneered the use of porous SiC for advanced applications, designed and constructed two novel SiC CVD reactors, and began to establish myself as a recognized expert in the field. This last point culminated in my first edited book on SiC processing technology.
 - a. S. E. Saddow and A. Agrawal, Editors ***Advances in Silicon Carbide Processing and Applications***, © 2004 Artech House ISBN 1-58053-740-5.
2. I began my second decade of research activity in SiC with a very fortuitous finding from the first decade. Based on my work on porous SiC the US Navy ONR approached me to write a concept paper for a new project to exploit porous SiC for Navy applications. In 2001 I began on a national project called DURINT (Defense University Research Initiative on Nanotechnology) to exploit porous SiC for electronic materials applications. Fortunately for my future I discovered that porous SiC was an ideal scaffold for growing human bone (osteoblasts) and realized that SiC was potentially advantageous for biomedical devices. I received permission to devote additional ONR research support to delve into this area and began our comprehensive work on SiC biocompatibility. While this was a subject that had been reported on in the literature, there was a great deal of controversy as to the outcome – was SiC biocompatible or not? The problem was that SiC was not understood by many of the researchers, and so they needed to be more sophisticated in their studies. We began with one of my PhD students to probe this parameter space and discovered that it depends on which SiC material (crystal) form you were investigating. SiC comes in over 220 single crystal forms, can be formed as amorphous and polycrystalline materials, and there is definitely a difference on how the material reacts with various biological environments. This work culminated in the publication of my second book which includes a fairly comprehensive discussion of this second decade of research activity, this time focused on SiC as a suitable material for biomedical applications. We consistently observed, whether it was with blood platelets, human and rat neuronal cells, etc., that the cubic form of SiC, aka 3C-SiC, was highly compatible with the biological environment. Our studies of 3C-SiC neural probes, both in-vitro and in-vivo, displayed an impressive degree of compatibility with wild-type mouse and rat brains, and this result culminated in our being selected to evaluate novel materials from around the country for the Defense Advance Projects Research Agency (DARPA). This work, in close collaboration with Dr. J. Pancrazio of GMU (now at UT-Dallas), again demonstrated that 3C-SiC was an outstanding material for implantable neural interfaces (INI) whereby our 3C-SiC outperformed all of the evaluated materials in terms of chemical resilience and biocompatibility.

- a. S. E. Sadow, Editor ***Silicon Carbide Biotechnology: A Biocompatible Semiconductor for Advanced Biomedical Devices and Applications***, © 2011 Elsevier LTD, UK ISBN 0-12385-906-9.
3. Our results in the area of 3C-SiC biological compatibility shifted the focus of my research group from material science to biomedical materials and devices. We start my third SiC research decade with numerous biomedical device activities. In addition to implantable neural interfaces and MEA's for in-vitro neuroscience studies, our pursuits include continuous glucose monitoring using a wireless antenna sensor, myoglobin electrochemistry sensors using self-assembled monolayers and antibodies, and MEMS-based SiC pressure and biosensors. On the neuroscience front we have designed and fabricated advanced 'all-SiC' MEA's as a demonstrator for subsequent INI development, and a novel 3C-SiC based optrode for optogenetics research and applications. The focus now is to demonstrate a fully-operational INI with both stimulation and recording capabilities, thus enabling true bi-directional communication with neural tissue. Ancillary work includes the development of a custom application specific integrated circuit (ASIC, Science without Borders project) and an artificial retina utilizing 3C-SiC Nanowires (IMEM-CNR, Parma Project). We are also developing bone implants for both dental and true prosthetic integration as part of the on-going IMEM-CNR project. All of this is made possible by the replacement of non-bio and non-hemocompatible Silicon with bio- and hemo-compatible 3C-SiC. Indeed we are able to learn from the Si biomedical device community and, where Si cannot meet long-term in-vivo needs, replace the Si device with SiC (semiconductors, conductors and insulators). Thus we have a fully comprehensive material system to replace unreliable coated Si and metallic devices. Much of this work has been published recently as invited conference papers and is the cornerstone of the second edition of my SiC Biotechnology book, © 2016.
- a. P. Lagonegro, F. Rossi, C. Galli, A. Smerieria, R. Alinovi, S. Pinelli, T. Rimoldi, G. Attolini, G. Macaluso C. Macaluso, S.E. Sadow, G. Salvati, "A cytotoxicity study of silicon oxycarbide nanowires as cell scaffold for biomedical applications," *Materials Science and Engineering: C*, Vol. 73, Pages 465-471, 2017.
- b. S. E. Sadow, Editor ***Silicon Carbide Biotechnology: A Biocompatible Semiconductor for Advanced Biomedical Devices and Applications***, second edition © 2016, Elsevier LTD, UK ISBN 978-0-12-802993-0.
- c. Bernardin, E., Frewin, C.L., Dey, A., Everly, R., Ul Hassan, J., Janzén, E., Pancrazio, J. and Sadow, S.E. (2016) 'Development of an all-SiC neuronal interface device', *MRS Advances*, pp. 1–6. doi: 10.1557/adv.2016.360.
- d. SE Sadow, CL Frewin, M Nezafati, A Oliveros, S Afroz, J Register, M. Reyes, and S. Thomas, "3C-SiC on Si: A bio-and hemo-compatible material for advanced nano-bio devices," *Nanotechnology Materials and Devices Conference (NMDC)*, 2014 IEEE 9th, 49-53 (invited).

Complete List of Published Work in Google Scholar Profile:

<https://scholar.google.com/citations?user=csuKjfMAAAAJ&hl=en&oi=pl>

D. Research Support

Ongoing Research Support

Agency: USF Office of Research S.E. Sadow 5/1/17-12/31/17

Robust Neural Implants based on Cubic Silicon Carbide, Tampa, FL

This Proposal Enhancement Grant provides support to complete pre-competitive research in the area of silicon carbide neural interfaces, with a particular emphasis on demonstrating the in-vitro and in-vivo capabilities of this novel technology.

Role: PI

Agency: ISPA Technology S. E. Sadow 9/1/16-12/31/2017

Wearable Sensors, Tampa, FL

This grant supports several undergraduate students who are developing novel applications for the company and one of graduate student who is developing an epidermal sensor system to enable at-home sleep studies.

Role: PI

Completed Research Support

Agency: Schlumberger Foundation S. E. Sadow 8/20/15-8/20/2016

Faculty for the Future Program

This grant supported one of my PhD students who is developing an in-vivo glucose monitoring system based on a SiC RF transducer. Role: PI

Agency: DARPA N66001-12-1-4026 J. Pancrazio (PI)

11/01/11 – 05/31/14

Biocompatibility of Advanced Materials for Brain Interfaces (BAMBI)

Project focuses on developing a world standard to test novel materials for implantable brain machine interface systems. Role: PI at USF.

STEPHANIE L. CAREY

Address: Department of Mechanical Engineering
University of South Florida
4202 East Fowler Avenue, ENB 118
Tampa, Florida 33620-5350

Phone: (813) 974-5765
Fax: (813) 974-3539
E-mail: scarey3@usf.edu

Professional Preparation:

University of Florida	Gainesville, FL	Engineering Science	B.S.	1996
University of Miami	Miami, FL	Biomedical Engineering	M.S.	2000
University of South Florida	Tampa, FL	Biomedical Engineering	Ph.D.	2008

Appointments:

2012-present Assistant Research Professor, University of South Florida, Mech. Eng. Dept., Tampa, FL

2009-present Researcher, James A. Haley VA Hospital, HSR&D/RR&D Center of Innovation on Disability and Rehabilitation Research VISN 8 (CIDRR8), Tampa, FL

2008-present Research Coordinator, Center for Assistive, Rehabilitation & Robotics Technologies (CARRT), University of South Florida, Tampa, FL

2004-2008 Research Assistant, Instructor, University of South Florida, Tampa, FL

2001-2003 Systems Engineer, Customer Trainer, Peak Performance Technologies, Englewood, CO

2002-2003 Adjunct Math Instructor, Front Range Community College, Boulder, Colorado

1996-2000 Research Associate, The Miami Project to Cure Paralysis, University of Miami School of Medicine, Miami, FL

Publications:

1. Carey SL, Stevens, PM, Highsmith MJ, "Differences in Myoelectric and Body-Powered Upper-Limb Prostheses: Systematic Literature Update 2013-2016," *J Prosthet Orthot*, 29:4S (2017), pp.17-20.
2. Lura, DJ, Kahle J, Wenke M, Miro R, Carey SL, Highsmith MJ, "Crossover Study of Amputee Stair Ascent and Descent Biomechanics Using Genium and C-Leg Prostheses with Comparison to Non-Amputee Control Gait and Posture," *Gait and Posture*, 58 (2017), pp. 103-107.
3. Carey SL, Reed KB, Martori A, Ramakrishnan T, Dubey R, Evaluating the Gait of Lower Limb Prosthesis Users. In Wearable Robotics: Challenges and Trends. Biosystems & Biorobotics, 16 (2017), pp. 219-224.
4. Highsmith MJ, Kahle, JT, Miro R, Cress EM, Lura DJ, Quillen WS, Carey SL, Dubey RV, Mengelkoch L, Functional Performance Differences Between the Genium and C-Leg Prosthetic Knees and Intact Knees, *Journal of Rehabilitation Research & Development (JRRD)*, 53:6 (2016), pp. 753-66.
5. Highsmith MJ, Kahle JT, Miro RM, Lura DJ, Carey SL, Wernke MM, Kim SH, Quillen WS, Differences in Military Obstacle Course Performance Between Three Energy-Storing and Shock Adapting Prosthetic Feet in High-Functioning Transtibial Amputees: Double-Blind, Randomized Control Trial, *Mil Med*, 181:S4 (2016), pp. 45-54.
6. Carey SL, Lura DJ, Highsmith MJ, "Differences in Myoelectric and Body-Powered Upper Limb Prostheses: A Systematic Literature Review," *Journal of Rehabilitation Research & Development*, 52:3 (2015), pp. 247-62
7. Lura DJ, Wernke MM, Carey SL, Kahle JT, Miro RM, Highsmith MJ, "Differences in Knee Flexion between the Genium and C-Leg Microprocessor Knees While Walking on Level Ground and Ramps," *Clinical Biomechanics*, 30:2 (2015), pp175-81.

8. Highsmith MJ, Kahle JT, Carey SL, Lura DJ, Dubey RV, Csavina KR, Quillen WS. Kinetic Asymmetry in Transfemoral Amputees while Performing Sit to Stand and Stand to Sit Movements. *Gait & Posture*, 34:1 (2011) pp. 86-91.
9. Morris ML, DeLaurentis KJ, Carey SL, Sundarrao D, Dubey RV, Highsmith MJ, Menglekoch LJ, McQueen ME. Dance and engineering link to produce a novel mobility device, *Technology and Innovation*, 13 (2011) pp. 213-224.
10. Carey SL, Highsmith MJ, Maitland ME, Dubey R. Compensatory movements of transradial prosthesis users during common tasks. *Clinical Biomechanics*, 23 (2008), pp. 1128-1135.

My Bibliography:

<https://www.ncbi.nlm.nih.gov/sites/myncbi/stephanie.carey.1/bibliography/53684302/public/?sort=date&direction=descending>

Patents: Prosthesis or Orthosis Slip Detection Sensor and Method of Use; Patent number: 9,848,822
This device is an optical parallax sensor that measures motion between prosthetic socket or orthotic device and the limb surface.

Inventors: M Wernke, S Phillips, D Lura, S Carey, R Dubey

Synergistic Activities:

- Advisor Research Experience for Undergraduates
- Advisor Honors College
- Girl Scouts Mind for Design Engineering Camp, USF coordinator, 2012-present
- Developed new course Introduction to Bioastronautics (BME 4440), Spring 2012 and Graduate Course Spring 2015
- Developed course Rehabilitation Engineering, Fall 2016, 2017
- Writing Team Member for Central Florida Aerospace Academy, NASA Curriculum Project, 2010
- American Academy of Orthotists and Prosthetists (AAOP), 2009-present
Standards & Protocols Committee 2010-2011
Secondary Knowledge Committee 2011-present

Collaborators & Other Affiliations:

Collaborators: (12) Alqasemi R (USF, ME); Bauer G (Westcoast Brace & Limb); Dubey R (USF, ME); Highsmith MF (USF, PT); Kahle J (USF, PT); Lusk C (USF, ME); Lura DL (USF); Maitland M (Uof Washington); Lee SH (USF, Music); Morris ML (USF, Dance); Phillips S (Tampa VA); Peterson M (Tampa VA)

Graduate Advisors: (4) Dubey, R (USF), Highsmith, MJ (USF), Lee W (USF), Maitland, M (University of Washington)

Advisees: (15) Major

Doctoral Students

- Martori, A., Menychtas, D. (current); Knight, A, Wernke MM, Ph.D.; Lura DJ, Ph.D.;

Masters Thesis Students

- Mott, B, Gatto A. (current) Tudor, S, M.S.; Masters, N; Martori, A; Simoes, M.; John Capille; Lura DJ; Freilich R; Curham, K;



MEMORANDUM

Date: May 7, 2018

To: Dr. Ralph Wilcox, Provost

From: Dr. Robert H. Bishop, Dean of Engineering *Robert H. Bishop*

RE: BS in Biomedical Engineering

This memo presents information about our Biomedical Engineering (BME) Major application regarding 126 Credit Hours and Limited Access.

We request 126 credit hours for completing our program, based upon these factors:

1. The best programs nationally in engineering are ABET accredited. *Our program must be ABET accredited.* In order to obtain this highest level of engineering accreditation, a program has to cover a number of areas delineated by the accreditation board and ABET reviewers. We need the 126 credit hours to cover these objectives and outcomes specified by ABET.
2. Our 126-hour program proposal includes two upper level professional specialization pathways—in a very unique and forward-thinking fashion. These professional specialization pathways, such as regenerative medicine, biomedical imaging, tissue engineering, neuroengineering, cardiac engineering, and pre-med allow our students to be prepared for high-paying biomedical engineering jobs, for medical school, and for graduate school. In each pathway, the student selects two upper level engineering and STEM courses from a short, targeted list of courses to optimally prepare them for their professional goals.
3. Nationally, other BME programs range from 126 to 136 credits, so 126 is at the bottom of the ABET range. However, we fully embrace the need for biomedical engineers to graduate in four years; and we achieve this successfully by including summer courses in our curriculum sequence.

We provide the following statement of commitment:

On behalf of the College of Engineering and the Department of Medical Engineering, we state our commitment to have all of our BME students graduate within 8 semesters/4 years.

We request Limited Access for several reasons:

1. We have limited space, specialized wet and dry lab equipment and other instructional facilities, including required laboratories for ABET accreditation.
2. Our BME program is of such nature that in order to demonstrate success in the program, and for future employment as a competitive biomedical engineer in the State of Florida, nationally and globally, our student applicants must attain a high level of competency in terms of GPA and SAT/ACT scores to enter and succeed in our rigorous curriculum over the four-year sequence.

OFFICE OF THE DEAN • COLLEGE OF ENGINEERING
University of South Florida • 4202 East Fowler Avenue, ENB118 • Tampa, FL 33620-5350
(813) 974-3780 • FAX (813) 974-0460

Agenda Item: FL 109

USF Board of Trustees
(June 12, 2018)

Issue: B.S. Biomedical Engineering Limited Access Request – CIP 14.0501

Proposed action: Approval

Executive Summary: The proposed new degree program is a Bachelor of Science in Biomedical Engineering.

Overall Purpose: The purpose of the proposed new Bachelor of Science in Biomedical Engineering (BS-BME) is to meet the rising demand for this newly emerging and rapidly growing field that is at the crossroads of engineering and bio-medicine. The proposed USF degree program will be distinctive as the faculty for the program will hold appointments in both USF's College of Engineering and its Morsani College of Medicine, allowing for continued, direct contact amongst clinicians, faculty, and BSBME students. Having the BS-BME option at USF will not only present a singular opportunity for students to enter into this fast growing, high-demand profession, it will also assist in meeting the growing workforce demand for graduates with unique skills at the intersection of engineering, biology and medicine. This cross-fertilization is necessary to meet many current and future demands related to decreasing the high costs of health care, while at the same time, maintaining and improving the quality of medical care delivered. This multidisciplinary, convergent training is unique among the engineering and medical fields, because it comprises a singular educational opportunity, preparing BME graduates for employment in various health and bioengineering professions.

We are requesting that this program be designated limited access due to:

- a) Very large anticipated demand, and
- b) Limited resources and space, equipment and other instructional facilities, including required laboratories for accreditation; and
- c) The development and maintenance of a high-quality, nationally competitive academic and research-oriented program.

Financial Impact: The positive financial impact of this new BME-BS academic degree program will be increased recruitment of highly qualified students, who positively impact upon many USF and State of FL metrics, such as decreased time to graduation, improved job placement and salaries upon graduation, research contributions, e.g., contributing to high-quality research publications (citations index) and new federal multi-year grants; as well as other FL Student Success and Research metrics.

Current ENG funds that support the salaries and benefits of the three initial BME faculty (Drs. Jiang, Passaglia, Frisina), come from shifting these monies from the Department of Chemical & Biomedical Engineering (Frisina, Passaglia) and from Emerging Pre-Eminence monies (Jiang). Additional faculty will be added in each year (2-3 new faculty/year), with additional ENG funding.

Strategic Goal(s) Item Supports:

- USF Tampa Strategic Plan Goal 1: Student Success

BOT Committee Review Date: May 22, 2018 ACE

Supporting Documentation Online (*please circle*):

Yes

No

USF System or Institution specific: USF Tampa

Prepared by: Robert Frisina, Ph.D., Professor, Interim Chair- Medical Engineering Dept., and Biomedical Engineering Director

APPENDIX C
Board of Governors, State University System of Florida
 Request Form: Limited Access Status for an Academic Program
 In Accordance with BOG Regulations
 6.001 – General Admissions and 8.013 - Limited Access

University:	University of South Florida Tampa	Degree(s) offered:	B.S.
Program:	Biomedical Engineering	Six digit CIP code:	14.0501

1. Will the entire program be limited access or only a specific track?

The entire program will be limited access, including the required BME Specialization and STEM Specialization tracks (student chooses one track).

2. If only one track is limited access, please specify the name of the track.

N/A

3. Please specify:

The total number of new students anticipated to enroll in the program each academic year: 100

The total number of students anticipated to enroll in the program each academic year: 400

4. When do you propose to initiate limited access? (please specify the effective term and year) Fall 2018

5. What is the justification for limiting access?

USF is requesting limited access status for the undergraduate Biomedical Engineering program due to the following reasons:

- 1) limited space, equipment and other instructional facilities, including required laboratories for accreditation; and
- 2) the program is of such nature that in order to demonstrate potential for success in the program, applicants must attain a grade point average of Minimum 3.5 GPA for the BME Major prerequisite courses, listed below in answer to #6.

6. By what means will access be limited? Please provide a description of the program’s admissions requirements and procedures. Additionally, please indicate how these requirements and procedures ensure equal access for Florida College System Associate of Arts degree graduates in competing for available space in the program.

Students who enter the University of South Florida as First Time in College (FTIC) identify pre-BME as their major of choice and begin enrolling in the required critical tracking courses to prepare for upper-division coursework. The USF Office of Admissions provides all freshmen admission decisions. (Individual departments have no involvement or influence over freshmen admission decisions). During the fall

semester of the sophomore year, pre-BME majors apply for admission to the upper-division BME major, which begins in the spring semester of the sophomore year. The department admits transfer students during the fall, spring, and summer terms.

Sophomores

Current USF students must meet the following minimum requirements to be considered for admission to the upper-division program.

- Minimum 3.5 GPA for the prerequisite courses, as listed in the table below (best attempt);*
- No more than two attempts allowed for the prerequisite courses listed in the table below (withdrawals included);
- Minimum grade of C in each prerequisite course listed in the table below;
- Completion of the first three semesters of the BME plan of study by the end of the third semester after matriculation to the University;
- Completed BME departmental online application.

*Only the best attempt in each prerequisite course as listed below, is considered for admission into the BME program.

Transfers

Transfer students must meet the following minimum requirements to be considered for admission into the BME program.

- Minimum 2.0 cumulative (overall) GPA;
- Minimum 3.5 GPA in the prerequisite courses listed below;
- Minimum grade of C in each prerequisite course listed in the table below;
- No more than two attempts allowed for the prerequisite courses listed in the table below (withdrawals included);
- Completed BME departmental online application.

Applicants who do not meet the minimum admission requirements as stated above will not be eligible for admission into the BME program.

Transfer applications are referred to the department only after the USF Office of Admissions (including official transcripts) considers them complete. Applications are reviewed periodically and not on a rolling basis. The date of review may vary depending on the number of applications received.

Transfer applicants coming from out-of-state or private Florida institutions will be considered on a space available basis only.

USF Course Prefix	USF Course Name
MAC 2311	Calculus I
MAC 2312	Calculus II
MAC 2313	Calculus III
MAP 2302	Differential Equations
CHM 2045	General Chemistry I
CHM 2045L	General Chemistry I Laboratory
CHM 2046	General Chemistry II
CHM 2046L	General Chemistry II

	Laboratory
PHY 2048	General Physics I - Calculus Based
PHY 2048L	General Physics I Laboratory
PHY 2049	General Physics II - Calculus Based
PHY 2049L	General Physics II Laboratory
CHM 2210	Organic Chemistry I
CHM 2210L	Organic Chemistry I Lab

7. Present the current race and gender profiles of the students in the program. Discuss the impact of the proposed action on the race and gender profiles and cite sources used to inform the discussion. What strategies, should they be necessary, will be used to promote diversity in the program?

The program is new, so there is no current race and gender profile.

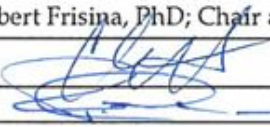

Biomedical Engineering is one of the top two most popular engineering majors for women, so we anticipate attracting female applicants in proportions at or exceeding the other engineering majors (<https://www.asee.org/papers-and-publications/publications/collegeprofiles/15EngineeringbytheNumbersPart1.pdf> Page 12). Also, USF is notably ranked #8 in the US, for all universities awarding doctorate degrees in engineering, for percentage of women graduates (35.1%); which bodes well for attracting women for our new undergraduate BME program (<https://www.asee.org/papers-and-publications/publications/college-profiles/15EngineeringbytheNumbersPart1.pdf> Page 23). Underrepresented ethnic groups are highly underrepresented in STEM fields such as engineering (<https://www.asee.org/papersandpublications/publications/college-profiles/15EngineeringbytheNumbersPart1.pdf> Page 13); however, the USF College of Engineering has relatively high numbers compared to many other colleges of engineering nationally. USF is one of the national leaders in awarding graduate degrees in Engineering to Black students, as cited in *Diverse Issues in Higher Education*, Top 100 Producers of Graduate Degrees, 2017 – African American Engineering Research Doctorates (USF ranked #12 in the US) (<http://diverseeducation.com/top100/pages/GraduateDegreeProducers2017.php?dtsearch=&dtdegree=Doctorate\Res\Schol,%20Other&dtrace=African%20American&dtmajor=Engineering&dtstate=&dtpage=1>) and Hispanic students, as cited in: *Diverse Issues In Higher Education*, Top 100 Producers of Graduate Degrees, 2017 – Hispanic Engineering Research Doctorates (USF ranked #2 in the US) (<http://diverseeducation.com/top100/pages/GraduateDegreeProducers2017.php?dtsearch=&dtdegree=&dtrace=Hispanic&dtmajor=Engineering&dtstate=&dtpage=0>). News release citation: <http://news.usf.edu/article/templates/?a=3576>. Consequently, we expect that our new degree program in Biomedical Engineering will have a similar favorable mix of underrepresented minorities, building upon the successes of the USF College of Engineering in related majors such as Chemical, Electrical, Mechanical, Industrial and Civil Engineering. In addition, the intellectual and professional environment in the USF College of Engineering is very favorable for underrepresented minorities in support of our new undergraduate BME Major; specifically, the USF College of Engineering is ranked in the top 20 in the US for all

colleges of engineering for the number of Hispanic Professors with Tenure/Tenure Track (<https://www.asee.org/papers-andpublications/publications/collegeprofiles/15EngineeringbytheNumbersPart1.pdf> Page 33).

In addition, The College of Engineering continues to be committed to engaging underrepresented and minority high school students into engineering programs. The College engages routinely with teachers, students and parents in Title I schools to attract students from diverse racial and ethnic and socio-economic backgrounds. This BME major will leverage the College’s recruitment and outreach programs such as "Bulls I Mentoring", ESTEAM events, Selmon S3 program and course offerings for high school students with a goal to secure a robust pipeline of diverse student population. Another specific step USF will take to ensure a diverse student body will be working closely with the coordinator of minority student recruitment in the USF College of Engineering. USF will actively recruit applicants from top high schools nationally with excellent underrepresented minority students, including attendance at state and national conferences, and visitations and summer courses at USF, and other successful recruiting techniques for these student populations.

8. Are the graduates of the program in high demand? If so, and if the program is to be limited due to lack of adequate resources, provide a justification for limiting access to the program rather than reallocating resources from programs with low market demand.

Yes, graduates are in high demand (see full data in the accompanying full BME Major Proposal). There are no programs in the USF College of Engineering with low market demand, and these existing programs are currently under-staffed relative to their student enrollments; so no reallocation is possible.

Request Initiated by:	Robert Frisina, PhD; Chair and BME Director
EEO Officer’s Signature:	
Provost’s Signature:	 3/5/18
University Board of Trustees Approval Date (please include a copy of the UBOT agenda with this form)	

Agenda Item: FL 110

USF Board of Trustees
(June 12, 2018)

Issue: B.S. Biomedical Engineering Exception to 120 Hours Request – CIP 14.0501

Proposed action: Approval

Executive Summary: The proposed new degree program is a Bachelor of Science in Biomedical Engineering. Total proposed credit hours are 126.

Overall Purpose: The purpose of the proposed new Bachelor of Science in Biomedical Engineering (BS-BME) is to meet the rising demand for this newly emerging and rapidly growing field that is at the crossroads of engineering and bio-medicine. The proposed USF degree program will be distinctive as the faculty for the program will hold appointments in both USF's College of Engineering and its Morsani College of Medicine, allowing for continued, direct contact amongst clinicians, faculty, and BSBME students. Having the BS-BME option at USF will not only present a singular opportunity for students to enter into this fast growing, high-demand profession, it will also assist in meeting the growing workforce demand for graduates with unique skills at the intersection of engineering, biology and medicine. This cross-fertilization is necessary to meet many current and future demands related to decreasing the high costs of health care, while at the same time, maintaining and improving the quality of medical care delivered. This multidisciplinary, convergent training is unique among the engineering and medical fields, because it comprises a singular educational opportunity, preparing BME graduates for employment in various health and bioengineering professions.

This proposed degree program requires the completion of 126 credits. This is required:

- a) To accommodate the curriculum to provide the knowledge and skills expected of biomedical engineering students in the workplace and professional schools, such as medical and graduate schools, and
- b) To satisfy the national accreditation requirements from ABET- Accreditation Board for Engineering and Technology.

We therefore request an exception to the 120 credit hour to degree regulation for this major.

Financial Impact: This 126 credit hour BME BS degree will be one of the BME majors nationally with the lowest required credit hours; i.e., BME programs nationally have from 126-136 credit hours. So, no negative financial impact of this proposal on attracting and recruiting students.

The positive financial impact will be increased recruitment of highly qualified students, who positively impact upon many USF and State of FL metrics, such as decreased time to graduation, improved job placement and salaries upon graduation, research contributions, e.g., contributing to high-quality research publications (citations index) and new federal grants; as well as other FL Student Success and Research metrics.

Current ENG funds that support the salaries and benefits of the three initial BME faculty (Drs. Jiang, Passaglia, Frisina), come from shifting these monies from the Department of Chemical & Biomedical Engineering (Frisina, Passaglia) and from Emerging Pre-Eminence monies (Jiang). Additional faculty will be added in each year (2-3 new faculty/year), with additional ENG funding.

Strategic Goal(s) Item Supports:

- USF Tampa Strategic Plan Goal 1: Student Success

BOT Committee Review Date: May 22, 2018 ACE

Supporting Documentation Online (please circle):

Yes

No

USF System or Institution specific: USF Tampa

Prepared by: Robert Frisina, Ph.D., Professor, Interim Chair- Medical Engineering Dept., and Biomedical Engineering Director

Board of Governors, State University System of Florida
**EXCEPTION TO THE 120 CREDIT HOURS REQUIREMENT FOR
 BACCALAUREATE PROGRAMS
 REQUEST FORM**

In Accordance with BOG Regulation 8.014

UNIVERSITY: University of South Florida Tampa

PROGRAM NAME: Biomedical Engineering

CIP CODE: 14.0501
 (Classification of Instructional Programs)

EFFECTIVE TERM: Fall 2018

Please use this form to request an exception to the 120 credit hours requirement for a new or existing program.

To request changes to the number of credit hours for a program that is already approved for an exception to the 120 credit hours please send a memorandum signed by the provost to the BOG Academic and Student Affairs staff.

- 1. List all the majors associated with this program and the desired program length for each one of them. Please see the definition of program major in Regulation 8.011, New Academic Program Authorization.**

Major Name (add rows as needed)	Current number of credit hours	Requested number of credit hours
Biomedical Engineering	New Program	126

- 2. Provide a narrative on why a new exception to 120 credit hours is needed for the major(s) indicated above?**

The proposed degree program requires the completion of 126 credits. This is required:

- To accommodate the curriculum to provide the knowledge and skills expected of biomedical engineering students in the workplace and professional schools, such as medical and graduate schools, and
- To satisfy the national accreditation requirements from ABET- Accreditation Board for Engineering and Technology.

We therefore request an exception to the 120 credit hour to degree regulation for this major. In addition, we are requesting that this program be designated limited access due to:

- a) Very large anticipated demand, and
- b) Limited resources and space, equipment and other instructional facilities, including required laboratories for accreditation; and
- c) The development and maintenance of a quality program.

Signature of Requestor/Initiator

Date

Signature of President or Vice President for
Academic Affairs

Date

Date Approved by the
Board of Trustees

Signature of the Chair of the
Board of Trustees

Date

References:

- BOG Regulation 8.014, Bachelors' Degree Exceptions to 120 credit Hours Requirement
- Policy Document: Administrative Process for Requesting Changes to Program Length for Baccalaureate Programs Approved to Exceed 120 Credit Hours

Agenda Item: FL 111

USF Board of Trustees
June 12, 2018

Issue: B.S. Risk Management/Insurance Limited Access Request – CIP 52.1701

Proposed action: Approval

Executive Summary: The Risk Management/Insurance (RMI) major is an undergraduate degree program focusing on coursework relevant to careers in both Property & Casualty and Life & Health insurance. USF Sarasota-Manatee developed the RMI program in consultation with insurance industry representatives and will provide students with the skills needed to be successful in a career in any of the many facets of insurance.

All undergraduate degree programs in the College of Business are currently approved as limited-access based solely on minimum student grade-point average (GPA) and completed prerequisite coursework. Students who have earned a GPA of 2.75 or higher are admissible to the College and eligible to pursue the Risk Management/Insurance degree program.

Financial Impact: One full-time faculty member will be hired for the RMI program through revenues from anticipated enrollment growth. The program is designed to incorporate courses from other business disciplines, thus optimizing the resources already allocated to those areas to support RMI.

Strategic Goal(s) Item Supports:

- USF System Goal 2: Activate key constituencies to provide value to our institutions, region and the State of Florida

BOT Committee Review Date: ACE – February 13, 2018

Supporting Documentation Online (please circle): Yes

No

USF System or Institution specific: USF Sarasota-Manatee

Prepared by: James M. Curran, Ph.D., Dean University of South Florida Sarasota-Manatee College of Business and Professor

Board of Governors, State University System of Florida
 Request Form: Limited Access Status for an Academic Program
 In Accordance with BOG Regulations
 6.001 – General Admissions and 8.013 - Limited Access

University:	University South Florida Sarasota-Manatee	Degree(s) offered:	Bachelor of Science
Program:	Risk Management/Insurance	Six digit CIP code:	52.1701

1. Will the entire program be limited access or only a specific track?
 The Risk Management/Insurance program (RMI) is a proposed new undergraduate degree program within the USF Sarasota-Manatee College of Business and, as is the case with the other undergraduate degree programs in the College, the entire program would be limited access.

2. If only one track is limited access, please specify the name of the track?
 N/A

3. Please specify:
 The total number of new students anticipated to enroll in the program each academic year:
 Year 1: 30; Year 2: 5; Year 3: 10; Year 4: 10; Year 5: 10

 The total number of students anticipated to enroll in the program each academic year:
 Year 1: 30; Year 2: 35; Year 3: 45; Year 4: 55; Year 5: 65

4. When do you propose to initiate limited access? (please specify the effective term and year)
 Fall 2018, when the new degree program is expected to be approved to offer.

5. What is the justification for limiting access?
 RMI is being proposed as a new undergraduate degree program within the College of Business. USF Sarasota-Manatee’s College of Business is accredited by AACSB. The College of Business faculty have determined that increased admission standards are necessary for maintaining the standards established in meeting AACSB accreditation requirements. The current degree programs under the scope of AACSB accreditation (Accounting, Finance, Management, and Marketing) have previously been approved for limited access. During the next AACSB Continuous Improvement Review (CIR), RMI will be included in the scope of AACSB accreditation. Therefore, limiting access to the RMI program is justified.

6. By what means will access be limited? Please provide a description of the program’s admissions requirements and procedures. Additionally, please indicate how these requirements and procedures ensure equal access for Florida College System Associate of Arts degree graduates in competing for available space in the program.

The College of Business is an upper-level, limited access college, which means that it has

admissions requirements in addition to those of the University in general, including:

- a. Minimum of 60 semester hours of college credit earned.
- b. Minimum of 2.75 overall grade-point average (GPA) on all college-level coursework and a minimum of 2.00 on all credits attempted at USF, including any prior to academic renewal.
- c. In computing entry GPA, all business and economics courses taken for S or U grades will be converted to C or F, respectively.
- d. Successful completion of the following State Mandated Common Prerequisites (or equivalents):
 - ACG 2021 Principles of Financial Accounting
 - ACG 2071 Principles of Managerial Accounting
 - CGS 2100 Computers in Business
 - ECO 2013 Macroeconomics
 - ECO 2023 Microeconomics
 - MAC 2233 Business Calculus
 - STA 2023 Introductory Statistics I

Florida College System Associate of Arts degree graduates typically complete the general education requirements and the State Mandated Common Prerequisites at their state college. Therefore, they should experience no negative impact to their admission to the RMI program in meeting the admissions standards.

7. Present the current race and gender profiles of the students in the program. Discuss the impact of the proposed action on the race and gender profiles and cite sources used to inform the discussion. What strategies, should they be necessary, will be used to promote diversity in the program?

As this is a newly proposed degree program, no students are currently enrolled. Provided below, however, is the race and gender profiles of the existing degree programs in the College of Business with limited access.

Ethnicity	% of Total	Total Student	Female	Male
American Indian	0.2%	1	1	0
Asian	2.4%	12	10	2
Black	2.6%	13	5	8
Hispanic	15.7%	77	36	41
Non-Resident Alien	1.8%	9	5	4
Not-Reported	2.2%	11	6	5
Two or More Race	2.9%	14	5	9
White	72.1%	354	182	172
Grand Total	100.0%	491	250	241

USF Sarasota-Manatee is committed to attracting and retaining a diverse student body and the steps taken to recruit for all programs will be used for the RMI program as well. Some of those steps are as follows:

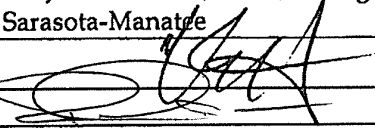

- Admissions uses a Customer Relationship Management (CRM) System to manage prospective student information and to execute a communication plan consisting of mail, email, and phone call campaigns. Communications are in place to reach and attract

diverse student body. Some examples include sharing profiles and testimonials of current students and alumni who are from underrepresented populations.

- USF Sarasota-Manatee has an Admissions Counselor for Diversity Recruitment and with responsibility for developing relationships with community partners, like Upward Bound programs, College Reach Out programs, Take Stock in Children, Boys and Girls Club, Y Achievers, and other community groups. She will also assist with communication to these partners about what USF Sarasota-Manatee has to offer and assisting them with setting up special group visits to campus.
- USF Sarasota-Manatee has a Bilingual Spanish Speaking Admissions Counselor to work with Hispanic students and their families on the admissions process.
- Representatives attend college fairs in the local market as well as visiting local high schools to give presentations and provide information on USF Sarasota-Manatee and its academic programs.
- Admissions representatives meet with prospective students at their high schools for instant decision days in the fall and offer on the spot acceptance to qualified students. Students who do not meet admissions requirements at that time are given guidance on what they can do to strengthen their application.
- Admissions purchases contact information of high school students who take the ACT and/or SAT to then communicate with them about USF Sarasota-Manatee and its academic programs. They are then able to target students by demographics and geographic locations.
- Admissions hosts open house programs, information sessions, and other events on campus for all potential students.
- USF Sarasota-Manatee representatives visit local state college and community colleges to attend events, set up information tables, or to speak to classrooms of students.
- The FUSE program at the State College of Florida is in place to co-advise SCF students on their courses based on their intended major at USF Sarasota-Manatee and to provide them with opportunities to participate in USF Sarasota-Manatee student life activities and events.

8. Are the graduates of the program in high demand? If so, and if the program is to be limited due to lack of adequate resources, provide a justification for limiting access to the program rather than reallocating resources from programs with low market demand.

The graduates of the program are in high demand. However, the program is not being limited due to lack of adequate resources.

Request Initiated by:	Dr. James Curran, Dean, College of Business, USF Sarasota-Manatee
EEO Officer's Signature:	
Provost's Signature:	
University Board of Trustees Approval Date (please include a copy of the UBOT agenda with this form)	

Board of Governors, State University System of Florida

Request to Offer a New Degree Program

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

University of South Florida
 Sarasota-Manatee

 University Submitting Proposal
 College of Business

 Name of College(s) or School(s)
 Insurance

 Academic Specialty or Field
 52.1701

 Proposed CIP Code

Fall Semester 2018

 Proposed Implementation Term
 Not Applicable

 Name of Department(s)/ Division(s)
 B.S. Risk Management/Insurance

 Complete Name of Degree


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.

March 6, 2018

 Date Approved by the University Board of Trustees



 President 3/6/18
Date



 Signature of Chair, Board of Trustees

3/6/18

 Date  3/6/18
Date
 Vice President for Academic Affairs

Provide headcount (HC) and full-time equivalent (FTE) student estimates of majors for Years 1 through 5. HC and FTE estimates should be identical to those in Table 1 in Appendix A. Indicate the program costs for the first and the fifth years of implementation as shown in the appropriate columns in Table 2 in Appendix A. Calculate an Educational and General (E&G) cost per FTE for Years 1 and 5 (Total E&G divided by FTE).

Implementation Timeframe	Projected Enrollment (From Table 1)	
	HC	FTE
Year 1	30	23
Year 2	35	25.5
Year 3	45	35.5
Year 4	55	39.5
Year 5	65	46.25

Projected Program Costs (From Table 2)				
E&G Cost per FTE	E&G Funds	Contract & Grants Funds	Auxiliary Funds	Total Cost
4,419	101,632			101,632
3,553	164,313			164,313

Note: This outline and the questions pertaining to each section must be reproduced within the body of the proposal to ensure that all sections have been satisfactorily addressed. Tables 1 through 4 are to be included as Appendix A and not reproduced within the body of the proposals because this often causes errors in the automatic calculations.

INTRODUCTION

I. Program Description and Relationship to System-Level Goals

- A. Briefly describe within a few paragraphs the degree program under consideration, including (a) level; (b) emphases, including majors, concentrations, tracks, or specializations; (c) total number of credit hours; and (d) overall purpose, including examples of employment or education opportunities that may be available to program graduates.**

The Risk Management/Insurance (RMI) major is an undergraduate program to be housed in the College of Business, focusing on course work relevant to firms in both Property & Casualty and Life & Health insurance. The State University System of Florida (SUS) has determined through its gap analysis that the insurance industry is an area with critical workforce needs. Insurance industry executives in our service region have been quite emphatic in their requests for USF Sarasota-Manatee to help them develop a skilled workforce to fill their operational needs.

The RMI program began as a minor in Finance at USF Sarasota-Manatee in 2015 and is being offered for the first time as a major in Finance under the CIP code 52.0801 in 2017-2018.

The RMI major is a 21-credit major within the 120-credit bachelor's degree that will carry the additional core requirements of all other business majors. The major was developed after a thorough review of RMI programs around the country and in consultation with more than 20 industry executives, from companies such as FCCI, The Zenith, CBIZ, BB&T, State Farm, Boyd Insurance & Investment Services, Atlas Insurance, and others. Courses will provide students, who perform well, opportunities to receive credit toward professional designations, such as the [Chartered Property Casualty Underwriter](#) (CPCU), and to be eligible for professional licenses from Florida.

Employment opportunities available to graduates in the insurance industry include claims, underwriting, sales, risk analyst, accounting, systems, customer service, and others.

- B. Please provide the date when the pre-proposal was presented to CAVP (Council of Academic Vice Presidents) Academic Program Coordination review group. Identify any concerns that the CAVP review group raised with the pre-proposed program and provide a brief narrative explaining how each of these concerns has been or is being addressed.**

The CAVP reviewed the pre-proposal on April 14, 2017, with no concerns raised.

- C. If this is a doctoral level program please include the external consultant's report at the end of the proposal as Appendix D. Please provide a few highlights from the report and describe ways in which the report affected the approval process at the university.**

This is an undergraduate program, not a doctoral program.

- D. Describe how the proposed program is consistent with the current State University System (SUS) Strategic Planning Goals. Identify which specific goals the program will directly support and which goals the program will indirectly support (see link to the SUS Strategic Plan on [the resource page for new program proposal](#)).**

In its strategic plan for 2012 through 2015, the SUS set priorities for economic and workforce needs. That plan states:

The Board of Governors believes that its 2025 goals for the System should align with state economic and workforce needs through its targeted degree programs. Through the identification and monitoring of performance in specific areas of strategic emphasis like STEM and other critical need areas, as well as through the setting of strategic priorities in the New Florida

initiative, the Board has demonstrated its intent to increase degree and research production and to organize the System to be THE STATE UNIVERSITY SYSTEM of FLORIDA | Board of Governors | STRATEGIC PLAN 2012-2025 13 more productive in these specific strategic areas. (http://www.flbog.edu/pressroom/_doc/2011-11-28_Strategic_Plan_2012-2025_FINAL.PDF)

This Risk Management/Insurance program will immediately address at least three of the directional goals set by the SUS in its strategic plan, with those being:

- **Increase Community and Business Workforce**
- **Increase Levels of Community and Business Engagement**
- **Strengthen Quality & Recognition of Commitment to Community and Business Engagement**

Increase Community and Business Workforce: This program has been developed in collaboration with representatives from the insurance industry in Florida to specifically meet the substantial employment needs of the industry. There is a significant, ongoing need for a knowledgeable workforce in the insurance industry locally, within Florida, and around the country and offering this program will allow USF Sarasota-Manatee to provide the employees those firms seek.

Increase Levels of Community and Business Engagement: USF Sarasota-Manatee has already been engaged with many representatives of the insurance industry in developing this program. The interest from the insurance industry in this program is very strong. They are interested in working with USF Sarasota-Manatee to interest students in insurance as a major, they are willing to work with students as mentors, they are willing to help with courses as guest speakers or instructors, and they are willing to support USF Sarasota-Manatee financially as the program develops.

Strengthen Quality & Recognition of Commitment to Community and Business Engagement: The RMI program already strengthened USF Sarasota-Manatee's recognition in the insurance field through its collaboration with insurance firms to build a major that will best suit the needs of employers and students. This program will allow students, who wish to remain in the Sarasota-Manatee region, an opportunity to find employment in the region with a livable income. Students who wish to move elsewhere will also have ample opportunities in whichever locations they choose. This program will clearly demonstrate to the local community and the business community that USF Sarasota-Manatee is aware of their needs and expends the extra effort to address those needs.

The RMI program will likely also address a fourth SUS goal, that being **Increase Collaboration and External Support for Research Activity**, as it develops over time. As faculty in the RMI area engage in research, USF Sarasota-Manatee expects that they will seek out industry partnerships and pursue research that will be beneficial to the RMI industry, as well as the academic discipline.

- E. **If the program is to be included in a category within the Programs of Strategic Emphasis as described in the SUS Strategic Plan, please indicate the category and the justification for inclusion.**

The Programs of Strategic Emphasis Categories:

1. Critical Workforce:
 - Education
 - Health
 - Gap Analysis
2. Economic Development:
 - Global Competitiveness
3. Science, Technology, Engineering, and Math (STEM)

Please see the Programs of Strategic Emphasis (PSE) methodology for additional explanations on program inclusion criteria at [the resource page for new program proposal](#).

Insurance, under the CIP code of 52.1701, has been designated as a Program of Strategic Emphasis through the State University System's Critical Workforce Gap Analysis

(http://www.flbog.edu/pressroom/strategic_emphasis/). The RMI program will prepare students for careers in the insurance industry where there is a substantial and growing need for qualified employees in Florida. The current gap will be increasing in the coming years as many people currently working in insurance are expected to retire unless it is addressed through programs like USF Sarasota-Manatee's RMI.

F. Identify any established or planned educational sites at which the program is expected to be offered and indicate whether it will be offered only at sites other than the main campus.

All courses for the Risk Management/Insurance degree will be offered either at USF Sarasota-Manatee or online.

INSTITUTIONAL AND STATE LEVEL ACCOUNTABILITY

II. Need and Demand

- A. Need: Describe national, state, and/or local data that support the need for more people to be prepared in this program at this level. Reference national, state, and/or local plans or reports that support the need for this program and requests for the proposed program which have emanated from a perceived need by agencies or industries in your service area. Cite any specific need for research and service that the program would fulfill.**

According to the Insurance Information Institute (<http://www.iii.org/fact-statistic/industry-overview>) 5,926 insurance companies were operating in the United States in 2015. Employment in the insurance industry has grown by more than 12% between July of 2011 and July of 2017 to more than 2.6 million people according to the United States Department of Labor's Bureau of Labor Statistics (https://data.bls.gov/timeseries/CES5552400001?amp%253bdata_tool=XGtable&output_view=data&include_graphs=true). This number continues to grow by approximately 2% per year. Of those employees, 159,900 were working in the state of Florida according to the Florida Department of Economic Opportunity (<http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/current-employment-statistics>).

According to a survey completed by Great Insurance Jobs.com (http://images.greatinsurancejobs.com/pdfs/gij-whitepaper/2017_Great_Insurance_Jobs_Insurance_Industry_Employment_Outlook.pdf), over 10,800 jobs were open in the year 2016 with another 11,000 jobs expected to open during 2017. Ninety-three percent (93%) of the insurance companies participating in the survey had job openings at the time they were surveyed. The respondents indicate that the insurance industry is also expecting approximately 25% of its current workforce to retire in the next four years.

A survey in August 2017 of insurance firms located in the USF Sarasota-Manatee service area reported at least 250 job openings at a variety of levels, and this number was expected to increase by year's end.

- B. Demand: Describe data that support the assumption that students will enroll in the proposed program. Include descriptions of surveys or other communications with prospective students.**

Currently, employer demand is stronger than student demand. Therefore, educating students about the possibilities in RMI will be a shared effort between USF Sarasota-Manatee and its local insurance companies. Students are largely unaware of the insurance industry, the myriad career opportunities that exist within it, and its starting salaries. Students who took the first Risk Management/Insurance courses now work for a local insurance company. They have returned to campus to recruit more students to follow the path that they took into an interesting industry with good growth potential. They all admit that they knew nothing about the insurance industry until they took the courses and would not have considered a career in insurance without knowing what they learned from those courses.

USF Sarasota-Manatee has been offering courses in insurance since 2015 when RMI was introduced as a minor under the finance major. Enrollments in the Principles course has grown from 23 students in 2015 to the course maximum of 30 students in 2016 and 2017. Florida State University offers the only other RMI program in the SUS and enrollments in its RMI program have grown from 84 students in 2014 to 230 students in 2016. Yet, this growth is not enough to cover the employer demand in Florida.

- C. If substantially similar programs (generally at the four-digit CIP Code or 60 percent similar in core courses), either private or public exist in the state, identify the institution(s) and geographic location(s). Summarize the outcome(s) of communication with such programs with regard to the potential impact on their enrollment and opportunities for possible collaboration (instruction and research). In Appendix C, provide data that support the need for an additional program.**

Florida State University offers the only existing Risk Management/Insurance undergraduate degree program in Florida. No other programs at the four-digit CIP code level exist in Florida.

- D. Use Table 1 in Appendix A (1-A for undergraduate and 1-B for graduate) to categorize projected student headcount (HC) and Full Time Equivalents (FTE) according to primary sources. Generally undergraduate FTE will be calculated as 30 credit hours per year and graduate FTE will be calculated as 24 credit hours per year. Describe the rationale underlying enrollment projections. If students within the institution are expected to change majors to enroll in the proposed program at its inception, describe the shifts from disciplines that will likely occur.**

Calculation of student FTE is based on the typical distribution of full- and part-time students who attend USFSM. Generally, half of USFSM undergraduates attend full time, represented in the calculations as 1 FTE, and half attend part time, represented in the calculations and .5 FTE.

It is expected that a small number of students who might have taken the Finance or General Business majors may gravitate toward RMI when the new major is offered for the first time. USF Sarasota-Manatee is currently offering RMI under the Finance CIP code for the first time. The headcount in the major has grown by 10%, with some of this growth attributable to the availability of the RMI program. Longer term, USF Sarasota-Manatee expects that most of the students in the RMI program will enter the University specifically for RMI, which should increase the College's overall student population rather than cannibalize other majors. The RMI program serves as a next step for students who begin their college careers at State College of Florida Manatee-Sarasota (SCF) in its Insurance associate's degree program, potentially bringing more transfers from SCF. USF Sarasota-Manatee has already had students transfer from other institutions, because they are interested in pursuing the major and careers in the Insurance field.

- E. Indicate what steps will be taken to achieve a diverse student body in this program. If the proposed program substantially duplicates a program at FAMU or FIU, provide, (in consultation with the affected university), an analysis of how the program might have an impact upon that university's ability to attract students of races different from that which is predominant on their campus in the subject program. The university's Equal Opportunity Officer shall review this section of the proposal and then sign and date Appendix B to indicate that the analysis required by this subsection has been completed.**

USF Sarasota-Manatee is committed to attracting and retaining a diverse student body and the steps taken to recruit for all programs will be used for the RMI program as well. Some of those steps are as follows:

- Admissions utilizes a Customer Relationship Management (CRM) System to manage prospective student information and to execute a communication plan consisting of mail, email, and phone call campaigns. They have communication in place that is designed to reach and attract diverse

student body. Some examples include sharing profiles and testimonials of current students and alumni who are from underrepresented populations.

- USF Sarasota-Manatee has an Admissions Counselor for Diversity Recruitment and one of her responsibilities will be developing relationships with community partners like Upward Bound programs, College Reach Out programs, Take Stock in Children, Boys and Girls Club, Y Achievers, and other community groups. She also assists with communication to these partners about what USF Sarasota-Manatee has to offer and assisting them with setting up special group visits to campus.
- USF Sarasota-Manatee has a Bilingual Spanish Speaking Admissions Counselor to work with Hispanic students and their families on the admissions process.
- Representatives attend college fairs in the local market as well as visiting local high schools to give presentations and provide information on USF Sarasota-Manatee and its academic programs.
- Admissions representatives meet with prospective students at their high schools for instant decision days in the fall and offer on the spot acceptance to qualified students. Students who do not meet admissions requirements at that time are given guidance on what they can do to strengthen their application.
- Admissions purchases contact information of high school students who take the ACT and/or SAT to then communicate with them about USF Sarasota-Manatee and its academic programs. They are then able to target students by demographics and geographic locations.
- Admissions hosts open house programs, information sessions, and other events on campus for all potential students.
- USF Sarasota-Manatee representatives visit local state college and community colleges to attend events, set up information tables, or to speak to classrooms of students.
- The FUSE program at the State College of Florida is in place to co-advise SCF students on their courses based on their intended major at USF Sarasota-Manatee and to provide them with opportunities to participate in USF Sarasota-Manatee student life activities and events.

The Risk Management/Insurance program does not duplicate any programs offered at either FAMU or FIU.

III. Budget

- A. Use Table 2 in Appendix A to display projected costs and associated funding sources for Year 1 and Year 5 of program operation. Use Table 3 in Appendix A to show how existing Education & General funds will be shifted to support the new program in Year 1. In narrative form, summarize the contents of both tables, identifying the source of both current and new resources to be devoted to the proposed program. (Data for Year 1 and Year 5 reflect snapshots in time rather than cumulative costs.)**

The data contained in Table 2 shows the amount of E&G money required to deliver courses needed for the RMI major. Faculty salaries and benefits for Year 1 include the teaching portion of one full-time position in RMI and part of the salaries for faculty who teach in other related disciplines. The RMI program has been constructed to optimize the college resources by including courses from other disciplines as part of the RMI major, which allows the College to serve RMI students while also filling courses from other disciplines. All of the courses are relevant to the RMI industry and the structure of the program has been discussed with industry experts. The change from Year 1 to Year 5 represents the addition of one faculty member dedicated to RMI in the third year. Table 3 contains all zeros because no funding is being reallocated.

- B. Please explain whether the university intends to operate the program through continuing education, seek approval for market tuition rate, or establish a differentiated graduate-level tuition. Provide a rationale for doing so and a timeline for seeking Board of Governors' approval, if appropriate. Please include the expected rate of tuition that the university plans to charge for this program and use this amount when calculating cost entries in Table 2.**

The university will offer this program in the same standard manner as its other degree programs.

- C. **If other programs will be impacted by a reallocation of resources for the proposed program, identify the impacted programs and provide a justification for reallocating resources. Specifically address the potential negative impacts that implementation of the proposed program will have on related undergraduate programs (i.e., shift in faculty effort, reallocation of instructional resources, reduced enrollment rates, greater use of adjunct faculty and teaching assistants). Explain what steps will be taken to mitigate any such impacts. Also, discuss the potential positive impacts that the proposed program might have on related undergraduate programs (i.e., increased undergraduate research opportunities, improved quality of instruction associated with cutting-edge research, improved labs and library resources).**

No other programs will be impacted by a reallocation of resources.

- D. **Describe other potential impacts on related programs or departments (e.g., increased need for general education or common prerequisite courses, or increased need for required or elective courses outside of the proposed major).**

There will be no significant impact on related programs or departments. Elective courses in other disciplines may have slightly increased enrollments but there is adequate capacity in those courses to accommodate any expected increase.

- E. **Describe what steps have been taken to obtain information regarding resources (financial and in-kind) available outside the institution (businesses, industrial organizations, governmental entities, etc.). Describe the external resources that appear to be available to support the proposed program.**

Discussions have been held with insurance industry representatives and they are open to the idea of offering financial support for student scholarships and support of the RMI program. Insurance firms and industry-related organizations have supported other RMI programs around the country with significant donations to support scholarships, faculty chairs, and professorships. This type of external support will be pursued as the program grows.

IV. **Projected Benefit of the Program to the University, Local Community, and State**

Use information from Tables 1 and 2 in Appendix A, and the supporting narrative for "Need and Demand" to prepare a concise statement that describes the projected benefit to the university, local community, and the state if the program is implemented. The projected benefits can be both quantitative and qualitative in nature, but there needs to be a clear distinction made between the two in the narrative.

The benefits to the university are the addition of a program, not currently available, that has been designated as an area of strategic emphasis by the SUS and an opportunity to serve students with an interest in the RMI field, along with an important industry operating within our service region and across the state. The benefits to the local community and state are: well-prepared prospective employee and taxpayers able to fill a growing significant void in a major industry in Florida. If industry estimates are accurate, there will be more than 40,000 jobs available in insurance over the next five years in the State of Florida. These jobs are stable with significant opportunity for upward mobility for skilled individuals.

V. **Access and Articulation – Bachelor's Degrees Only**

- A. **If the total number of credit hours to earn a degree exceeds 120, provide a justification for an exception to the policy of a 120 maximum and submit a separate request to the Board of Governors for an exception along with notification of the program's approval. (See criteria in Board of Governors Regulation 6C-8.014)**

This degree can be completed in 120 credit hours.

- B. List program prerequisites and provide assurance that they are the same as the approved common prerequisites for other such degree programs within the SUS (see link to the Common Prerequisite Manual on [the resource page for new program proposal](#)). The courses in the Common Prerequisite Counseling Manual are intended to be those that are required of both native and transfer students prior to entrance to the major program, not simply lower-level courses that are required prior to graduation. The common prerequisites and substitute courses are mandatory for all institution programs listed, and must be approved by the Articulation Coordinating Committee (ACC). This requirement includes those programs designated as “limited access.”**

If the proposed prerequisites are not listed in the Manual, provide a rationale for a request for exception to the policy of common prerequisites. NOTE: Typically, all lower-division courses required for admission into the major will be considered prerequisites. The curriculum can require lower-division courses that are not prerequisites for admission into the major, as long as those courses are built into the curriculum for the upper-level 60 credit hours. If there are already common prerequisites for other degree programs with the same proposed CIP, every effort must be made to utilize the previously approved prerequisites instead of recommending an additional “track” of prerequisites for that CIP. Additional tracks may not be approved by the ACC, thereby holding up the full approval of the degree program. Programs will not be entered into the State University System Inventory until any exceptions to the approved common prerequisites are approved by the ACC.

In addition to general education requirements that all USF Sarasota-Manatee students must complete, the RMI program prerequisites are exactly the same as all of the other majors offered within the College of Business. These include the following state-mandated common prerequisites as described in the [Common Prerequisites Manual](#):

- ACG 2021 Principles of Financial Accounting
- ACG 2071 Principles of Managerial Accounting
- CGS 2100 Computers in Business
- ECO 2013 Macroeconomics
- ECO 2023 Microeconomics
- MAC 2233 Business Calculus
- STA 2023 Introductory Statistics I

- C. If the university intends to seek formal Limited Access status for the proposed program, provide a rationale that includes an analysis of diversity issues with respect to such a designation. Explain how the university will ensure that Florida College System transfer students are not disadvantaged by the Limited Access status. NOTE: The policy and criteria for Limited Access are identified in Board of Governors Regulation 6C-8.013. Submit the Limited Access Program Request form along with this document.**

All undergraduate degree programs in the College of Business are currently approved as limited-access based solely on minimum student grade-point average (GPA) and completed prerequisite coursework. Students who have earned a GPA of 2.75 or higher are admissible to the College and eligible to pursue this major. A Limited Access Program Request is being submitted along with this document.

- D. If the proposed program is an AS-to-BS capstone, ensure that it adheres to the guidelines approved by the Articulation Coordinating Committee for such programs, as set forth in Rule 6A-10.024 (see link to the Statewide Articulation Manual on [the resource page for new program proposal](#)). List the prerequisites, if any, including the specific AS degrees which may transfer into the program.**

The RMI program is not part of the AS-to-BS program.

INSTITUTIONAL READINESS

VI. Related Institutional Mission and Strength

- A. Describe how the goals of the proposed program relate to the institutional mission statement as contained in the SUS Strategic Plan and the University Strategic Plan (see link to the SUS Strategic Plan on [the resource page for new program proposal](#)).**

The SUS mission statement reads as follows:

The mission of the State University System of Florida is to provide undergraduate, graduate and professional education, research, and public service of the highest quality through a coordinated system of institutions of higher learning, each with its own mission and collectively dedicated to serving the needs of a diverse state and global society (http://www.flbog.edu/pressroom/_doc/2011-11-28_Strategic_Plan_2012-2025_FINAL.PDF).

The mission statement for USF Sarasota-Manatee reads as follows:

The University of South Florida Sarasota-Manatee provides high quality bachelor’s and graduate-level education and scholarly activity in a personalized learning community that prepares successful leaders and responsible citizens (<http://USF Sarasota-Manatee.edu/about-USF Sarasota-Manatee/mission/>).

The goals of the RMI program relate to exposing students to the many facets of the insurance industry and to prepare them for the various career opportunities available in insurance. This fits with the SUS mission in that these students will be prepared to fill the needs of an important industry in Florida. The RMI program also fulfills the USF Sarasota-Manatee goal of preparing students to be successful leaders in the insurance industry.

- B. Describe how the proposed program specifically relates to existing institutional strengths, such as programs of emphasis, other academic programs, and/or institutes and centers.**

The Risk Management Insurance program will provide resources to students and employers as a program listed in the Board of Governors’ Gap Analysis programs of strategic emphasis. There will be plentiful opportunities for students who graduate from the RMI program for not only employment but also rapid advancement. The insurance industry is growing at a rate of about 2% per year, according to the U.S. Department of Labor’s Bureau of Labor Statistics, and industry sources, such as [Jacobs Online](#) (page 3), expect a significant number, up to 25%, of older workers in the industry to retire in the next few years.

This particular RMI program was designed to complement the other business majors offered, including courses that are electives in those other business areas. Consultations with local insurance industry representatives showed strong support for a managerial approach that includes courses relevant to finance, marketing, and management in addition to courses pertinent to specific RMI functions.

- C. Provide a narrative of the planning process leading up to submission of this proposal. Include a chronology in table format of the activities, listing both university personnel directly involved and external individuals who participated in planning. Provide a timetable of events necessary for the implementation of the proposed program.**

The Risk Management/Insurance program began as an effort to collaborate with executives from local insurance firms who are in serious need of skilled employees for openings that they are having a difficult time filling.

Planning Process

Date	Participants	Planning Activity
Fall 2014	Dr. Robert Anderson, Lisa Krouse	Initial discussions about USF Sarasota-

	(FCCI), Dr. Thomas Pencek, Dr. Ned Wilson (FCCI)	Manatee offering courses in insurance
Fall 2014	Dr. Robert Anderson, Dr. Thomas Pencek, Dr. James Curran, Dr. Ned Wilson (FCCI)	Structure of a minor in Risk Management/Insurance developed and key courses identified
Spring 2016	Dr. James Curran and Dr. Ned Wilson (FCCI)	Discussions about developing RMI as a major to serve RMI industry needs. Research conducted on structure of RMI programs being offered around the country. Proposal for RMI major developed.
June 27, 2016	Dr. James Curran, Casey Welch, Kathleen Curran, Dr. Ned Wilson (FCCI), Lisa Krouse (FCCI), Ann Driscoll (FCCI), Tracy Stoeckel (FCCI), Karen Nysten Dederling (FCCI), Ursula Nixon, (The Zenith), Taylor Hendrick (The Zenith), Gene Donnelly (The Zenith), Keith Mercier (CBIZ), Patrick Wright (CBIZ), Michele Schrotter (Bouchard Insurance), Phillip Baker (Boyd Insurance & Investment Services), Annie LaRiviere (Atlas Insurance), Rob Brown (Atlas Insurance), David Ford-Coates (BB&T), George Quarterman (State Farm), Andrea Allison (Al Purmort Insurance), Taylor Collins (Professional Benefits Inc.), Jason Slack (Stahl & Associates)	Meeting to discuss the structure of a possible new major in Risk Management/Insurance. Industry representatives were very supportive of proposed program and encouraged USF Sarasota-Manatee to offer it.
December 19, 2016	Dr. James Curran, Lisa Krouse (FCCI), Keith Mercier (CBIZ), Patrick Wright (CBIZ)	Follow-up meeting where industry representatives confirmed their strong desire to have USF Sarasota-Manatee offer a major in RMI and discussed how they could work with USF Sarasota-Manatee to advance and support the program.

Events Leading to Implementation

Date	Implementation Activity
2/3/2015	RMI Minor approved by Academic Programs Committee (APC)
2/3/2015	First three RMI courses approved by APC. Those courses were RMI 3011 (Principles of Insurance), RMI 4292 (Property and Casualty Insurance Operations), and RMI 4941 (Risk Management/Insurance Internship).
Fall 2015	First RMI courses offered as special topics courses under Finance major. (RMI course numbers had not yet cleared State Course Numbering System processing) RMI Minor offered for the first time.
3/3/2017	RMI Major approved by APC under CIP code 52.0801 (Finance)
3/7/2017	Preproposal for RMI Major under CIP code 52.1701 (Insurance) approved by APC
3/27/2017	Preproposal for RMI Major under CIP code 52.1701 (Insurance) approved by APAC
4/14/2017	Preproposal for RMI Major under CIP code 52.1701 (Insurance) approved by CAVP
6/8/2017	Preproposal for RMI Major under CIP code 52.1701 (Insurance) approved by

	Board of Trustees
6/22/2017	Preproposal for RMI Major under CIP code 52.1701 (Insurance) approved by Board of Governors
Fall 2017	Proposal for RMI Major under CIP code 52.1701 (Insurance) submitted for approval

VII. Program Quality Indicators - Reviews and Accreditation

Identify program reviews, accreditation visits, or internal reviews for any university degree programs related to the proposed program, especially any within the same academic unit. List all recommendations and summarize the institution's progress in implementing the recommendations.

The College of Business is accredited by the Association to Advance Collegiate Schools of Business (AACSB) (<http://www.aacsb.edu/>). The College will be undergoing a Continuous Improvement Review (CIR) by AACSB in the Spring of 2018. These CIR reviews are conducted every five years. There have been no recommendations made related to the RMI program because the program was initiated after the last review in 2013.

VIII. Curriculum

A. Describe the specific expected student learning outcomes associated with the proposed program. If a bachelor's degree program, include a web link to the Academic Learning Compact or include the document itself as an appendix.

Graduates of the USF Sarasota-Manatee RMI program will:

- Demonstrate knowledge of corporate structure, governance, and organizational goals of insurance companies and how these insurance companies operate and make/earn profits.
- Demonstrate a working knowledge of the terminology common to the insurance industries and their operations.
- Demonstrate an understanding of property/casualty, life, and health care products and services and the consumers to whom they are being sold.
- Demonstrate an understanding of major contract provisions commonly found in policies and explain how limits, deductibles and coinsurance impact coverage.
- Demonstrate an understanding of the important environmental factors that influence policy costs, including competition, regulations, economy, etc.
- Demonstrate an ability to engage in critical thinking.
- Demonstrate an ability to communicate effectively.

The Academic Learning Compact can be found at <https://usf.app.box.com/s/sju3n8ssc6o5xgeep824yn1okp81dm7g>

B. Describe the admission standards and graduation requirements for the program.

RMI admissions standards are the same as those for admission to the College of Business at USF Sarasota-Manatee:

1. Minimum of 60 semester hours of college credit earned.
2. Minimum of 2.75 overall GPA on all college-level work and a minimum of 2.00 on all credit attempted at USF, including any prior to academic renewal.

Graduation standards must meet those minimum standards of B.S. degrees in the College of Business as follows: 2.0 GPA overall. Graduation requirements are: 120 credit hours of coursework with at least 60 hours in business courses and a minimum of 54 hours in non-business courses. Students must earn a grade of C or higher and a minimum grade point average of 2.00 in all major and minor fields and

College foundation courses. All business students are required to select at least one course that deals with contemporary international topics.

- C. Describe the curricular framework for the proposed program, including number of credit hours and composition of required core courses, restricted electives, unrestricted electives, thesis requirements, and dissertation requirements. Identify the total numbers of semester credit hours for the degree.**

The total number of credit hours needed to complete the RMI degree is 120. The framework is as follows:

General Education Requirements – 36 hours. Courses must be complete in the five state-mandated subject areas: communications, mathematics, social sciences, natural sciences, and the humanities.

Business prerequisites – 21 hrs. In addition to general education requirements that all USF students must complete, the RMI program prerequisites are exactly the same as all of the other majors offered within the College of Business. These include the following state-mandated common prerequisites:

- ACG 2021 Principles of Financial Accounting
- ACG 2071 Principles of Managerial Accounting
- CGS 2100 Computers in Business
- ECO 2013 Macroeconomics
- ECO 2023 Microeconomics
- MAC 2233 Business Calculus
- STA 2023 Introductory Statistics I

Communication Requirements – 6 hrs. All business students must complete two required communication courses for a business major. They must complete SPC 2608 Public Speaking and either COM 3110 Communication for Business and the Professions or ENC 3250 Professional Writing.

Business Core Requirements – 21 hrs. All students in the College of Business are also required to take the following business foundation courses:

- BUL 3320 Law and Business I
- FIN 3403 Principles of Finance
- ISM 3011 Information Systems in Organizations
- QMB 3200 Business and Economic Statistics II
- MAN 3025 Principles of Management
- MAR 3023 Basic Marketing
- GEB 4890 Strategic Management and Decision Making

RMI Major Requirements – 15 hrs. All RMI majors are required to take the following courses:

- RMI 3011 Principles of Insurance
- RMI 4292 Property & Casualty Insurance Operations
- RMI 4115 Life & Health Insurance Products
- FIN 4303 Financial Institutions and Markets
- MAR 4841 Services Marketing

RMI Electives – 6 hrs. All RMI majors must complete two of the following courses:

- RMI 4941 Risk Management/Insurance Internship
- FIN 4504 Principles of Investments
- MAN 3240 Organizational Behavior
- MAN 4802 Entrepreneurship & Small Business Management
- MAR 3400 Professional Selling

D. Provide a sequenced course of study for all majors, concentrations, or areas of emphasis within the proposed program.

BS/BA in Risk Management/Insurance

Year 1

<i>Freshman Semester 1 (13 credit hours)</i>	<i>Freshman Semester 2 (15 credit hours)</i>
ENC 1101 Composition I (3) ^{GR} (Communications General Education)	ENC 1102 Composition II (3) ^{GR} (Communications General Education)
ECO 2013 Macroeconomics (3) ^{PR} (Social Sciences General Education)	ECO 2023 Microeconomics (3) ^{PR} (Social Sciences General Education)
Humanities General Education (3) ^{GR}	Humanities General Education (3) ^{GR}
SLS 1107 Foundations for University Success (1)	MAC 2233 Business Calculus (3) ^{GR PR} (Mathematics General Education)
Non-Business Elective (3)	CGS 2100 Computers in Business (or equiv.) (3) ^{PR}

Year 2

<i>Sophomore Semester 1 (15 credit hours)</i>	<i>Sophomore Semester 2 (17 credit hours)</i>
Natural Sciences General Education (3)	Natural Sciences General Education (3)
General Education Elective (3)	General Education Elective (3)
ACG 2021 Principles of Financial Accounting (3) ^{PR}	ACG 2071 Principles of Managerial Accounting (3) ^{PR}
STA 2023 Introductory Statistics or (QMB 2100, STA 2122) (3) ^{GR PR} (Mathematics General Education)	ENC 3250 Professional Writing OR ENC 3310 Expository Writing (3)
SPC 2608 Public Speaking (3) OR COM 3110 Communication for Business and the Professions (3)	SLS 2122 Foundations of Professional Success (2)
	Non-Business Elective (3)

Year 3

<i>Junior Semester 1 (15 credit hours)</i>	<i>Junior Semester 2 (15 credit hours)</i>
FIN 3403 Principles of Finance (3)	QMB 3200 Business & Economic Statistics II (3)
MAN 3025 Principles of Management (3) ^{PC} (Leadership and Ethics Pillar Course)	MAR 3023 Basic Marketing (3)
BUL 3320 Law and Business I (3)	FIN 4303 Financial Institutions and Markets (3)
ISM 3011 Information Systems in Organizations (3)	RMI 4292 Property & Casualty Insurance Operations (3)
RMI 3011 Principles of Insurance (3)	Community Engagement & Diversity Pillar Course (3) ^{PC}

Year 4

<i>Senior Semester 1 (15 credit hours)</i>	<i>Senior Semester 2 (15 credit hours)</i>
RMI 4115 Life & Health Insurance Products (3)	GEB 4890 Strategic Management and Decision Making (3) ^{PC} (Communication and Critical Thinking Pillar Course)
Non-Business Elective (3)	RMI Major Elective (3)
Business Elective (3)	RMI Major Elective (3)
Non-Business Elective (3)	Non-Business Elective (3)
MAR 4841 Services Marketing (3)	Elective (3)

- Total Credit Hours=120; Business Credit Hours = 60 min; Non-Business Credit Hours = 54 min
- Students are required to take 42 upper-level credit hours

- Students are required to take 9 credit hours in the summer, but are encouraged to accelerate the completion of their degree by taking additional summer credits
- GR = Gordon Rule Requirement (12 hrs. Communication, 6 hrs. Computation)
- PR = State-Mandated Common Prerequisites that are required for this degree
- PC = USF Sarasota-Manatee Pillar Course Requirements; Students are required to take 9 credit hours of pillar courses
- All students pursuing a BA degree must satisfy the college-level foreign language requirement.

E. Provide a one- or two-sentence description of each required or elective course.

Business Core Courses

BUL 3320 Law and Business I: This course covers the nature of legal and societal institutions and environments, and major aspects of public, private, UCC and related business law.

FIN 3403 Principles of Finance: Study of the processes, decision structures, and institutional arrangements concerned with the use and acquisition of funds by a firm. Includes the management of the asset and liability structure of the firm under certain and risky situations.

ISM 3011: An introduction to the language, concepts, structures and processes involved in the management of information systems including fundamentals of computer-based technology and the use of business-based software for support of managerial decisions.

MAN 3025 Principles of Management: Examines intrapersonal, interpersonal, group/team, organizational, and environmental (both stakeholder and societal) factors influencing the management task.

MAR 3023 Basic Marketing: Survey of the marketing of goods and services within the economy. Attention is paid to the impact of marketing on other functional areas of business as well as society.

QMB 3200 Business and Economic Statistics II: This course covers simple linear regression and correlation; multiple regression and model building; forecasting models; analysis of variance; chi-square tests; nonparametric methods.

GEB 4890 Strategic Management and Decision Making: This capstone course focuses on helping students develop a top-level executive perspective on managing a business, and requires students to integrate the theoretical and functional area concepts, principles, and skills learned in previous coursework.

Required RMI Courses

RMI 3011 Principles of Insurance: Identification of various types of risks; principles underlying selection of appropriate means of handling risks; introduction to life, health, property, liability and other area of insurance.

RMI 4292 Property & Casualty Insurance Operations: Analysis of insurer operations and the issues facing managers of such operations. Topics covered include regulation, accounting, finance, marketing, underwriting, reinsurance, ratemaking, and claims.

RMI 4115 Life & Health Insurance Products: This course provides an introduction to the life and health insurance side of the insurance industry. In the course, the term "Life Insurance" will be used in a broad context, including traditional life insurance, which pays on the death of the insured, but also examining annuities, which pay while an insured is still alive.

FIN 4303 Financial Institutions and Markets: A study of financial institutions and their roles in the capital markets; includes the savings allocation, investment, and financial decision making processes.

MAR 4841 Services Marketing: The course focuses on challenges facing service providers in developing, managing, promoting, and delivering quality service to customers.

Electives for RMI Majors

RMI 4941 Risk Management/Insurance Internship: This course is for those students who desire a career in Risk Management and Insurance. It will provide practical experience in the area.

FIN 4504 Principles of Investments: Survey of the risks and returns of investment media in relation to the investment objectives of individual and institutional investors. It includes an examination of the capital markets, information flows, and analytical techniques in terms of their impact on the valuation process.

MAN 3240 Organizational Behavior: The course covers research literature relevant to organizational functioning including behavioral effects of power and authority, formal organization, structural variation, leadership, motivation, and communication.

MAN 4802 Entrepreneurship & Small Business Management: Study of the factors involved in starting and managing a small- to medium-sized business. Emphasis is on conducting pre-business feasibility study, start-up of business, successful management of the firm, and options for succession or termination.

MAR 3400 Professional Selling: A study of the stages of the professional selling process, and the role of sales in today's marketing environment. Emphasis is on learning adaptive selling techniques and developing effective interpersonal communications skills.

- F. For degree programs in the science and technology disciplines, discuss how industry-driven competencies were identified and incorporated into the curriculum and indicate whether any industry advisory council exists to provide input for curriculum development and student assessment.**

Not Applicable.

- G. For all programs, list the specialized accreditation agencies and learned societies that would be concerned with the proposed program. Will the university seek accreditation for the program if it is available? If not, why? Provide a brief timeline for seeking accreditation, if appropriate.**

The College of Business at USF Sarasota-Manatee is accredited by AACSB. This program will be included in the AACSB accreditation and will undergo a full review by AACSB during the next Continuous Improvement Review cycle.

- H. For doctoral programs, list the accreditation agencies and learned societies that would be concerned with corresponding bachelor's or master's programs associated with the proposed program. Are the programs accredited? If not, why?**

Not Applicable.

- I. Briefly describe the anticipated delivery system for the proposed program (e.g., traditional delivery on main campus; traditional delivery at branch campuses or centers; or nontraditional delivery such as distance or distributed learning, self-paced instruction, or external degree programs). If the proposed delivery system will require specialized services or greater than normal financial support, include projected costs in Table 2 in Appendix A. Provide a narrative describing the feasibility of delivering the proposed program through collaboration with other universities, both public and private. Cite specific queries made of other institutions with respect to shared courses, distance/distributed learning technologies, and joint-use facilities for research or**

internships.

This program will be delivered using a combination of traditional, face-to-face courses and online courses.

IX. Faculty Participation

- A. Use Table 4 in Appendix A to identify existing and anticipated full-time (not visiting or adjunct) faculty who will participate in the proposed program through Year 5. Include (a) faculty code associated with the source of funding for the position; (b) name; (c) highest degree held; (d) academic discipline or specialization; (e) contract status (tenure, tenure-earning, or multi-year annual [MYA]); (f) contract length in months; and (g) percent of annual effort that will be directed toward the proposed program (instruction, advising, supervising internships and practica, and supervising thesis or dissertation hours).**

Table 4 is included in Appendix A.

- B. Use Table 2 in Appendix A to display the costs and associated funding resources for existing and anticipated full-time faculty (as identified in Table 4 in Appendix A). Costs for visiting and adjunct faculty should be included in the category of Other Personnel Services (OPS). Provide a narrative summarizing projected costs and funding sources.**

The Faculty Salaries and Benefits in Table 2 include three (3) current full-time faculty who teach courses that can be applied to the RMI major. Likewise, the salaries of adjuncts teaching RMI courses that can also be applied to other majors are included under Other Personal Services. The proportion of current full-time and adjunct salary included reflects anticipated RMI student enrollment in courses currently offered.

Year 1 cost per FTE is projected to be \$4,419 or \$147 per SCH, declining to \$3,553 or \$118 per SCH by Year 5. According to the FLBOG Direct Instruction Expenditures by Student Credit Hour report <http://www.flbog.edu/board/office/budget/expendanalysis.php>, the Year 1 cost is lower than the average cost posted for five of the twelve SUS universities and is nearly equal to the SUS average by Year 5.

- C. Provide in the appendices the abbreviated curriculum vitae (CV) for each existing faculty member (do not include information for visiting or adjunct faculty).**

CVs for current faculty have been added to Appendix C.

- D. Provide evidence that the academic unit(s) associated with this new degree 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, as well as qualitative indicators of excellence.**

Most College of Business faculty teach either five or six courses per year. Pre-tenured faculty will teach four courses per year allowing them to devote adequate time to their research and publication. Over the past five years, these faculty members have published 96 articles in peer-reviewed journals. According to Google Scholar (May 16, 2017), 61 of the scholarly works published by the faculty between 2013 and 2017 have been cited at least once and these 61 works have been cited a total of 865 times. Overall, the College of Business faculty have produced more than 450 scholarly works that have collectively been cited more than 17,000 times. The faculty are all engaged in governance by serving on committees at both the College and University levels. Externally, many of the faculty serve their disciplines through their involvement with conferences and reviewing for journals. Faculty members have completed more than 200 peer reviews for journals over the past five years.

Student headcount in the College over the past five years is shown in the table below:

Enrollment	Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016
Total Undergraduate	497	489	485	513	474
Accounting	137	127	135	119	94
Finance	51	47	31	59	50
General Business Administration	72	58	68	84	60
Management	56	63	58	40	39
Marketing	25	23	19	34	45
Pre-Business Administration	156	171	174	177	186
Master's Business Administration	44	36	25	69	88
Total COB	482	525	510	582	551

Graduation over the same five year period was as follows:

Degrees Awarded	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Undergrad	171	156	139	153	138
MBA	19	18	17	16	15

X. Non-Faculty Resources

- A. Describe library resources currently available to implement and/or sustain the proposed program through Year 5. Provide the total number of volumes and serials available in this discipline and related fields. List major journals that are available to the university's students. Include a signed statement from the Library Director that this subsection and subsection B have been reviewed and approved.**

The USF Libraries has 94 journals for Actuarial Science, Insurance, and Risk Management. In addition there are 25 article databases and 33 Company & Industry databases to support the program. USF Libraries also 1,464 books on this subject, of which 1,235 are available online. In addition, students in this program will have access to 4,700 books from other libraries within the State University Library System. RMI students will also have access to Bloomberg Professional Services through the David Kotok/Cumberland Advisors Bloomberg Lab.

- B. Describe additional library resources that are needed to implement and/or sustain the program through Year 5. Include projected costs of additional library resources in Table 2 in Appendix A. Please include the signature of the Library Director in Appendix B.**

At this time based on the current resources available no additional resources will be necessary to implement and/or sustain the program through Year 5. No additional costs are projected for library resources.

- C. Describe classroom, teaching laboratory, research laboratory, office, and other types of space that are necessary and currently available to implement the proposed program through Year 5.**

Standard classroom space will be utilized to deliver the face-to-face courses. There is enough classroom space available to accommodate the program's needs.

- D. Describe additional classroom, teaching laboratory, research laboratory, office, and other space needed to implement and/or maintain the proposed program through Year 5. Include any projected Instruction and Research (I&R) costs of additional space in Table 2**

in Appendix A. Do not include costs for new construction because that information should be provided in response to X (E) below.

Office space will be available to accommodate one new RMI faculty.

- 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. Table 2 in Appendix A includes only Instruction and Research (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.**

There will be no new capital expenditure for instructional or research space required.

- F. Describe specialized equipment that is currently available to implement the proposed program through Year 5. Focus primarily on instructional and research requirements.**

There is no specialized equipment needed for this program.

- G. Describe additional specialized equipment that will be needed to implement and/or sustain the proposed program through Year 5. Include projected costs of additional equipment in Table 2 in Appendix A.**

There is no specialized equipment needed for this program.

- H. Describe any additional special categories of resources needed to implement the program through Year 5 (access to proprietary research facilities, specialized services, extended travel, etc.). Include projected costs of special resources in Table 2 in Appendix A.**

There are no special categories of resources needed for the RMI program.

- I. Describe fellowships, scholarships, and graduate assistantships to be allocated to the proposed program through Year 5. Include the projected costs in Table 2 in Appendix A.**

Industry sources have expressed interest in possible scholarship support for students in the RMI program. Scholarship programs will be developed as external funding is generated.

- J. Describe currently available sites for internship and practicum experiences, if appropriate to the program. Describe plans to seek additional sites in Years 1 through 5.**

Internships are currently available with many local insurance firms including FCCI, The Zenith, John Eastern Co., State Farm (George Quarterman), Bankers Life, and the Auto Club Group. Other firms have indicated that they will work with us to develop internship opportunities in the future.

APPENDIX A

**TABLE 1-A
PROJECTED HEADCOUNT FROM POTENTIAL SOURCES
(Baccalaureate Degree Program)**

Source of Students (Non-duplicated headcount in any given year)*	Year 1		Year 2		Year 3		Year 4		Year 5	
	HC	FTE	HC	FTE	HC	FTE	HC	FTE	HC	FTE
Upper-level students who are transferring from other majors within the university**	0	0	0	0	0	0	0	0	0	0
Students who initially entered the university as FTIC students and who are progressing from the lower to the upper level***	3	3	4	2.5	10	9.5	13	8.5	16	10
Florida College System transfers to the upper level***	21	15.75	24	18	27	20.25	32	24	37	27.75
Transfers to the upper level from other Florida colleges and universities***	5	3.75	6	4.5	7	5.25	8	6	10	7.5
Transfers from out of state colleges and universities***	1	0.5	1	0.5	1	0.5	2	1	2	1
Other (Explain)***	0	0	0	0	0	0	0	0	0	0
Totals	30	23	35	25.5	45	35.5	55	39.5	65	46.25

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

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

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

APPENDIX A

**TABLE 2
PROJECTED COSTS AND FUNDING SOURCES**

Instruction & Research Costs (non-cumulative)	Year 1								Year 5						
	Funding Source							Subtotal columms 1+...+7	Funding Source						Subtotal columms 9+...+14
	Reallocated Base* (E&G)	Enrollment Growth (E&G)	New Recurring (E&G)	New Non-Recurring (E&G)	Contracts & Grants (C&G)	Philanthropy Endowments	Enterprise Auxiliary Funds		Continuing Base** (E&G)	New Enrollment Growth (E&G)	Other*** (E&G)	Contracts & Grants (C&G)	Philanthropy Endowments	Enterprise Auxiliary Funds	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Faculty Salaries and Benefits	0	97,882	0	0	0	0	0	\$97,882	156,759	0	0	0	0	0	\$156,759
A & P Salaries and Benefits	0	0	0	0	0	0	0	\$0	0	0	0	0	0	0	\$0
USPS Salaries and Benefits	0	0	0	0	0	0	0	\$0	0	0	0	0	0	0	\$0
Other Personal Services	0	2,250	0	0	0	0	0	\$2,250	4,554	0	0	0	0	0	\$4,554
Assistantships & Fellowships	0	0	0	0	0	0	0	\$0	0	0	0	0	0	0	\$0
Library	0	0	0	0	0	0	0	\$0	0	0	0	0	0	0	\$0
Expenses	0	1,500	0	0	0	0	0	\$1,500	3,000	0	0	0	0	0	\$3,000
Operating Capital Outlay	0	0	0	0	0	0	0	\$0	0	0	0	0	0	0	\$0
Special Categories	0	0	0	0	0	0	0	\$0	0	0	0	0	0	0	\$0
Total Costs	\$0	\$101,632	\$0	\$0	\$0	\$0	\$0	\$101,632	\$164,313	\$0	\$0	\$0	\$0	\$0	\$164,313

*Identify reallocation sources in Table 3.

**Includes recurring E&G funded costs ("reallocated base," "enrollment growth," and "new recurring") from Years 1-4 that continue into Year 5.

***Identify if non-recurring.

Faculty and Staff Summary

	Year 1	Year 5
Total Positions		
Faculty (person-years)	0.42	1.26
A & P (FTE)	0	0
USPS (FTE)	0	0

Calculated Cost per Student FTE

	Year 1	Year 5
Total E&G Funding	\$101,632	\$164,313
Annual Student FTE	23	46.25
E&G Cost per FTE	\$4,419	\$3,553

**TABLE 3
ANTICIPATED REALLOCATION OF EDUCATION & GENERAL FUNDS***

Program and/or E&G account from which current funds will be reallocated during Year 1	Base before reallocation	Amount to be reallocated	Base after reallocation
	0	0	\$0
	0	0	
Totals	\$0	\$0	\$0
* If not reallocating funds, please submit a zeroed Table 3			

APPENDIX A

**TABLE 4
ANTICIPATED FACULTY PARTICIPATION**

Faculty Code	Faculty Name or "New Hire" Highest Degree Held Academic Discipline or Specialty	Rank	Contract Status	Initial Date for Participation in Program	Mos. Contract Year 1	FTE Year 1	% Effort for Prg. Year 1	PY Year 1	Mos. Contract Year 5	FTE Year 5	% Effort for Prg. Year 5	PY Year 5
A	Thomas Pencek, Ph.D. Finance	Instructor II	MYA	Fall 2018	9	0.75	0.02	0.02	9	0.75	0.09	0.07
A	Lisa Penney, Ph.D. Management	Associate Professor	Tenured	Fall 2018	9	0.75	0.02	0.02	9	0.75	0.03	0.02
A	Kelly Cowart, Ph.D. Management	Assistant Professor	Tenure Earning	Spring 2019	9	0.75	0.02	0.02	9	0.75	0.06	0.05
C	New Hire, Ph.D. Risk Management	TBD	T/TE	Fall 2018	9	0.75	0.50	0.38	9	0.75	0.50	0.38
C	New Hire, Ph.D. Risk Management	TBD	TBD	Fall 2020	9	0.75	0.00	0.00	9	0.75	0.25	0.19
Total Person-Years (PY)								0.42				0.70

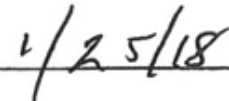
Faculty Code		Source of Funding	PY Workload by Budget Classification	
			Year 1	Year 5
A	Existing faculty on a regular line	Current Education & General Revenue	0.05	0.70
B	New faculty to be hired on a vacant line	Current Education & General Revenue	0.38	0.00
C	New faculty to be hired on a new line	New Education & General Revenue	0.00	0.56
D	Existing faculty hired on contracts/grants	Contracts/Grants	0.00	0.00
E	New faculty to be hired on contracts/grants	Contracts/Grants	0.00	0.00
Overall Totals for			Year 1 0.42	Year 5 1.26

APPENDIX B

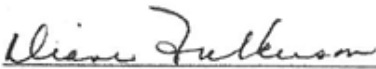
Please include the signature of the Equal Opportunity Officer and the Library Director.



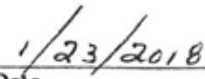
Signature of Equal Opportunity Officer



Date



Signature of Library Director



Date

This appendix was created to facilitate the collection of signatures in support of the proposal. Signatures in this section illustrate that the Equal Opportunity Officer has reviewed section II.E of the proposal and the Library Director has reviewed sections X.A and X.B.

APPENDIX C (Faculty Abbreviated CVs)

Curriculum vitae (abbreviated)

Thomas Edwin Becker

Present Position: Professor, Management, University of South Florida Sarasota-Manatee,
Sarasota, FL 34243

Phone: (941) 359-4245

E-mail: teb1@sar.usf.edu

EDUCATION

Ph.D. The Ohio State University, Columbus, Ohio, December 1990
Department of Industrial and Organizational Psychology
M.A. The Ohio State University, March 1988
Department of Industrial and Organizational Psychology
B.A. University of South Florida, Tampa, Florida, June 1982
Department of Psychology
Summa cum Laude

GRANTS FOR RESEARCH

\$120,000 German Science Foundation, 2009-2010
\$75,000 Belgian Franqui Foundation, 2002-2003
\$190,000 Army Research Institute, 1993-1995

AWARDS/HONORS

- Social Science Citation Index citation award, top 1% of economics and business
- Editor's distinction for *Organizational Research Methods* (#2 on the Top 10 list of all-time most noteworthy manuscripts)
- Certificate of Recognition for Excellence in Teaching, Spring, 2016
- University Excellence in Teaching Award, 2013
- Mercator Fellowship, German Science Foundation, Johann Wolfgang Goethe University, Frankfurt, Germany, 2010
- Associate Editor of *Human Performance*, 2008-2011
- Belgian International Francqui Chair in the Human Sciences, 2003
- CBE Continuing Excellence in Research Beyond Tenure Award, 1998
- Department of Management and Systems Advising Excellence Award, 1995
- Seafirst Distinguished Faculty Award, 1993
- Shell Instructional Excellence Award, 1992

PUBLICATIONS

1. Gonzalez-Morales, M. G., Kernan, M. C., Becker, T. E., & Eisenberger, R. (in press). Defeating abusive supervision: Training supervisors to support subordinates. *Journal of Occupational Health Psychology*.
2. Becker, T. E. (2016). Multiple foci of workplace commitments. In J. P. Meyer, *The handbook of employee commitment*. Northampton, MA: Elgar Publishing.
3. Becker, T. E., & Ferry, D. (2016). Profiles as a way of learning more about resilience (2016). *Industrial and Organizational Psychology: Perspectives on Science and Practice, 9*, 503-508.
4. Becker, T. E., Atinc, G., Breugh, J. A., Carlson, K. D., Edwards, J. R., & Spector, P. E. (2016). Statistical control in correlational studies: Ten essential recommendations for organizational researchers. *Journal of Organizational Behavior, 37*, 157-167.
5. Becker, T. E., Kernan, M. C., Clark, K. C., & Klein, H. K. (2015, online). Dual commitments to organizations and professions: Different motivational pathways to productivity. *Journal of Management*, DOI: 10.1177/0149206315602532
<http://jom.sagepub.com/content/early/2015/09/02/0149206315602532.full.pdf+html>
6. Becker, T. E., & Marique, G. (2014). Observer effects without demand characteristics: An inductive investigation of video monitoring and performance. *Journal of Business and Psychology, 29*, 541-553.
7. Becker, T. E., Ullrich, J., & Van Dick, R. (2013). Within-person variation in employee commitment: Where it comes from and why it matters. *Human Resource Management Review, 23*, 131-147. [Lead article of a special issue on advances in understanding workplace commitments.]
8. Becker, T. E. (2012). Nepotism and the commitment of relevant parties. In R. G. Jones (Ed.), *Understanding and adapting to organizational nepotism* (pp. 129-145). New York: Routledge.
9. Eisenberger, R., Karagonlar, G., Stinghamber, F., Neves, P., Becker, T. E., GonzalezMorales, M. G., & Steiger-Mueller, M. (2010). Leader-member exchange and affective organizational commitment: The contribution of supervisor's organizational embodiment. *Journal of Applied Psychology, 95*, 1085-1103.
10. Klein, H. J., Becker, T. E., & Meyer, J. P. (Eds.). (2009). *Commitment in organizations: Accumulated wisdom and new directions*. New York: Routledge.
 - (a) Becker, T. E. (2009). Interpersonal commitments. In H. J. Klein, T. E. Becker, & J. P. Meyer (Eds.), *Commitment in organizations: Accumulated wisdom and new directions* (pp. 137-178). New York: Routledge.
 - (b) Becker, T. E., Klein, H. J., & Meyer, J. P. (2009). Commitment in organizations: Accumulated wisdom and new directions. In H. J. Klein, T. E. Becker, & J. P. Meyer (Eds.), *Commitment in organizations: Accumulated wisdom and new directions* (pp. 419-452). New York: Routledge.
11. Jeffries, F. J., & Becker, T. E. (2008). Trust, norms, and cooperation: Development and test of a simplified model. *Journal of Behavioral and Applied Management, 9*, 316-336. [Selected for the editor's 2008 best paper of the year award.]
12. Becker, T. E., & Bennett, R. (2007). Employee attachment and deviance in organizations. In J. Langan-Fox, C. Cooper, and R. Klimoski (Eds.), *Research companion to the dysfunctional workplace: Management challenges and symptoms* (pp. 136-151). Northampton, MA: Elgar.
13. Meyer, J. P., Becker, T. E., & Van Dick, R. (2006). Social identities and commitments at work: Toward an integrative model. *Journal of Organizational Behavior, 27*, 665-683.
14. Van Dick, R., Becker, T. E., & Meyer, J. P. (2006). Commitment and identification: Forms, foci, and future. Introduction and overview. *Journal of Organizational Behavior, 27*, 545-548. (Editors' introduction to a special issue.)
15. Becker, T. E. (2005). Potential problems in the statistical control of variables in organizational research: A qualitative analysis with recommendations. *Organizational Research Methods, 8*, 274-

289. [Chosen by *ORM's* editor as #2 on the Top 10 list of the journal's all-time "most noteworthy manuscripts."]
16. Aquino, K., & Becker, T. E. (2005). Lying at work: How individual and situational factors influence the use of neutralization strategies. *Journal of Organizational Behavior, 26*, 661-679.
 17. Becker, T. E. (2005). Development and validation of a situational judgment test of employee integrity. *International Journal of Selection and Assessment, 13*, 225-232.
 18. Becker, T. E. (2005). Changing places in a small world: An American in Brussels. *The Industrial-Organizational Psychologist, 42*, 101-105.
 19. Meyer, J. P., Becker, T. E., & Vandenberghe, C. (2004). Employee commitment and motivation: A conceptual analysis and integrative model. *Journal of Applied Psychology, 89*, 991-1007.
 20. Becker, T. E. (2004). Why pragmatism is not practical. *Journal of Management Inquiry, 13*, 224-228.
 21. Becker, T. E. (2004). Review of the book Postmodernism and management: Pros, cons, and the alternative. *Personnel Psychology, 57*, 783-786.
 22. Becker, T. E., & Kernan, M. C. (2003). Matching commitment to supervisors and organizations to in-role and extra-role performance. *Human Performance, 16*, 327-348.
 23. Becker, T. E. (2003). Is emotional intelligence a viable concept? *Academy of Management Review (Dialogue), 28*, 192-196.
 24. Becker, T. E. (2002). A mostly informal analysis of our marketplace of ideas. *The Industrial – Organizational Psychologist, 40*, 77-84.
 25. Gopinath, C., & Becker, T. E. (2000). Communication, procedural justice, and employee attitudes: Relationships under conditions of divestiture. *Journal of Management, 26*, 6383.
 26. Becker, T. E. (1998). Integrity in organizations: Beyond honesty and conscientiousness. *Academy of Management Review, 23*, 154-161.
 27. Locke, E. A., & Becker, T. E. (1998). Rebuttal to a subjectivist critique of an Objectivist approach to integrity in organizations. *Academy of Management Review, 23*, 170-175.
 28. Locke, E. A., & Becker, T. E. (1998). Locke and Becker's reply to Weiss. *Academy of Management Review (Dialogue), 23*, 391-392.
 29. Locke, E. A., & Becker, T. E. (1998). Objectivism's answer to the sad, old world of skepticism. *Academy of Management Review (Dialogue), 23*, 658-659.
 30. Becker, T. E., Billings, R. S., Eveleth, D. M., & Gilbert, N. W. (1997). Validity of three attachment style scales: Exploratory and confirmatory evidence. *Educational and Psychological Measurement, 57*, 477-493.
 31. Becker, T. E., Billings, R. S., Eveleth, D. M., & Gilbert, N. W. (1996). Foci and bases of commitment: Implications for performance. *Academy of Management Journal, 39*, 464-482.
 32. Becker, T. E., & Martin, S. L. (1995). Trying to look bad at work: Methods and motives for managing poor impressions in organizations. *Academy of Management Journal, 38*, 174-199. (Note: Summaries of this article were published in the July-August 1995 issue of the *Harvard Business Review* and the August 1995 issue of the *Academy of Management Executive*.)
 33. Becker, T. E., Randall, D. M., & Riegel, C. D. (1995). The multidimensional view of commitment and the theory of reasoned action: A comparative evaluation. *Journal of Management, 21*, 617-638.
 34. Becker, T. E., & Eveleth, D. M. (1995, August). Foci and bases of employee commitment: Implications for job performance. *Best Paper Proceedings of the 1995 Academy of Management Meetings, Vancouver, B.C.*
 35. Becker, T. E., & Cote, J. A. (1994). Additive and multiplicative method effects in applied psychological research: An empirical assessment of three models. *Journal of Management, 20*, 625-641.

36. Becker, T. E., & Randall, D. M. (1994). Validation of a measure of organizational citizenship behavior against an objective behavioral criterion. *Educational and Psychological Measurement*, 54, 160-167.
37. Becker, T. E., & Billings, R. S. (1993). Profiles of commitment: An empirical test. *Journal of Organizational Behavior*, 14, 177-190.
38. Becker, T. E., & Vance, R. J. (1993). Construct validity of three types of organizational citizenship behavior: An illustration of the direct product model with refinements. *Journal of Management*, 19, 663-682.
39. Becker, T. E. (1992). Foci and bases of commitment: Are they distinctions worth making? *Academy of Management Journal*, 35, 232-244.
40. Becker, T. E., & Colquitt, A. L. (1992). Potential versus actual faking of a biodata form: An analysis along several dimensions of item type. *Personnel Psychology*, 45, 389-406.
41. Becker, T. E., & Klimoski, R. J. (1989). A field study of the relationship between the organizational feedback environment and performance. *Personnel Psychology*, 42, 343-358.
42. Becker, T. E., & Klimoski, R. J. (1989, April). A field study of the relationship between the organizational feedback environment and performance. In E. Stone & D. Stone (Eds.), *Proceedings of the 32nd Annual Conference of the Midwest Division of the Academy of Management*, Columbus.
43. Becker, T. E., & Sexton, D. L. (1989, June). The entrepreneurial spirit as a profile of commitment: An explication of the propensity for growth. In B. Garnier, G. d'Amboise, & Y. Gasse (Eds.), *Proceedings of the 34th World Conference of the International Council for Small Business*, Quebec.

Curriculum vitae (abbreviated)

Kelly Cowart

Present Position: Assistant Professor, Marketing, University of South Florida Sarasota-Manatee,
Sarasota, FL 34243

Phone: (941) 359-4576
E-mail: cowartk@sar.usf.edu

EDUCATION

PhD (2010), Florida State University, Tallahassee, FL; Major: Marketing; Secondary Area: Social Psychology
MBA Syracuse University, Syracuse, NY; Major: Organizational Behavior
BA Business Administration, University of Florida, Gainesville, FL; Major: Business Management

AWARDS/HONORS

Professor of the Year Award – TRIO Student Support Organization (2016)
Class experiential learning project featured on GVNOW & GVSU *Lanthorn* (2015 & 2016)
University Distinguished Early-Career Award nominee (2014)
Research findings featured in five regional media outlets (2014)
Research findings featured on GVNOW Faculty Spotlight – GVSU webpage (2014)
Best Working Paper Award – Association of Consumer Research (2013) Favorite Professor Recognition - ΒΓΣ International Honor Society (2013) McKnight Doctoral Fellow (2005 - 2010)
Ph.D. Project Fellow (2005 - 2010)
Dissertation Research Grant, Florida State University Graduate School (2008 - 2009) College of Business Teaching Excellence Award, Florida State University (2008) National Summer Institute Fellow, University of Denver (2008)
Russell V. Ewald Award for Excellence & Human Services (2008) AMS Sheth Foundation MDSA Conference Fellow (2006 - 2008)
American Marketing Association Foundation Valuing Diversity Scholarship (2007) National Black MBA Association H. Naylor Fitzhugh Scholarship (2007)

PUBLICATIONS

Pelet, J., Ettis, S. Cowart, K. (forthcoming) “Optimal Experience of Flow Enhanced by Telepresence: Evidence from Social Media Use,” *International Journal of Information and Management*.
Kemp, E., Moore, David J., Cowart, K. (2016) “Me, Myself and I: Examining the Effect of Loneliness and Self-focus on Message Referents,” *Journal of Current Issues & Research in Advertising*.
Cowart, K., Brady, M. (2014) “Pleasantly Plump: Managing the Negative Effects of Obesity

Stereotypes on Customer Evaluations of Frontline Service Employees," *Journal of Retailing*, 90(3), 365-378.

Swilley, E., Cowart, K., Flynn, L. (2014) "An Examination of Regifting: A Look at the Behaviors Behind This Gift-Giving Phenomenon," *Journal of Consumer Behaviour*, 13(4), 251-261.

Cowart, K., Ramirez, E., Brady, M. (2014). "Religious Affiliation: Buffering Negative Reactions to Service Failures," *Journal of Services Marketing*, Vol. 28(1).

Cowart, K., Darke, P. (March 2014). "Targeting Miss Daisy: Using Age and Gender to Target Unethical Sales Tactics" *Marketing Letters*, Vol. 25(1), 67-75.

2

Cowart, K., Fox, G., Wilson, A. (2008). "A Structural Look at Consumer Innovativeness and Self Congruence in New Product Purchases," *Psychology & Marketing*, Vol. 25(12), pp. 1111-1130.

Cowart, K., Goldsmith, R. (2007). "Influence of Consumer Decision Making Styles on Online Fashion Consumption of College Students," *International Journal of Consumer Studies*, Vol. 31(6), pp. 639- 647.

Curriculum vitae (abbreviated)

JAMEY AUSTIN DARNELL

Present Position: Visiting Instructor, Management, University of South Florida Sarasota-Manatee,
Sarasota, FL 34243

Phone: (941) 359-4647

E-mail: darnellj@sar.usf.edu

EDUCATION

- D.B.A. Doctor of Business Administration: University of Florida, Gainesville, FL. 2017 AACSB & regionally accredited. Ph.D. course work – 27 credit hours in Management (Organizational Behavior).
Virginia Commonwealth University, Richmond, VA 2007-2008. AACSB & regionally accredited.
Dissertation: Corporate Social Responsibility and Firm Reputation Risk: Bettering Firm
Reputational Risk through Socially Responsible Activities.
- M.B.A. Thunderbird, School of Global Management, Glendale, AZ. International Management, 1999.
AACSB & regionally accredited.
- B.S. Pepperdine University, Malibu, CA. International Business, 1998. AACSB & regionally accredited.

AWARDS/HONORS

- International Management syllabus recognized by McGraw-Hill as an exemplar to accompany *Global Business Today* by Hill & Hult.
- Endowed Chairs for Excellence at the College of Central Florida: the Mr. and Mrs. Seymour B. Robinson Endowed Chair (grant to develop Experiential Entrepreneurship Education 2015-2016).
- UF Graduate Grant 2014, 2015
- Southern Management Association Doctoral Consortium Travel Stipend 2007.
- VCU Graduate School Scholarship 2007/2008
- Indiana Department of Workforce Development Grant (to develop a training program for new frontline managers) 2004.
- Best Educator nominee, Kokomo Tribune 2004.
- Thunderbird Grant 1999.

PUBLICATIONS

- Darnell, J. A. (2017). The Experiential Exercise about Nothing: using comedy to teach creativity. *Experiential Entrepreneurship Exercises Journal*, 2(S1), 30-35.
- Darnell, J. A. & Means, T. S. (2017, forthcoming). What do People, Prototyping, Problem Solving, and Play-Doh have in Common? Team-based Learning! *American Journal of Management*, 17(2).
- Darnell, J. A. & Rahn, D. R. (2017, forthcoming). E-business for Entrepreneurs: a turnkey experiential based course for teaching faculty. *Journal of Higher Education Theory & Practice*, 17(5).
- Darnell, J. A., Darnell, M. R., & Means, T. S. (2017, forthcoming). Resistance is Futile: using Team Based Learning (TBL) to teach change and create an Idea Champion collective. *American Journal of Management*, 17(3).

Curriculum vitae (abbreviated)

Thomas Pencek

Present Position: Instructor II - Finance
University of South Florida-Sarasota-Manatee, Sarasota, FL 34243

Phone: (941) 359-4631
Email: pencek@sar.usf.edu

EDUCATION

D.B.A. (1988) Mississippi State University, Mississippi State, Mississippi. (Major-Finance, Minors-Accounting and Quantitative) Dissertation Topic - A Comparison of Relative Efficiency Measures of the Major United States Stock Exchanges.

M.B.A. (1982) Mississippi State University, Mississippi State, Mississippi.

B.S. (1977) (Business Administration/Accounting) SUC at Fredonia, Fredonia, New York.

AWARDS/HONORS

Outstanding Professor Award by graduating seniors, USF/Sarasota-Manatee (Fall 2008) Faculty Representative to Faculty Governance Association USF/Sarasota-Manatee
MBA Professor of Year 2003-2004 Meredith College
International Academy for Information Management (Board of Directors, Vice President 2000-2005)
Beta Gamma Sigma
Decision Sciences Institute
Delta Mu Delta
Financial Management Association
Midsouth Academy of Economics and Finance
Midwest Finance Association
Northeast Business and Economics Association
Academy of Financial Services
Omicron Delta Epsilon

PUBLICATIONS

"Excess Returns in Hospitality Stocks," with K. Annaraud and D. Singh, Journal of Tourism and Hospitality Management, Accepted for publication in 2017.

"Sunrise Golf Club" with K. Annaraud, Journal of Hospitality and Tourism Cases, 2015.

"Predicting First-Year Returns of Health Care IPOs," with R. Borghesi, Journal of Applied Business Research, May/June 2013, Vol. 29, NO. 3.

"The Value of Smart Money Stock Recommendations," with R. Borghesi, Applied Economics Letters, July 2011, Vol. 18, Issue 10.

"The (Non) Performance of *Kiplinger's* Expert Recommendations" with R. Borghesi, Journal of Applied Business Research (July/August 2010).

Stock Market Performance of Health Initial Public Offering, with Neset Hikmet and J. Barry Lin, Journal of Business and Economic Studies (Fall 2009)

"An Application of Active Learning and Distance Education," with D. Bialaszewski, e-book of Informing Sciences, 2001.

"A Description of the Finance Requirements and Computer Utilization at AACSB-Accredited

Schools," with Dennis Bialaszewski and John Zeitlow, Financial Practice and Education, Spring 1994.

"A Comparison of Market Efficiency of the Major U.S. Stock Exchanges," with Theodor Kohers, American Business Review, June 1990.

"An Investigation Into the Market Efficiency of the American Stock Exchange," with Theodor Kohers, Business and Economic Review, Summer 1988.

Curriculum vitae (abbreviated)

Lisa M. Penney

Present Position: Associate Professor – Management, University of South Florida Sarasota-Manatee, Sarasota, FL 34243

Phone: (941) 359-4653

E-mail: lpenney@sar.usf.edu

EDUCATION

Ph.D. Industrial-Organizational Psychology, University of South Florida, 2003

Dissertation: Workplace incivility and counterproductive work behavior (CWB): What is the relationship and does personality play a role? Chair: Paul E. Spector

M.A. Industrial-Organizational Psychology, University of South Florida, 1999 Thesis:

Antisocial workplace behavior and self-esteem: An examination of the relationship between egotism and aggressive and antisocial behavior. Chair: Paul E. Spector

B.A. Psychology, University of South Florida, 1996, Magna Cum-Laude

GRANTS for RESEARCH

- \$3,300,000 Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers (ADVANCE). (NSF 12-584) PI: Renu Khator (Chancellor, UH). Co-PIs: Tedesco, J. (Dean, College of Engineering), Wells, D. (Dean, College of Natural Sciences and Mathematics), Dunbar, B. (Professor, Engineering), & Hutchins, H. (Associate Professor, HR Development).
Role: L. M. Penney & L. A. Witt (Co-Investigators) ADVANCE Social Science Research Initiative: *Organizational Climate as a Faculty Resource: A Multi-Dimensional, Latent Variable, Multi-Level Investigation*. Funded for August 2014-July 2019.
- \$20,603 National Institutes of Justice (NIJ) via the Southwest Public Safety Technology Center (SWTC), 2007. Violence, Aggression and Law Enforcement Officer Performance: Do Formal and Informal Support Systems Mitigate the Negative Impact of Experienced Aggression on Officer Performance? Funded for Jan. 15, 2008 – Sept. 30, 2008.
- \$6,000 New Faculty Research Grant, University of Houston, 2005. Identifying motives for employee counterproductive behavior.

AWARDS/HONORS

- 2014 Recognized by Routledge for having one of the most downloaded articles published in Routledge Behavioral Sciences journals in 2014 for Hunter & Penney (2014) article in *Human Performance*.

- 2013 Nominated for the Ross M. Lence Teaching Excellence Award, College of Liberal Arts and Social Sciences, University of Houston.
- 2012 Nominated for the Ross M. Lence Teaching Excellence Award, College of Liberal Arts and Social Sciences, University of Houston.
- 2011 Recognized by Elsevier for having one of the 10 most cited papers of the last 5 years by the *Journal of Vocational Behavior*.
- 2008 Recognized for presenting one of the top posters at the 2008 SIOP Conference.
- 2008 Recognized for presenting one of the top papers at the 2008 Academy of Management Meeting, Entrepreneurship Division.

PUBLICATIONS

* INDICATES CURRENT OR FORMER STUDENT.

1. Hutchins, H. M., **Penney, L. M.**, & *Sublett, L. W. (In press). What imposters risk at work: Exploring imposter phenomenon, coping, and job outcomes. *Human Resource Development Quarterly*.
2. Messa, E. A, Horn, C. L., Longacre, T., Olenchak, F. R., & **Penney, L. M.** (2016). A case for competencies: Assessing the value of trait-based performance appraisal for nonfaculty university employees. *Education Policy Analysis Archives*, 24(51). <http://dx.doi.org/10.14507/epaa.v24.2212>
3. *Shoss, M. K., *Hunter, E. M., & **Penney, L. M.** (2016). Avoiding the issue: Disengagement coping style and the personality-CWB link. *Human Performance*, 29(2), p.106-122. DOI:10.1080/08959285.2016.1148036
4. *Hunter, E., & **Penney, L. M.** (2014). The Waiter Spit in my Soup! Antecedents of Customer-Directed Counterproductive Work Behavior. *Human Performance*, 27, 262-281.
doi: 10.1080/08959285.2014.913595
****Recognized as one of the most downloaded articles published in Routledge Behavioral Sciences journals in 2014.**
5. *Hunter, E. M., Neubert, M. J., *Perry, S. J., Witt, L. A., **Penney, L. M.**, & Weinberger, E. L. (2013). Servant leaders inspire servant followers: Outcomes for employees and the organization. *Leadership Quarterly*, 24, 316-331. doi: 10.1016/j.leaqua.2012.12.001
****Recognized as one of the 5 most highly cited articles in *Leadership Quarterly* from 2014-2016.**
6. *Shoss, M., & **Penney, L. M.** (2012). The economy and absenteeism: A macro-level study. *Journal of Applied Psychology*, 97(4), 881-889 doi:10.1037/a0026953.
7. Ilie, A., **Penney, L. M.**, Ispas, D., & Ilescu, D. (2012). The role of anger in the relationship between stressors and counterproductive work behaviors: Convergent findings from multiple studies and methodologies. *Applied Psychology: An International Review*, 61(3), 415-436.

8. **Penney, L. M.**, *David, E., & Witt, L. A. (2011). A review of personality and performance: Identifying boundaries, contingencies, and future research directions. *Human Resource Management Review*, 21, 297-310. doi:10.1016/j.hrmr.2010.10.005
9. **Penney, L. M.**, *Hunter, E. M., & *Perry, S. J. (2011). Personality and CWB: Using Conservation of Resources Theory to narrow the profile of deviant employees. *Journal of Occupational and Organizational Psychology*, 84, 58-77. doi:10.1111/j.2044-8325.2010.02007.x
10. *Perry, S. J., Witt, L. A. **Penney, L. M.**, & Atwater, L. (2010). The downside of goalfocused leadership: The role of personality in subordinate exhaustion. *Journal of Applied Psychology*, 95, 1145-1153. doi: 10.1037/a0020538
11. Kessler, S. R., Bandelli, A. C., Spector, P. E., Borman, W. E., Nelson, C. E., & **Penney, L. M.** (2010). Reexamining Machiavelli: A three dimensional model of Machiavellianism in the workplace. *Journal of Applied Social Psychology*, 40(8), 1868-1896.
12. *Krischer, M., **Penney, L. M.**, & *Hunter, E. (2010). Can counterproductive work behaviors be productive? CWB as emotion-focused coping. *Journal of Occupational Health Psychology*, 15(2), 154-166. doi: 10.1037/a0018349
****Also featured in *Academy of Management Perspectives*, August 2010 issue.**
13. *Milam, A., Spitzmuller, C., & **Penney, L. M.** (2009). Individual differences and perceptions of workplace incivility. *Journal of Occupational Health Psychology*, 14(1), 58-69.
doi: 10.1037/a0012683
14. Spector, P. E., Fox, S., **Penney, L. M.**, Bruursema, K., Goh, A., & Kessler, S. (2006). The dimensionality of counterproductivity: Are all counterproductive behaviors created equal? *Journal of Vocational Behavior*, 68, 446-460. doi:10.1016/j.jvb.2005.10.005
****In 2011 Elsevier noted as one of top 10 cited over the prior 5 years in the journal.**
15. **Penney, L. M.**, & Spector, P. E. (2005). Job stress, incivility, and counterproductive workplace behavior (CWB): The moderating role of negative affectivity. *Journal of Organizational Behavior*, 26(5), 777-796. doi: 10.1002/job.336
16. **Penney, L. M.** & Spector, P. E. (2002). Narcissism and counterproductive behavior: Do bigger egos mean bigger problems? *International Journal of Selection and Assessment*, 10(1), 126-134.

Agenda Item: FL 112

USF Board of Trustees

June 12, 2018

Issue: In order to commence USF Institute of Applied Engineering operations, the Board of Trustees must certify the Institute as a new Direct Support Organization, submit the necessary legal documentation for incorporation and tax exempt status, and finally approve its operating budget.

Proposed action: Approve by consensus the Institute of Applied Engineering Articles of Incorporation, Bylaws, and initial Board of Director membership as reviewed by the Strategic Initiatives Committee at their May 22 meeting. Upon approval, General Counsel will submit the documents to the State of Florida for not-for-profit incorporation and the IRS for tax-exempt status. The Institute will come forward in August to the Finance Committee to submit its operating budget for approval by the Board of Trustees in September.

Executive Summary:

Advances in autonomous systems, data analytics, and human performance enhancement/biomedical engineering have the promise to dramatically increase national defense capabilities, while introducing new vulnerabilities related to cybersecurity. As presented at the February USF Strategic Initiatives Committee meeting, the Institute of Applied Engineering was conceived to address these challenges, with the ultimate goal of being designated by the Department of Defense as one of a select number of University Affiliated Research Centers. The Institute plans on initially supporting the United States Special Operations Command, which is headquartered at MacDill Air Force Base and has a \$500M research, development, test, and engineering annual budget. This builds on support the College of Engineering already provides USSOCOM. Since receiving preliminary approval from the Strategic Initiatives Committee, additional Institute planning efforts have been accomplished, and with Board of Trustees certification for a new DSO, will be ready to start operations in summer 2018.

Financial Impact:

The Institute will generate revenue through contracts with the Department of Defense and other federal, state, and local government and industry. However, additional funding will be required initially for start-up operations and cash flow requirements. As revenue grows, the need for external support will be reduced over time and eventually eliminated.

Strategic Goal(s) Item Supports: The Institute supports all four goals of the USF Strategic Plan

BOT Committee Review Date: Strategic Initiatives Committee, May 22, 2018

Supporting Documentation Online (please circle): Yes **No**

USF System or Institution specific: USF System

Prepared by: Eric Forsyth, College of Engineering

INSTITUTE OF APPLIED ENGINEERING

CERTIFICATION REQUEST TO CREATE NEW USF DIRECT SUPPORT ORGANIZATION

Dr. Robert H. Bishop, PE | May 22, 2018

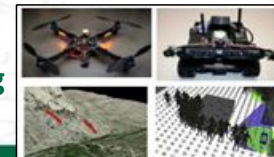
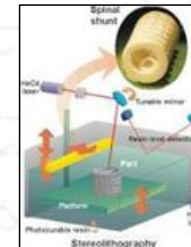
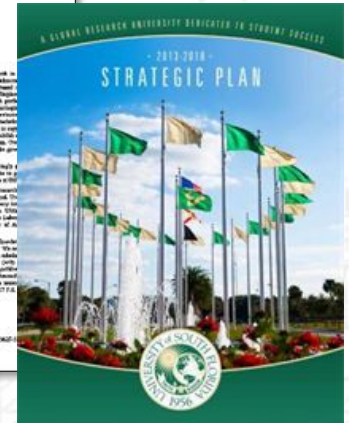
Mr. Eric Forsyth, Col (ret) U.S. Air Force

TODAY'S PURPOSE

- **Seek Strategic Initiatives Committee approval to request Board of Trustees in June to certify by consent the Institute of Applied Engineering as a new Direct Support Organization**
 - **Approve Institute Articles of Incorporation, Bylaws, and Board of Directors**

THE INSTITUTE OF APPLIED ENGINEERING

- February 2018 USF Board of Trustees' Strategic Initiatives Committee provided authority to establish Institute as new Direct Support Organization
- Institute diversifies USF's research portfolio by pursuing \$71B annual Department of Defense (DoD) research and development (R&D) budget
 - Initial focus: supporting USSOCOM and their \$500M annual R&D portfolio
- Mission: Become our customers' trusted agent to provide engineering solutions that enhance the performance, effectiveness & safety of their frontline operators
- Institute core competencies promote USF System strengths, address DoD needs
 - Autonomous System Development
 - Human Performance Enhancement and Biomedical Engineering Technologies
 - Cybersecurity
 - Transportation and Energy Infrastructure
 - Supporting capabilities including large scale data analytics and additive manufacturing



PURSUING INSTITUTE STAND UP VIA TWO PHASE APPROACH

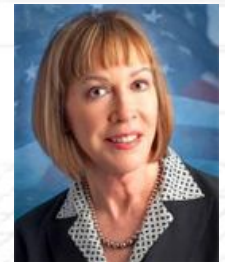
- **Phase 1 (May/June): Approve Legal Documentation**
 - Approve Institute Articles of Incorporation
 - Approve Institute Bylaws
 - Approve initial membership for Institute Board of Directors
 - Upon Board of Trustees consent approval in June, will submit legal documentation to incorporate and request tax-exempt status
- **Phase 2 (August/September): Approve Budget**
 - Approve Institute funding strategy
 - Approve final membership for Institute Board of Directors

INSTITUTE BYLAWS SUMMARY (MODELED AFTER MSSC BYLAWS APPROVED MARCH 2017)

- **Institute Board of Director Composition (all must be approved by Board of Trustees)**
 - Dean, College of Engineering
 - One member nominated by USF System President
 - One member nominated by USF Board of Trustees
 - 4-6 additional members nominated by Dean, College of Engineering (next slide)
- **Institute Officers**
 - Board Chairperson: Elected by the Board from the membership of the Board
 - Board Vice-Chairperson: Elected by the Board from the membership of the Board
 - Corporation President/Chief Executive Officer: Dean, College of Engineering
 - Corporation Secretary and Treasurer position(s): Appointed annually by the Board
- **Standing and special committees established by Board via Bylaws**
- **Board chairperson calls all regular and special meetings; annual meeting in October**

PROPOSED INITIAL INSTITUTE BOARD OF DIRECTOR MEMBERSHIP

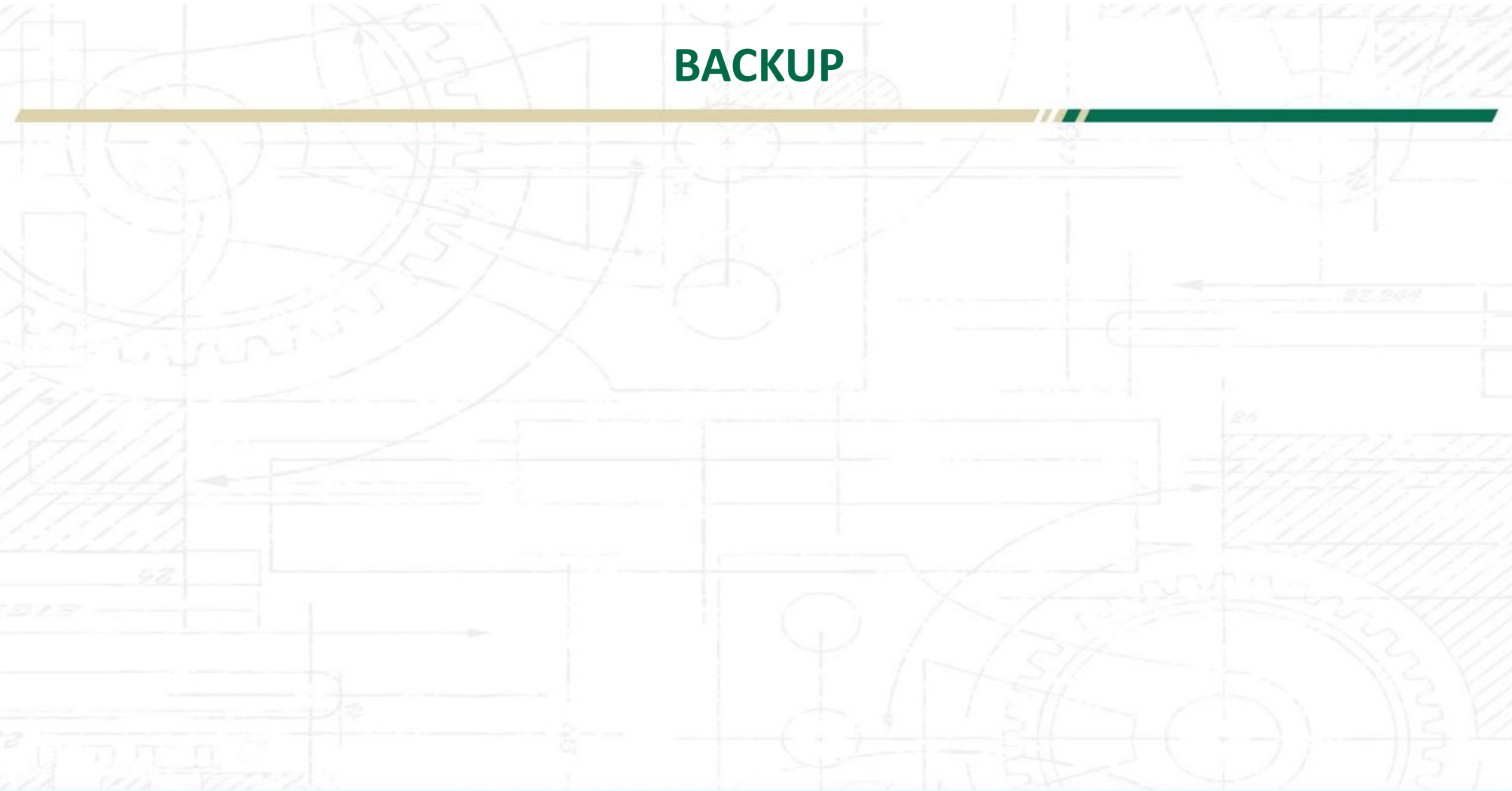
- **ADM (ret) Eric T. Olson** is an independent national security consultant who supports a wide range of private and public sector organizations, including serving on the Boards of Iridium Communications, Under Armour, and the Special Operations Warrior Foundation. In 2011 he retired as a full Admiral in the United States Navy after 38 years of military service. Admiral Olson's last active duty assignment was as the eighth commander of United States Special Operations Command, where he was responsible for the mission readiness of all Army, Navy, Air Force, and Marine Corps special operations forces.
- **MGEN (ret) N. Lee Price** runs a consulting firm focusing on leadership training, governance, and strategic planning while also serving on several Boards including Southern Research Institute, the Lakeshore Foundation, and Red Gate Group. In 2014 she retired from the United States Army after over 32 yrs of military service. General Price's last active duty assignment was as the Army Program Executive Officer Command, Control, Communications – Tactical, where she was responsible for the Army's 2nd largest acquisition portfolio.
- **Mr. James Cluck** currently serves as the President of Ultra Armoring & Defense and Metal Works Mfg. Co. based in Shelby NC. He has over 41 years of combined military and civilian Federal service including over 29 years' experience in Department of Defense acquisition. As a member of the Senior Executive Service, Mr. Cluck previously served as the Acquisition Executive and the Chief Information Officer for the U.S. Special Operations Command.
- **Mr. Paul Lemmo** is the Vice President and General Manager of Fire Control/SOF Contractor Logistics Support Services for Lockheed Martin Missiles and Fire Control in Orlando. Mr. Lemmo leads the LMC's center of expertise for electro-optical, infrared, and radar targeting and navigation systems on aircraft, advanced fire control and situational awareness systems for future platforms, ground systems, and passive attack and survivability systems. Mr. Lemmo has more than 30 years of experience in business development, engineering and program management.



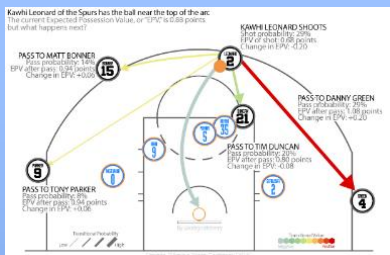
CONCLUSION

- **Request Strategic Initiatives Committee recommend to USF Board of Trustees to certify by consent Institute of Applied Engineering as a new Direct Support Organization**
 - **Approve Institute Articles of Incorporation, Bylaws, and initial Board of Director membership**

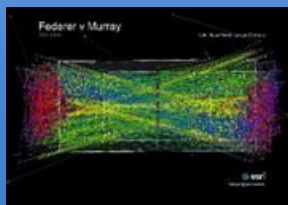
BACKUP



DEPARTMENT OF DEFENSE CHALLENGE



Autonomous systems, data analytics & human performance enhancement tech promises to dramatically increase defense capabilities ...



...while opening the door to new cyber threats that can negate their benefits.



And yet, today's institutions were not conceived to provide technical expertise to DoD on how to best prototype & adopt these capabilities

Commercial
Defense
Aerospace
TechIT
Industry
Communications

Academia
UARCs
Laboratories
SPOs FFRDCs
Non-profits

FY17 RDT&E Budgets



\$71.8B



\$497M

INSTITUTE ASPIRATION: UNIVERSITY-AFFILIATED RESEARCH CENTER (UARC)

- **USF College of Engineering is successfully transitioning to a nationally recognized, public university program**
- **Institute will further stimulate growth of College by providing engineering solutions beyond basic research to federal govt with commercial-based contracts**
- **Other world-class universities have supporting institutions providing this similar capability via University Affiliated Research Centers (UARCs)**
- **UARCs are university-based entities established to solve national security problems for the government**
 - **Approved by Assistant Secretary of Defense (Research and Engineering), who assigns a service sponsor**
 - **Provides essential engineering, research & development core capabilities to Dept of Defense**
 - **Long-term, strategic relationship; eligible for sole source funding (minimum \$6M annually)**

University Affiliated Research Centers

(Association of American University Members)

Primary Sponsor	University	UARC
Army	Georgia Institute of Technology	Georgia Tech Research Institute (GTRI) Applied Systems Laboratory (ASL)
	Massachusetts Institute of Technology	Institute for Soldier Nanotechnologies
	University of California, Santa Barbara	Institute for Collaborative Biotechnologies
	University of Southern California	Institute for Creative Technologies
Navy	The Johns Hopkins University	Applied Physics Laboratory
	Penn State University	Applied Research Laboratory
	University of Hawaii	Applied Research Laboratory
	University of Texas at Austin	Applied Research Laboratory
	University of Washington	Applied Physics Laboratory
Missile Defense Agency	Utah State University	Space Dynamics Laboratory
DASD (Systems Engineering)	Stevens Institute of Technology	Systems Engineering Research Center
National Security Agency	University of Maryland, College Park	Center for Advanced Study of Language
U.S. Strategic Command	University of Nebraska	National Strategic Research Institute



Founded in 1942
\$1.3B contracts/grants (2015)

Founded in 1934
\$370M contracts/grants (2015)

Founded in 2012
\$24M awards in first 3 yrs of ops

CURRENT USF SUPPORT TO USSOCOM \$1.05M funded efforts in 2016-2017 and \$1.28M projected 2018

- Full-time presence at SOFWERX
- USF-led undergrad intern / graduate research assistants
 - USF acts as the umbrella, hiring students from other universities
 - Providing technical, business and graphic design support
 - Florida Corridor Matching funds help offset costs
 - Spring 2018: 16 undergraduate and 6 graduate-level students
- USSOCOM's Program Executive Office - Special Reconnaissance, Surveillance & Exploitation's Small Sat
 - Extremely low-cost satellite, 2 phases: Design, test, integration, launch in 12-18 months
 - Florida Corridor Matching funds offset labor costs; 1 PhD student, 6 undergraduates
- Mad Jack's Cyber Range
 - USF Florida Cyber Center funds supporting 2 graduate and 5 undergraduate students in 2018
- Air Force Blue Horizon Fellow Support
 - Faculty Member part-time SME

ThunderDRONE



Industry Engagement



CO-INVENTION **COLLABORATION EVENTS** **Project Vulcan**
Rapid Prototyping **Industry Fellowship/University Interns**
TECHNOLOGY AWARENESS **USF Partnership** **TALOS**

- **JOBWERX**
 - Part-time support for recent graduates
 - February 2018 kick-off with first hire
- **Tactical Assault Light Operator Suit (TALOS)**
 - Faculty member systems engineering support 2017
 - Senior project Fall 17, Spring 18 – 4 undergraduates

Future SOFWERX support will flow through Institute

ONGOING INSTITUTE BUSINESS DEVELOPMENT EFFORTS

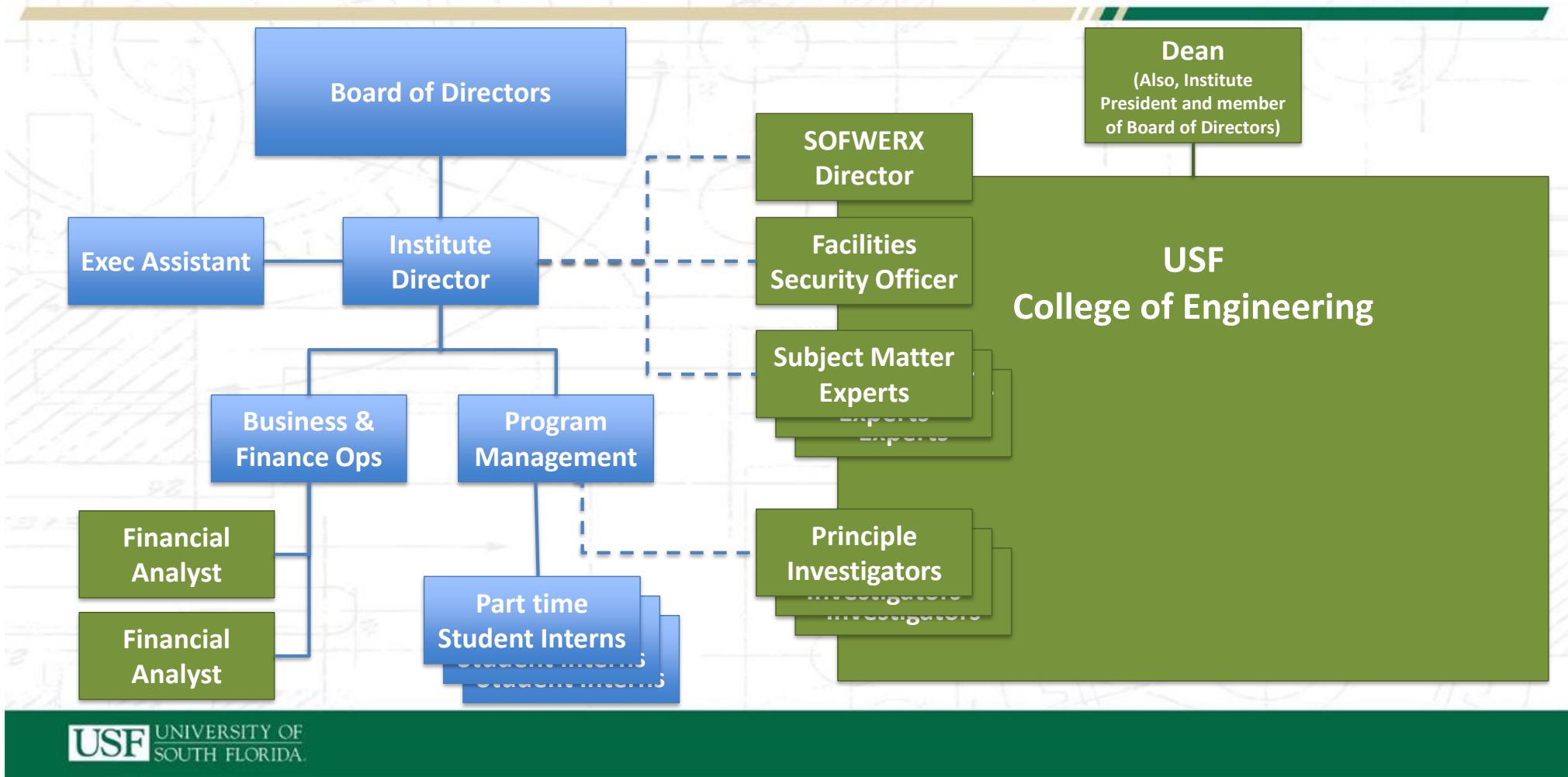
- **Pursuing USSOCOM Sole Source Task Order Contract**
 - Engaged Acquisition Executive, Science & Technology Director, and Program Executive Officers on Institute capabilities
 - USSOCOM developing acq strategy; opportunity for multi-year, \$13.5M contract
- **Invited to join Systems Engineering Research Center (SERC)**
 - UARC with 22 universities engaged in systems engineering research
 - Led by Stevens Institute of Technology: \$14M in revenue in 2017
 - Contract permits multiple DoD sponsors to easily access partner universities
- **Signing NDAs with multiple entrepreneurs to partner on Department of Defense opportunities**
- **Hosted Air Force 2030 Science & Technology Workshop in April**
 - One of six universities selected to host academia and business to identify new ideas supporting Air Force, informing basic and applied research investments
 - Resounding success! Identified numerous opportunities to collaborate
 - Invited to HQ Air Force Research Lab by Chief Technology Officer
 - <http://www.usf.edu/engineering/news-room/afri-2030.aspx>



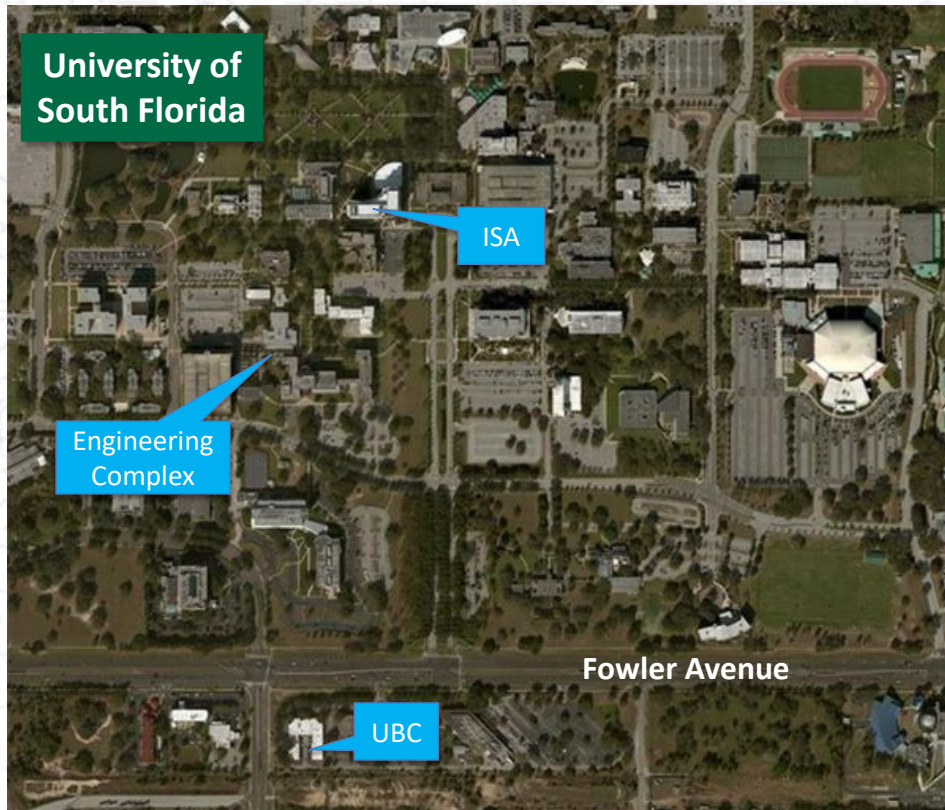
Founded in 2008
\$20M awards in first 3 yrs of ops



Institute Org Chart (Fall 2018)



Facilities and IT Infrastructure



- Secure facility in Interdisciplinary Sciences (ISA)
 - 2100 sq ft, includes space for additive manufacturing, servers, security office, & workstation/conference area
 - Working with SOCOM J6 on network connectivity
- University Business Center (UBC)
 - Available May 2018 (5 year lease through USF Research Foundation)
 - Requested 2000 sq ft, \$23/sq ft annual
 - Developing MOU with USF IT for data/phone service
- Cybersecurity Center (location TBD, available ~2023)
 - Both open/restricted areas and network connectivity
 - Recommending Institute requirements into Cybersecurity Center planning

Other Operational Considerations: University Functional Support

- USF & College of Engineering IT (desktop support, web)
- USF General Counsel (e.g. contract legal review)
- USF Controller (e.g. Purchasing, pCard)
- USF Research & Innovation (e.g. Export Control)
- USF & College of Engineering Human Resources (e.g. Hiring, Payroll)
- Others, e.g., Audit and Compliance

Other Operational Considerations: Accounting System & Financial Support

- As a DSO, Institute requires a separate set of books
 - Will also require separate banking services, tax preparation, and independent audit
- After assessing various options w/ USF Business and IT professionals (and polling similar organizations at other Universities), recommend implementing QuickBooks/eFaact solution for separate accounting system
 - QuickBooks/eFaact is affordable, cloud-based solution that supports DCAA compliance requirements including time-keeping, execution status by contract, etc
 - Alternative University systems do not meet key requirements and are costly
 - Reimbursement to University accomplished through multiple mechanisms including convenience funds and redundant salary accounts
- Will require University “investment” (funding in compliance w/existing DSO statute & anticipated legislative language) to support Institute start up and cash flow needs

Institute Timeline Operating Expenses and Revenue Targets

Years 1-2: “Establish the DSO, solidify internal USF relationships, and pursue initial contracts”

- Facilities: Space in University Business Center (UBC, lease); Interdisciplinary Sciences (ISA, on campus)
- Personnel:
 - Full time Director, Business & Finance Manager, Program Manager, Exec Assistant, Student Interns
 - Receive staff support from SOFWERX Director, Security Officer, Accountants, Engineering Subject Matter Experts
- Revenue: \$1.5-3M/yr

Years 4-5: “Grow business necessary to pursue formal UARC designation and reduce USF support”

- Facilities: Transition into new Cybersecurity Research Center (on campus)
- Personnel:
 - Add to support staff as required
 - Hire dedicated researchers
- Revenue: \$6-7M/yr

Years 7-8: “Mature, financially independent DSO & UARC supporting multiple govt & industry partners”

- Facilities: Expand to additional site(s) depending on customer base
- Personnel:
 - Maintain small full time support staff
 - For contracted efforts, balance between USF faculty/student, institute researchers, and collaborating university/industry partners
- Revenue: \$10-11M/yr

INSTITUTE 12 MONTH LOOK AHEAD

- **Board of Trustees certify Institute as new Direct Support Organization in June**
- **Submit Articles for Florida not-for-profit incorporation, IRS application for tax exempt**
- **Finalize first year Institute budget for presentation to Board of Trustees in September**
- **Hire initial staff and finalize relationships with University stakeholders via MOUs**
- **Establish Institute business processes**
- **Complete 7th floor ISA construction; move in, establish space utilization process**
- **Procure and install accounting system; obtain bank, audit, tax services and insurance**
- **Continue to develop relationships with USF researchers to support Institute**
- **Continue Business Development Efforts**
 - **Award SOCOM Task Order Contract. Negotiate indirect rate(s); award initial task(s)**
 - **Submit proposal for Systems Engineering Research Center Collaborating University membership**
 - **Engage with USSOCOM and other Florida-based DoD and industry on partnership opportunities**

Direct Support Organization (DSO) Formation and Oversight

- **Applicable DSO Statute and Regulations**
 - Florida Statute 1004.28
 - State University System of Florida Board of Governors Regulation 9.011
 - USF System Regulation 13.002
- **Approval and Oversight**
 - DSO Articles and Bylaws (and all amendments) shall be recommended and presented by the President of the USF System to the Board of Trustees for review and approval
 - Upon approval, the DSO shall be certified and authorized to use the property, facilities and personnel services of the USF System to the extent permissible by applicable law and regulation
 - Operating budgets shall be prepared at least annually, approved by the DSO's governing board, and presented by the USF President to the Board of Trustees for review and approval
 - Expenditure plans shall be reviewed and approved quarterly by the USF President or designee; said designee shall be a VP, provost or other duly senior officer of the USF System reporting directly to the USF President and having operational responsibility on behalf of the USF System for the DSO
 - DSO shall provide for an annual financial audit and management letter

ARTICLES OF INCORPORATION

The undersigned incorporator, for the purpose of forming a corporation under the Florida Not For Profit Corporation Act, hereby adopt(s) the following Articles of Incorporation:

ARTICLE I. NAME

The name of the corporation shall be the University of South Florida Institute of Applied Engineering, Incorporated (the "Corporation").

ARTICLE II. PRINCIPAL OFFICE

The principal place of business and mailing address of the Corporation is:

University of South Florida College of Engineering
4202 East Fowler Avenue, ENB 118
Tampa, Florida 33620

ARTICLE III. PURPOSE(S)

The purpose for which the Corporation is organized is exclusively for charitable, religious, educational, and scientific purposes under Section 501(c)(3) of the Internal Revenue Code, or corresponding section of any future federal tax code.

ARTICLE IV. MANNER OF ELECTION OF DIRECTORS

The manner in which the directors are elected or appointed is set forth in the By Laws.

ARTICLE V. INITIAL REGISTERED AGENT AND STREET ADDRESS

The name and Florida street address of the initial registered agent is:

University of South Florida Office of the General Counsel
4202 East Fowler Avenue, CGS 301
Tampa, Florida 33620

ARTICLE VI. INCORPORATOR

The name and address of the Incorporator to these Articles of Incorporation:

Henry H. Raattama, Jr.
98 Southeast Seventh Street, Suite 1100
Miami, Florida 33131

ARTICLE VII. CHARITABLE ORGANIZATIONS PROVISIONS

Notwithstanding any powers granted to the Corporation by its Articles, By Laws or by the laws of the State of Florida, the following limitations of power shall apply:

a. The Corporation is organized exclusively for charitable, religious, educational and scientific purposes, including for such purposes the making of distributions to organizations that qualify as exempt organizations under Section 501(c)(3) of the Internal Revenue Code of 1986, as amended ("Code").

b. No part of the net earnings of the Corporation shall inure to the benefit of, or be distributable to its members, trustees, officers, or other private persons, except that the Corporation shall be authorized and empowered to pay reasonable compensation for the services rendered and to make payments and distributions in furtherance of purposes set forth in the purpose clause hereof. No substantial part of the activities of the Corporation shall be the carrying on of propaganda, or otherwise attempting to influence legislation, and the Corporation shall not participate in, or intervene in (including the publishing or distribution of statements) any political campaign on behalf of (or in opposition to) any candidate for public office. Notwithstanding any other provision of this document, the organization shall not carry on any other activities not permitted to be carried on (i) by an organization exempt from federal income tax under Code Section 501(c)(3); or (ii) by an organization contributions to which are deductible under Code Section 170(c)(2).

c. Upon dissolution of the Corporation, assets shall be distributed for one or more exempt purposes within the meaning of Code Section 501(c)(3), or shall be distributed to the federal government, or a state or local government, for public purpose. Any such assets not so disposed of shall be disposed of by the court having jurisdiction over the Corporation, exclusively for such purposes or to such organization or organizations, as said court shall determine, which are organized and operated exclusively for such purposes.

Signature/Incorporator

Date

Having been named as registered agent and to accept service of process for the above stated corporation at the place designated in this certificate, I hereby accept the appointment as registered agent and agree to act in this capacity. I further agree to comply with the provisions of all statutes relating to the proper and complete performance of my duties, and I am familiar with and accept the obligations of my position as registered agent.

Signature/Registered Agent

Date

**BYLAWS
OF
UNIVERSITY OF SOUTH FLORIDA
INSTITUTE OF APPLIED ENGINEERING, INCORPORATED
(a Florida Corporation Not For Profit and a University Direct Support Organization
of the University of South Florida)**

ARTICLE I

Name and Address

The name of this corporation is University of South Florida Institute of Applied Engineering, Incorporated (the “Corporation”). The principal office and mailing address of the Corporation shall be University of South Florida College of Engineering, 4202 East Fowler Avenue, Tampa, Hillsborough County, Florida 33620.

ARTICLE II

Purposes and Powers

SECTION 1. Purposes and Powers.

The Corporation is organized as (i) a corporation not for profit under Chapter 617, Florida Statutes, and (ii) a university direct-support organization under Section 1004.28, Florida Statutes, Florida Board of Governors Regulations 1.001(8)(b) and 9.011, and University of South Florida Regulation 13.002, and corresponding provisions of any subsequent laws or regulations. The Corporation is organized and shall be operated exclusively for charitable, scientific and educational purposes and not for pecuniary profit, and exclusively

for the support and benefit of the University of South Florida (the “University” or “USF”) including without limitation the USF College of Engineering (“COE”). The Corporation shall possess all of the powers and authority as are now or may hereafter be granted to corporations not for profit and university direct-support organizations under the laws of the State of Florida. Pursuant to the Corporation’s operations and activities exclusively for the support and benefit of the University, the specific purposes for which the Corporation is organized shall include but not be limited to the following:

- A. The Corporation is organized and operated to provide applied engineering solutions to the United States Federal government as well as other State, County, and Municipal governments and industry. A distinguishing feature of the Corporation, compared to other USF direct support organizations, is that it will predominantly provide these solutions through contracts subject to Federal Acquisition Regulation Sub-Part 31.2, Contracts with Commercial Organizations. Further, these solutions, which include both products and services, will come from, but not be limited to, the fields of Electrical, Mechanical, Aerospace, Chemical, Material Science, Computer Science, Civil & Environmental, Industrial & Management Systems, and Bio-Medical Engineering. Through this, the Corporation will enhance scientific research and educational opportunities for the University and community while attracting new technology-focused industries to the local geographic area. As such, the Corporation will further promote, stimulate, develop and advance the business prosperity and economic welfare and diversity of the State of Florida (the "State") and its residents.

SECTION 2. Limitations on Purposes and Powers.

- A. All the assets and earnings of the Corporation shall be used exclusively for the exempt purposes hereinabove set forth, including the payment of expenses incidental thereto. No part of the net earnings of the Corporation shall inure to

the benefit of any member, director, or officer of the Corporation, or any other private individual, and no member, director, or officer of the Corporation or any private individual shall be entitled to share in the distribution of any of the corporate assets on dissolution of the Corporation.

- B. No substantial part of the activities of the Corporation shall be the carrying on of a program of propaganda, or otherwise attempting to influence legislation, and the Corporation shall not participate in, or intervene in (including the publication or distribution of statements) any political campaign on behalf of or in opposition to any candidate for public office.
- C. The Corporation shall not have the power to convey, lease, pledge, or otherwise encumber assets owned by the State of Florida or the University. The Corporation shall have sole responsibility for the acts, debts, liabilities, and obligations of the Corporation in accordance with Florida law.
- D. The Corporation does not have the power to issue stock or pay dividends, and the private property of the members, directors, and officers shall not be liable for the debts of the Corporation.
- E. The Corporation shall not have the power to conduct any activities not permitted by applicable laws including without limitation the Internal Revenue Code and pertinent Treasury Regulations (or corresponding provisions of any subsequent revenue laws) (hereinafter the "Code").
- F. Persons employed by the Corporation shall not be considered employees of the University or State of Florida by virtue of such employment.
- G. The University's President shall retain the ability, powers, and duties to: monitor and control the use of University resources and the University name by the Corporation; assure that the Corporation's activities are consistent with and supportive of the mission of the University; monitor compliance of the

Corporation with federal and state laws and applicable rules, regulations and policies; approve salary supplements and other compensation or benefits paid to University faculty and staff from the Corporation's assets, consistent with applicable policies; approve salaries, benefits, and other compensation paid to employees of the Corporation, consistent with applicable policies; and otherwise supervise the Corporation as provided by Florida Board of Governors Regulations 9.011, University of South Florida Regulations 13.002, and provisions of any subsequent laws, regulations, and University policies and internal management memoranda.

SECTION 3. Special Duties as a University Direct Support Corporation.

The Corporation shall comply with all requirements and perform all duties which are necessary to maintain approval and certification of the Corporation as a university direct support organization under Section 1004.28, Florida Statutes, Florida Board of Governors Regulation 9.011, and University of South Florida Regulation 13.002, and corresponding provisions of any subsequent laws or regulations. Without limiting the foregoing:

- A. The Corporation shall comply with all conditions established by the Florida Board of Governors and the USF Board of Trustees in order to be approved and certified and to use property, facilities, or personal services at the University.
- B. The Corporation shall comply with all such additional conditions, controls and requirements as the Florida Board of Governors and the USF Board of Trustees deems appropriate to provide for budget and audit review and oversight.
- C. The Corporation's Executive Director shall report to the University's President (or designee) in compliance with Florida Board of Governors Regulation 9.011(2).
- D. The Corporation shall prepare an operating budget at least annually which, upon approval by the Corporation's Board of Directors, shall be submitted for approval by the USF Board of Trustees or designee. Significant changes in planned expenditures in the approved budget must be reported by the Corporation to the USF Board of Trustees or designee as soon as practicable

but no later than the deadline established by the USF Board of Trustees. The Corporation may provide any salary supplements and other compensation or benefits for University faculty and staff employees only as set forth in the Corporation's budget and subject to approval by the University's President.

- E. The Corporation shall provide for an annual audit conducted pursuant to the University's regulations or policies. The annual audit report shall be submitted by the Corporation to the USF Board of Trustees or designee, the Florida Board of Governors, and the Florida Auditor General for review. The USF Board of Trustees or designee, the Florida Board of Governors, the Florida Auditor General, and the Florida Office of Program and Policy Analysis and Governmental Accountability may require and receive any records relative to the operation of the Corporation from the Corporation or its independent auditors.
- F. The Corporation shall submit its federal Internal Revenue Service application for Recognition of Exemption form (Form 1023) and its federal Internal Revenue Service Return of Organization Exempt for Income Tax form (Form 990) to the USF Board of Trustees or designee at the times required by the applicable regulation or policy of the USF Board of Trustees.
- G. In the event of the Corporation's decertification by the USF Board of Trustees, the Corporation shall provide an accounting of its assets and liabilities to the USF Board of Trustees or designee, and take such reasonable action as is necessary to secure the return of all University property and facilities as requested by the University.

ARTICLE III

Membership

The sole member of the Corporation shall be the USF Board of Trustees, a public body corporate of the State of Florida, acting for and on behalf of the University (the "Member.").

The Member of the Corporation shall have no voting rights as member of the Corporation.

ARTICLE IV

Board of Directors

SECTION 1. Powers and Duties

- A. The Board of Directors (the “Board”) shall be the governing body of the Corporation exercising supervisory control over the operation , maintenance, and governance of the Corporation in accordance with applicable laws and regulations.
- B. The Board shall have the powers, duties and responsibilities vested in the board of directors of a Florida not for profit and university direct support organization under applicable Florida laws and regulations.

SECTION 2. Qualification and Compensation of the Board of Directors

The property, affairs, business, funds and operations of the Corporation shall be managed, supervised and controlled by the Board, subject to applicable law and regulations, the limitations contained in the Corporation’s Articles of Incorporation and Bylaws, and the powers and duties reserved to the University’s President and the USF Board of Trustees. The members of the Board shall serve in such capacity without compensation. The Board shall carry out the purposes of the Corporation in compliance with the Articles of Incorporation and these Bylaws. The Board shall include the incumbent holders of the following named offices and persons from the following named classes (note the maximum number of members on the Board of Directors is nine (9)):

- A. The University’s Dean of the College of Engineering (the “USF Dean, College of Engineering”).
- B. One (1) Director shall be a person who is selected and appointed to the Board by the Chairperson of the USF Board of Trustees in accordance with Section

1004.28, Florida Statutes.

- C. One (1) Director shall be a person who is ~~selected and appointed~~nominated to the Board by the University's President as the President's representative (provided, the University's President may elect to appoint the USF Dean, College of Engineering to serve as the President's representative for this purpose).
- D. A minimum of four (4), up to a maximum of six (6) additional persons, to include non-USF employees, who are each nominated~~selected and appointed~~ to the Board by the USF Dean, College of Engineering.

While the University President and USF Dean, College of Engineering, shall nominate members to the Board of Directors, all Board members shall be approved and formally appointed by the USF Board of Trustees.

Except as may be otherwise provided in the Articles and these Bylaws, Directors shall serve a term of ~~threetwo~~ (32) years and may be reappointed. Directors shall be removed in accordance with the procedure provided in the Bylaws; provided, the Director who is appointed to the Board by the Chairperson of the USF Board of Trustees may be removed only by action of the Chairperson of the USF Board of Trustees.

SECTION 3. Removal and Resignation of Directors.

Directors may be removed by the University's President in his/her sole discretion; provided, the Director who is appointed to the Board by the Chairperson of the USF Board of Trustees may be removed only by action of the Chairperson of the USF Board of Trustees. Any Director may resign at any time by giving written notice to the Board. Any such resignation shall take effect at the time specified therein or, if no time is specified therein, upon its acceptance by the Board.

SECTION 4. Conflict of Interest

The Board shall adopt and keep in full force and effect a substantial conflict of interest

policy for its Directors and principle officers in accordance with the rules and regulations of the Internal Revenue Service applicable to tax exempt organizations.

ARTICLE V

Officers

SECTION 1. Officers of the Board of Directors

The officers of the Board shall consist of a Chairperson, a Vice-Chairperson and such other officers as the Board may provide by resolution. All of said officers shall be elected by the Board from the membership of the Board. The same person may not hold more than one office on the Board.

Chairperson: The Chairperson shall:

- A. Exercise overall supervision of Board affairs and preside at meetings of the Board.
- B. Provide leadership to the Board and its committees in formulating, developing and evaluating the Corporation's policies and goals;
- C. Appoint special committees from time to time for the sole purpose of advising the Chairperson on such matters as may be deemed necessary and appropriate at the time;
- D. Develop, coordinate, and supervise all operating policies and procedures of and for the Board; and
- E. Submit all information and reports to the University's President as required by Florida Board of Governors Regulation 9.011 and University of South Florida Regulation 13.002.
- F. Perform all the duties incident to his/her office and such other duties as may be designated by the University's President or the Board.

Vice-Chairperson: The Vice-Chairperson shall:

- A. In the absence of the Chairperson, preside at meetings of the Board. The Vice

Chairperson shall vote in the decisions and actions of the Board.

- B. Perform such duties as may be designated by the Chairperson or the Board.

SECTION 2. Officers of the Corporation

The officers of the Corporation shall consist of a President/Chief Executive Officer (CEO), Secretary, Treasurer and such other positions as from time to time are elected or appointed by the Board. The Secretary and Treasurer positions may be held by the same person. The individual who serves as the USF Dean, College of Engineering shall be the Corporation President/CEO. All other officers shall hold office until the next annual meeting of the Board or until their successors are elected or appointed by the Board.

President/CEO: The President/CEO is the direct representative of the Board in the management of the Corporation. The President/CEO's duties shall include, but not be limited to, the following:

- A. Direct and oversee performance of the Corporation.
- B. Sign written instruments of the Corporation except as the Board shall provide otherwise;
- C. Control the budget and funds of the Corporation;
- D. Prepare annual operating and capital budgets; develop performance reports comparing actual operations with approved budgets; and submit reports on the financial condition of the Corporation to the Board at its regular meetings;
- E. Create and supervise the Corporation's administrative management structure and staff; and
- F. Perform all the duties incident to his/her office and such other duties as may be designated by the Chairperson or the Board.

Secretary: The Board shall appoint an individual to serve as the Secretary. The Secretary shall:

- A. Keep accurate records of attendance, votes, and minutes of all proceedings of

the Board.

~~A.B.~~ Ensure that a quorum of Directors is present to conduct Board meetings;

~~B.C.~~ Have charge of and affix the corporate seal to instruments as appropriate.

~~C.D.~~ Have charge of all official records of the Corporation that shall be at all reasonable times open to the inspection of any Director; and

~~D.E.~~ Perform all the duties incident to his/her office and such other duties as may be designated by the Chairperson or the Board.

Treasurer The Board shall appoint an individual to serve as the Treasurer. The Treasurer shall:

- A. Support the President/CEO in controlling the budget and funds of the Corporation;
- B. Support the President/CEO in preparing annual operating and capital budgets; developing performance reports comparing actual operations with approved budgets; and submitting reports on the financial condition of the Corporation to the Board at its regular meetings;
- C. Receive and keep the funds of the Corporation and pay out the same only in accordance with the guidelines established by the Board;
- D. Deposit all monies, checks and other credits to the account of the Corporation in such bank or banks or other depositories as the Board may designate;
- E. Review all receipts and vouchers for payment made to and all vouchers and checks made by the Corporation and shall regularly maintain a full and accurate account of all funds received and paid out by the Corporation;
- F. Render to the Board an account and statement of the Treasurer's actions at the annual meeting of the Board and at such other times as the Board may determine;
- G. At all reasonable times exhibit the Treasurer's books and accounts to any Director of the Board;
- H. Perform all the duties incident to his/her office and such other duties as may be designated by the Chairperson or the Board.

SECTION 3. Resignation and Removal

Any officer of the Corporation may resign at any time by giving written notice to the Chairperson or the Secretary. Any such resignation shall take effect at the time specified in the notice, or, if no time is specified therein, upon its acceptance by the Chairperson or the Board. The Chairperson or the Board may, with or without cause, remove from office any officer or agent of the Corporation except the Corporation President/CEO. The University President may, with or without cause, remove from office the Corporation President/CEO. The Chairperson or the Board shall have authority to make appointments to fill vacancies in officer positions, subject to the provisions of these Bylaws.

ARTICLE VI

Meetings of the Board of Directors and its Committees

SECTION 1. Regular Meetings.

The Board shall hold regular meetings as called by the Chairperson. One regular meeting of the Board, to be held in October of each year, shall be designated the annual meeting of the Board for the purpose of electing officers as applicable, appointing new committee members as applicable, and the transaction of other business. The Chairperson and the chairpersons of other committees shall fix the time and place of regular meetings of such Board or committee, respectively.

SECTION 2. Special Meetings.

The Chairperson and the chairpersons of other committees shall have authority to call special meetings of such Board or committee respectively whenever he/she deems necessary or desirable. In addition, the Chairperson and the chairpersons of other committees shall call a special meeting whenever requested in writing to do so by a majority of the members of the Board or other committee.

SECTION 3. Participation in Meetings by Telephone.

Members of the Board and other committees may participate in meetings of the Board

and other committees by means of a conference telephone or similar communications equipment by which all persons participating can hear each other at the same time, and participation by such means shall constitute presence in person at such meeting.

SECTION 4. Notice, Agendas and Minutes.

- A. Unless waived as provided by law, written notice of the place, date, time, and purpose of regular Board and committee meetings shall be given to each member thereof by personal delivery, mail, facsimile, telegram or email at least one (1) day prior to said meetings, and similar notice of any special meetings shall be given to all Board or committee members as soon as practicable prior to said meetings. Either a regular or special meeting may be held without notice if all Board or committee members waive, in writing, the right to receive notice. Notice of a meeting need not be given to any member who signs a waiver of notice either before or after the meeting. Attendance of any Board or committee member at any meeting shall be deemed a waiver of notice of such meeting and a waiver of any and all objections to the place of the meeting, the time of the meeting, or the manner in which it has been called or convened, except when a member states at the beginning of the meeting or promptly upon arrival at the meeting, any objection to the transaction of affairs because the meeting is not lawfully called or convened.
- B. The Chairperson of the Board and the chairpersons of other committees may elect to provide notices of Board and committee meetings to individuals other than members of such Board or committee, respectively. The Chairperson shall provide notices of all Board meetings to the USF Chief Financial Officer who shall have the right to attend all meetings of the Board.
- C. A written agenda of the matters to be considered at a Board or committee meeting shall be delivered to members thereof prior to such meeting, provided, however, that Board and committee proceedings shall not be limited to matters set forth in such agenda.
- D. Written minutes of the proceedings of the Board and committees shall be maintained and all actions taken at Board and committee meetings shall be properly

recorded in the minutes. Minutes shall, where reasonably possible, be delivered to the members of the Board or committee in advance of its next scheduled meeting.

SECTION 5. Quorum and Voting.

- A. The presence of a majority of the members of the Board shall be necessary and sufficient to constitute a quorum for the transaction of business at all meetings of the Board.
- B. The presence of a majority of the members of any Board committee shall be necessary and sufficient to constitute a quorum for the transaction of business at all meetings of committees of such Board committee.
- C. In the absence of a quorum, a majority of members present at the meeting of the Board or committee may adjourn the meeting until a quorum is present for the transaction of business.
- D. The vote of a majority of the members of the Board or any Board committee present at a meeting of the Board or committee shall constitute the action of the Board or Committee except as otherwise provided by these Bylaws.

SECTION 6. Parliamentary Rules.

The most recent edition of “Roberts Rules of Order” shall be followed in conducting the meetings of the Board and committees unless otherwise provided by resolution of the Board.

ARTICLE VII

Committees of the Board of Directors

SECTION 1. Appointment to and Removal from, Composition, and Term of Committees.

- A. The chairpersons and members of all standing and special committees of the Board shall be appointed as provided by these Bylaws. A committee

chairperson or member may be removed from a committee only by the Board.

- B. All committees of the Board shall consist of not less than three (3) members, at least one (1) of whom shall be a Director. Individuals other than Directors shall be eligible to serve on committees. However, the chairperson of each committee shall be a Director.
- C. The chairpersons and members of standing committees shall continue in these capacities until their successors have been appointed. Special committees shall be discharged by the Board upon completion of the task for which they are established.

SECTION 2. Other Standing and Special Committees.

A. Composition.

The Board may by resolution appoint one or more other standing or special committees which shall perform specific functions and tasks as provided in the resolution, except that a delegation of power to such committees shall not include any of the following powers:

- (i) approve or recommend to members actions or proposals required by Chapter 617, Florida Statutes, to be approved by members
- (ii) fill vacancies on the Board or any committee thereof;
- (iii) adopt, amend, or repeal the Articles of Incorporation or these Bylaws of the Corporation;
- (iv) sell, lease, exchange, or otherwise dispose of all or substantially all of the property and assets of the Corporation;
- (v) adopt a plan of voluntary dissolution of the Corporation;
- (vi) amend or repeal any resolution approved by the Board; or

- (vii) exercise any other powers specifically provided in the Bylaws as being reserved for the Board.

In addition, if such a committee includes a member who is not a Director, the committee shall not be delegated any powers of the Board. The Board shall have the authority to appoint a special committee from time to time for the sole purpose of advising the Board on such matters as may be deemed necessary and appropriate at the time.

B. Meetings, Quorums and Minutes.

Meetings of standing and special committees may be called by the chairperson of the committee or by the Board, or by the Chairperson, and notice of any committee meeting shall be given in the manner provided in these Bylaws for notices of special meetings of the Board. Each committee shall keep regular minutes of its proceedings. The Chairperson, and his/her designees, shall have the right to attend any meeting of any special and standing committee.

ARTICLE VIII

Adoption and Amendments

The Board shall adopt these Bylaws and may from time to time modify, alter, amend or repeal the Bylaws by an affirmative vote of two-thirds (2/3) of the members of the Board present and voting at any duly held regular or special meeting of the Board, or by all Directors signing a written statement manifesting their intention that the Bylaws be adopted, amended or repealed; provided, with respect to such meetings, notice thereof, which shall include the text of the proposed change to the Bylaws, shall be furnished in writing to each member of the Board at least seven (7) days prior to the meeting at which the change to the Bylaws is to be voted upon; provided further, the adoption, amendment or repeal of the Bylaws shall not be

effective without the written concurrence of the University's President, the USF Board of Trustees, and such other approvals as may be required by law or regulation.

ARTICLE IX

Indemnification

The Corporation shall indemnify each director, officer, employee and agent of the Corporation, and may indemnify any other person, to the full extent permitted by the Florida Not For Profit Corporation Act and other applicable laws. The rights conferred by this Article shall not be exclusive of any other right that any director, officer, employee, agent or other person may have or hereafter acquire under the Florida Not For Profit Corporation Act, any other statute or agreement, pursuant to a vote of disinterested directors, or otherwise. No repeal or modification of this Article shall limit the rights of any director, officer, employee or agent to indemnification with respect to any action or omission occurring prior to such repeal or modification

ARTICLE X

Dedication of Assets and Dissolution

The Corporation dedicates all assets which it may acquire to the charitable purposes as set forth in Article III hereof. In the event that the Corporation shall dissolve or otherwise terminate its corporate existence, subject to the provision of Chapter 617, Florida Statutes, the Corporation shall distribute all its existing assets as provided in the Articles of Incorporation.

ARTICLE XI

Access to Corporate Records

Public access to all records of the Corporation shall be governed by Section 1004.28, Florida Statutes and the Corporation's policy on disclosure of records.

Agenda Item: FL 113

USF Board of Trustees
June 12, 2018

Issue: USF System Audit (Audit) Work Plan for FY 2019 and FY 2020

Proposed action: Approval of the Audit Work Plan and allocation of available staff hours.

Executive Summary: The USF Board of Trustees' Audit and Compliance Committee and the President have the responsibility to approve the Audit Work Plan per Audit's Charter effective March 9, 2017. Additionally, Board of Governors' regulations and IIA Performance Standards require the Chief Audit Executive to communicate the plans and resource requirements to senior management and to the board for review and approval. A two-year plan has been prepared to allow for more flexibility and increased efficiency in managing time and resources. The plan covers common processes and systems where testing procedures are performed for all three institutions, as well as audits specific to each institution.

The Board should consider whether the Work Plan is aligned with the USF System's strategic plans, objectives, and enterprise risk. Consider whether this plan optimizes the use of Audit resources and the value added by the audit activity in the following areas: results of operations, programs, or projects, including accomplishment of objectives and effective use of resources; reliability and integrity of financial and operating information; compliance with policies, laws, regulations, and ethical standards; the means to safeguard assets; loss prevention; fraud detection; and process improvement.

Financial Impact: N/A

Strategic Goal(s) Item Supports: Goal 4: Sound financial management to establish a strong and sustainable economic base in support of USF's continued academic advancement.

Committee Review Date: Audit & Compliance - 5/22/2018

Supporting Documentation Online (please circle): Yes No

USF System or Institution specific: USF System

Prepared by: Virginia Kalil, Executive Director, USF System Audit



**USF SYSTEM AUDIT
FY 2019 and FY 2020 WORK PLAN**

	Total Hours	% of Effort	Yr 1	Yr 2
DIRECT SERVICES				
<i>Audit Services</i>				
Core Processes:				
Access Controls/Entitlement Reviews-Internal Transfers	600		600	
Time & Labor (Decentralized)	800		800	
Payroll	800			800
Emergency Management	800			800
Surplus Property & Asset Disposal	600		600	
Academic Areas:				
College of Behavioral-Comm Sciences	800			800
College of Hospitality & Tourism Leadership (USFSM)	600			600
College of Public Health	800		800	
College of Medicine	800			800
PBF Data Integrity-Year 1	800		800	
PBF Data Integrity-Year 2	800			800
Governance:				
Delegation of Authority/MOUs/Contract Approval	200		200	
IT Governance	800			800
Research:				
Recharge Centers Operations	800		400	400
Human Subjects Regulations	600			600
Information Technology:				
Cloud Computing & Security	700			700
IT Change Management	700		700	
IT General Controls (USFSP/USFSM)	600		600	
USFH IT - Year 1	800		800	
USFH IT - Year 2	800			800
<i>Follow-up; Coordinate External Audits</i>	<u>1,000</u>		<u>500</u>	<u>500</u>
<i>Subtotal</i>	15,200		6,800	8,400
<i>Consulting Services</i>				
Special Projects	2,000		1,800	200
Emerging Issues - compliance, financial, IT	<u>600</u>		<u>300</u>	<u>300</u>
<i>Subtotal</i>	2,600		2,100	500
<i>Investigations @ 10%</i>	4,160		2,080	2,080
<i>Contingency @ 7%</i>	3,000		1,500	1,500
TOTAL DIRECT SUPPORT	24,960	60%	12,480	12,480
INDIRECT SUPPORT				
University Meetings, In-House Training, Professional Orgs	2,160		1,080	1,080
Administration	6,280		3,140	3,140
TOTAL INDIRECT SUPPORT	8,440	20%	4,220	4,220
OTHER				
CPE	800		400	400
Holidays	1,760		880	880
Leave (Annual/Sick)	5,640		2,820	2,820
TOTAL OTHER	8,200	20%	4,100	4,100
TOTAL HOURS AVAILABLE (CAE + 9 STAFF)	41,600	100%	20,800	20,800

Agenda Item: FL 114

USF Board of Trustees
June 12, 2018

Issue: DSO Annual Financial Plans for FY 2019

Proposed action: Approve DSO Annual Financial Plans for FY 2019

Executive Summary:

The Direct Support Organizations of the University of South Florida (DSOs) have prepared their Annual Financial Plans for FY 2019 for review and approval by the USF Board of Trustees, pursuant to Florida Statutes and DSO Bylaws.

Each DSO has provided a Financial Plan Statement which includes the Corporation's mission, key drivers for improvements in the FY 2019 Plan over prior year, material capital expenditures, key risks for the FY 2019 Plan, and major initiatives for FY 2020 and FY 2021.

The Financial Plans, comprised of both Income Statement and Statement of Cash Flows, include a comparison of Net Operating Profit and Net Cash Position for the FY 2019 Financial Plan to the current FY 2018 Forecast, and also provide the original FY 2018 Financial Plan that was approved by the BOT Finance Committee at its May 18, 2017 Meeting and Actuals for FY 2017 and FY 2016. The Financial Plans also include a three-year forecast.

DSOs are governed by independent Boards of Directors. DSOs have obtained approval of their FY 2019 Financial Plan from their Board or DSO Finance / Audit Committee in advance of this meeting.

The DSOs are:

- a) Sun Dome, Inc.
- b) USF Health Professions Conferencing Corporation
- c) University Medical Services Association, Inc.
- d) USF Medical Services Support Corporation
- e) USF Foundation, Inc.
- f) USF Alumni Association, Inc.
- g) USF Research Foundation, Inc.
- h) USF Financing Corporation & USF Property Corporation



DIRECT SUPPORT ORGANIZATIONS

ANNUAL FINANCIAL PLANS

FISCAL YEAR 2019

May 22, 2018



DSO Annual Financial Plans for FY 2019

INDEX

Sun Dome Inc.	1-4
USF Health Professions Conferencing Corporation	5-9
University Medical Services Association, Inc. and Medical Services Support Corporation, Inc.....	10-14
USF Foundation, Inc.	15-19
USF Alumni Association, Inc.	20-23
USF Research Foundation, Inc.....	24-28
USF Financing Corporation and USF Property Corporation.....	29-32



Sun Dome Arena

Annual Financial Plan for FY 2019

FINANCIAL PLAN STATEMENT

State the DSO's Statutory Mission which Supports the Goals of the University

- Enhance awareness and perception in the local market and nationally, promoting Sun Dome Arena as a premier event and hospitality venue.

List Key Drivers for the 2019 Financial Plan Over 2018 - Focus on Cash Flows and Adequacy of Reserves

- Work with our new partner, TBEP, to enhance all aspects of the arena. This will include areas such as scheduling, fan experience, and event coordination.
- The 2019 Financial Plan reflects a 14% increase in revenue. The primary driver for the projected increase in revenue is greater attendance at events. At this stage of the fiscal year, there are 10 confirmed events for 2019 (excluding USF- related events), which is a significant increase from the prior year of approximately 6 events.
- The 2019 Financial Plan projects a decrease in the fiscal year cash balance of \$172K, primarily due to the increase in expenses related to the additional events that exceeds the increase in revenue.
- Based upon the 2019 projected Financial Plan, it is not currently anticipated that the Sun Dome Arena will require cash funding in 18/19 to sustain operations.

Describe Material Capital Expenditures in the 2019 Financial Plan - Provide Details and ROI Expectations

- Currently there are not any material capital expenditures anticipated for fiscal year 2019.

Identify Key Risks That Might Affect the 2019 Financial Plan

- The 2019 Financial Plan factors in concerts/ events, which have not been confirmed. In the event, these shows do not come to fruition, it could negatively impact profitability on a net basis.
- The 2019 Financial Plan assumes attendance and related event profitability with respect to USF Men's and Women's basketball will remain consistent with 2017- 2018.
- The 2019 Financial Plan does not factor in a contingency for any extraordinary maintenance, repairs or rate increases in insurance premiums.

List Major DSO Initiatives that will Drive Increases in Operating Earnings for 2020 and 2021

- Identify multi-show deals and concert series opportunities to increase event bookings
- Re-establish and build on relationships with top promoters
- Strategic booking to include a diverse programming of quality events that crosses all genres



Sun Dome Arena

Annual Financial Plan for FY 2019

INCOME STATEMENT

(In thousands)

	FY 2019	FY 2018	Variance		FY 2018	FY 2017	FY 2016
	FINANCIAL PLAN	ESTIMATE (as of 3/31/18)	\$	%	FINANCIAL PLAN	ACTUAL RESULTS	ACTUAL RESULTS
REVENUES							
Direct Event Income	\$701	\$959	\$(258)	(27)%	\$964	\$830	\$905
Ancillary Revenue	1,092	811	281	35 %	1,513	952	1,590
Miscellaneous	287	48	239	498 %	300	172	317
Total Revenues	\$2,080	\$1,818	\$262	14 %	\$2,777	\$1,954	\$2,812
EXPENSES							
Salaries & Benefits	\$794	\$750	\$44	6 %	\$908	\$824	\$843
General & Administrative	464	343	121	35 %	482	248	455
Marketing & Sales	26	22	4	18 %	23	8	30
Equipment & Supplies	338	101	237	235 %	307	228	412
Utilities	36	51	(15)	(29)%	50	72	50
Insurance	152	111	41	37 %	110	70	70
Depreciation/Amortization	38	42	(4)	(10)%	139	43	139
Transition Expenses	0	52	(52)	(100)%	50	72	90
Incentive Fees	228	0	228	%	0	57	140
Total Expenses	\$2,076	\$1,472	\$604	41 %	\$2,069	\$1,622	\$2,229
OPERATING PROFIT BEFORE NON-CASH CHANGES	\$4	\$346	\$(342)	(99)%	\$708	\$332	\$583
Unrealized Investment Gains (Losses)		0	0	%	0	0	0
Total Non-Cash Changes	\$0	\$0	\$0	%	\$0	\$0	\$0
NET OPERATING PROFIT	\$4	\$346	\$(342)	(99)%	\$708	\$332	\$583
Operating Profit Margin	0%	19%	(131)%		25%	17%	21%



Sun Dome Arena
Annual Financial Plan for FY 2019

STATEMENT OF CASH FLOWS

(In thousands)

	FY 2019	FY 2018	Variance		FY 2018	FY 2017	FY 2016
	FINANCIAL	ESTIMATE	\$	%	FINANCIAL	ACTUAL	ACTUAL
	PLAN	(as of 3/31/18)			PLAN	RESULTS	RESULTS
<u>OPERATING ACTIVITIES</u>							
Net Operating Profit	\$4	\$346	\$(342)	(99)%	\$708	\$332	\$583
Adjustments for Non-Cash Activities:	272	(4)	276	6,900 %	139	67	407
Total Cash From Operating Activities	\$276	\$342	\$(66)	(19)%	\$847	\$399	\$990
<u>INVESTING ACTIVITIES</u>							
Capital Expenditures	\$0	\$0	\$0	%	\$0	\$0	\$0
Net (Purchases) Sales of Investments	0	0	0	%	0	0	0
Total Cash From Investing Activities	\$0	\$0	\$0	%	\$0	\$0	\$0
<u>FINANCING ACTIVITIES</u>							
Principal Payments	\$0	\$0	\$0	%	\$(65)	\$(73)	\$(71)
Event Revenue Transfer to USF, net	(449)	(415)	(34)	(8)%	(415)	(505)	(524)
Total Cash From Financing Activities	\$(449)	\$(415)	\$(34)	(8)%	\$(480)	\$(578)	\$(595)
CHANGE IN CASH							
Cash, Beginning of Year	(173)	(73)	(100)	(137)%	367	(179)	395
Cash, End of Year	1,068	1,141	(73)	(6)%	1,480	1,320	925
	\$895	\$1,068	\$(173)	(16)%	\$1,847	\$1,141	\$1,320
Total Cash & Investments	\$895	\$1,068	\$(173)	(16)%	\$1,847	\$1,141	\$1,320
Days Cash on Hand	157	265	(107)	(41)%	326	257	216



Sun Dome Arena

Annual Financial Plan for FY 2019

3-YEAR FORECAST

(In thousands)

	ACTUAL & ESTIMATED			FORECAST		
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
ASSETS						
Cash & Investments	\$1,320	\$1,141	\$794	\$622	\$269	\$402
Accounts Receivable	208	260	100	100	100	100
Prepays	12	7	0	0	0	0
Fixed Assets	721	678	640	602	564	526
Other Assets	0	0	0	0	0	0
Total Assets	\$2,261	\$2,086	\$1,534	\$1,324	\$933	\$1,028
LIABILITIES						
Payables	\$203	\$168	\$188	\$84	\$85	\$87
Accrued Liabilities	328	136	300	538	575	783
Deferred Revenue	244	535	300	400	414	498
Long-Term Debt	736	0	0	0	0	0
Other Liabilities	277	284	0	0	0	0
Total Liabilities	\$1,788	\$1,123	\$788	\$1,022	\$1,074	\$1,368
NET ASSETS	\$473	\$963	\$746	\$303	\$(141)	\$(340)
Days Cash on Hand	216	257	197	109	46	62
REVENUES						
Direct Event Income	\$905	\$830	\$959	\$701	\$706	\$716
Ancillary Revenue	1,590	952	811	1,092	1,152	1,630
Miscellaneous	317	172	48	287	287	287
Total Revenues	\$2,812	\$1,954	\$1,818	\$2,080	\$2,145	\$2,633
EXPENSES						
Salaries & Benefits	\$843	\$824	\$750	\$794	\$811	\$829
General & Administrative	455	248	343	464	473	483
Marketing & Sales	30	8	22	26	27	27
Equipment & Supplies	412	228	101	338	340	342
Utilities	50	72	51	36	37	37
Insurance	70	70	111	152	155	158
Depreciation / Amortization	139	43	42	38	38	38
Transition Expenses	90	72	52	0	0	0
Incentive Fees	140	57	0	228	254	449
Total Expenses	\$2,229	\$1,622	\$1,472	\$2,076	\$2,134	\$2,363
Changes	\$583	\$332	\$346	\$4	\$11	\$271
Total Non-Cash Changes	\$0	\$0	\$0	\$0	\$0	\$0
NET OPERATING PROFIT	\$583	\$332	\$346	\$4	\$11	\$271
Operating Profit Margin	21%	17%	19%	0%	1%	10%



USF Health Professions Conferencing Corporation

Annual Financial Plan for FY 2019

FINANCIAL PLAN STATEMENT

State the DSO's Statutory Mission which Supports the Goals of the University

- The mission of USF Health Professions Conferencing Corporation (HPCC), a direct support organization and Florida not-for-profit corporation is to support the University missions of academic excellence, top-impact research and beneficial community service, consistent with the goals of the University of South Florida and its Board of Trustees.

HPCC strives to achieve that support by using the tools of medical simulation to educate students, train faculty, and prepare health care professionals to acquire, maintain, and enhance their clinical practice and research skills to meet and exceed the workforce and healthcare needs of Tampa Bay, Florida and other communities.

List Key Drivers for the 2019 Financial Plan Over 2018 - Focus on Cash Flows and Adequacy of Reserves

- Overall, HPCC is expected to modestly improve its cash flow and reserves in FY19 after making substantial gains in both areas over the past couple of years to achieve a more sustainable financial state of affairs.
- FY18 reflects significant international programming revenue sources that are not expected to reoccur in FY19.
- To maintain a high quality of services as academic activities have increased, the FY19 plan assumes a commitment to restore a portion of the CAMLS work force that had been reduced over the past two years.
- FY19 Planned Revenue for Continuing Professional Development is forecasted to be 48% less than FY18 due to decreasing commercial funding for continuing medical education and as a result, fewer medical education companies (MEC) that use USF Health's accreditations for their programming. Accordingly, 'Direct Program Expense' is also projected to decrease 37% from FY18 because most of this revenue passes through HPCC to the MEC to cover the cost of content development and delivery.
- FY19 'CAMLS-Industry, Societies, Healthcare' is forecasted to decrease 14% largely due to the non-recurrence of a physician training program conducted in concert with the Mexican government as well as the introduction at mid-year of direct billing by CAMLS's catering vendor which eliminated a substantial amount of revenue that was merely a pass-through.
- For FY19 there is a transfer from the Dean's Academic Support Fund (DASF) via UMSA for the development and delivery of continuing academic and professional simulation education for students and practitioners. This amount is unchanged from FY18.
- USF Financing Corporation refinancing of the CAMLS facility debt will decrease interest expense in FY19 and into the future.

Describe Material Capital Expenditures in the 2019 Financial Plan - Provide Details and ROI Expectations

- In FY18, HPCC budgeted for modest but needed equipment and facility repairs, deferring the use of the funds until after Q2 to ensure financial targets were on track. HPCC plans to approach FY19 similarly, however, it is proposing a more substantial capital investment to ensure effective upkeep of the initial investment in the unique space, equipment, and functionality, some of which is reaching end-of-life usefulness. HPCC has now established a long-range capital and expense plan to ensure a state-of-good repair, including investments in HVAC and lighting that are expected to yield a positive return over time.

Identify Key Risks That Might Affect the 2019 Financial Plan

- While there is now an established capital maintenance plan, unexpected repair and capital needs always pose a risk when operating on tight margins.

List Major DSO Initiatives that will Drive Increases in Operating Earnings for 2020 and 2021

- In FY19, HPCC expects to maintain a conservative approach to its financial standing by focusing on the following: a) continue to evaluate private sector business lines to identify and grow only those that are strategically aligned with mission and provide appropriate financial yield; b) continue to examine under-performing business lines and activities to eliminate or scale back those that are not sufficiently offset by mission support; c) identify new opportunities across USF/USF Health to build on USF's growing downtown presence; d) explore opportunities to meet new national and global health care training needs.
- A national recruitment for an Executive Director has been underway and is expected to be completed in early summer. New leadership will assume a manageable and responsible FY19 budget and will be charged to continue the integration of CAMLS and USF Health academic training, while simultaneously identifying growth opportunities and adjustments within CAMLS operation to ensure long-term mission support and financial health.



USF Health Professions Conferencing Corporation

Annual Financial Plan for FY 2019

INCOME STATEMENT

(In thousands)

	FY 2019 FINANCIAL PLAN	FY 2018 ESTIMATE (as of 3/31/18)	Variance		FY 2018 FINANCIAL PLAN	FY 2017 ACTUAL RESULTS	FY 2016 ACTUAL RESULTS
			\$	%			
REVENUES							
Continuing Professional Development	\$1,857	\$3,583	\$(1,726)	(48)%	\$2,883	\$2,289	\$3,988
CAMLS - USF Health Programming	2,927	2,927	0	0 %	2,411	2,222	1,727
CAMLS - Industry, Societies, Healthcare	3,980	4,610	(630)	(14)%	4,296	4,619	7,055
Other HPCC Divisions	405	400	5	1 %	0	810	1,420
In Kind Donations	40	40	0	0 %	0	41	7
Rents, Parking, Rebates, Interest	529	471	58	12 %	430	362	504
Gain on Sale of Fixed Assets	0	12	(12)	(100)%	0	434	0
Transfer from USF-Plant Operations & Maint.	1,293	1,293	0	0 %	1,293	1,293	1,293
Transfer from USF-Educational wages/supplies	0	0	0	%	0	755	1,660
Transfer from USF-Settlement of intercompany A/P	0	0	0	%	0	943	0
Transfer from UMSA-Settlement of intercompany A/P	0	0	0	%	0	401	0
Transfer from UMSA - Wages and Benefits	0	33	(33)	(100)%	0	0	0
Transfer from DASF-Continuing Education	1,000	1,000	0	0 %	1,000	1,530	1,750
Total Revenues	\$12,031	\$14,369	\$(2,338)	(16)%	\$12,313	\$15,699	\$19,405
EXPENSES							
Wages and Benefits	\$3,904	\$3,277	\$627	19 %	\$3,277	\$3,296	\$4,499
Utilities, Leases, Maint., Supplies, Marketing	2,234	2,250	(16)	(1)%	2,275	3,274	3,730
Direct Program Expense	3,430	5,449	(2,019)	(37)%	4,214	4,589	7,127
Interest	567	685	(118)	(17)%	710	726	757
In Kind Expense	40	40	0	0 %	0	41	7
Depreciation-Purchased & Donated Assets	1,307	1,677	(370)	(22)%	1,677	1,972	2,252
Transfer to UMSA-Settlement of intercompany A/P	0	0	0	%	0	366	0
Total Expenses	\$11,482	\$13,378	\$(1,896)	(14)%	\$12,153	\$14,264	\$18,372
OPERATING PROFIT BEFORE NON-CASH CHANGES	\$549	\$991	\$(442)	(45)%	\$160	\$1,434	\$1,033
Unrealized Investment Gains (Losses)	0	0	0	%	0	0	0
Total Non-Cash Changes	\$0	\$0	\$0	%	\$0	\$0	\$0
NET OPERATING PROFIT	\$549	\$991	\$(442)	(45)%	\$160	\$1,434	\$1,033
Operating Profit Margin	5%	7%	0		1%	9%	5%



USF Health Professions Conferencing Corporation

Annual Financial Plan for FY 2019

STATEMENT OF CASH FLOWS

(In thousands)

	FY 2019	FY 2018	Variance		FY 2018	FY 2017	FY 2016
	FINANCIAL	ESTIMATE	\$	%	FINANCIAL	ACTUAL	ACTUAL
	PLAN	(as of 3/31/18)			PLAN	RESULTS	RESULTS
<u>OPERATING ACTIVITIES</u>							
Net Operating Profit	\$549	\$991	\$(442)	(45)%	\$160	\$1,434	\$1,033
Adjustments for Non-Cash Activities:							
Depreciation	1,307	1,677	(370)	(22)%	1,677	1,972	2,252
(Gain)/Loss on sale of fixed assets	0	(12)	12	100 %	0	(434)	0
Adjustments for Changes in Operating Assets and Liabilities	0	(200)	200	100 %	0	(856)	(2,007)
Total Cash From Operating Activities	\$1,856	\$2,456	\$(600)	(24)%	\$1,837	\$2,116	\$1,278
<u>INVESTING ACTIVITIES</u>							
Capital Expenditures	\$(200)	\$(250)	\$50	20 %	\$(120)	\$(441)	\$(74)
Net (Purchases) Sales of Investments	0	41	(41)	(100)%	0	385	8
Total Cash From Investing Activities	\$(200)	\$(209)	\$9	4 %	\$(120)	\$(56)	\$(66)
<u>FINANCING ACTIVITIES</u>							
Proceeds of Long-Term Debt	\$0	\$0	\$0	%	\$0	\$0	\$0
Principal Payments	(1,138)	(1,153)	15	1 %	(1,138)	(1,524)	\$(2,111)
Total Cash From Financing Activities	\$(1,138)	\$(1,153)	\$15	1 %	\$(1,138)	\$(1,524)	\$(2,111)
CHANGE IN CASH	518	1,094	(576)	(53)%	579	536	(899)
Cash, Beginning of Year	1,810	716	1,094	153 %	473	180	1,079
Cash, End of Year	\$2,328	\$1,810	\$518	29 %	\$1,052	\$716	\$180
Total Cash & Investments	\$2,328	\$1,810	\$518	29 %	\$1,052	\$716	\$180
Days Cash on Hand	83	56	27	48 %	37	21	4



USF Health Professions Conferencing Corporation

Annual Financial Plan for FY 2019

3-YEAR FORECAST

(In thousands)

	ACTUAL & ESTIMATED			FORECAST		
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
<u>ASSETS</u>						
Cash & Investments	\$181	\$716	\$1,810	\$2,328	\$2,846	\$3,364
Fixed Assets	20,163	19,959	18,532	17,425	16,625	16,025
Other Assets	2,287	1,591	1,591	1,591	1,591	1,591
Total Assets	\$22,631	\$22,266	\$21,933	\$21,344	\$21,062	\$20,980
<u>LIABILITIES</u>						
Payables	\$3,234	\$2,576	\$2,600	\$2,600	\$2,400	\$2,400
Long-Term Debt	15,919	16,121	14,968	13,830	13,125	12,441
Other Liabilities	3,990	2,647	2,452	2,452	2,452	2,452
Total Liabilities	\$23,143	\$21,344	\$20,020	\$18,882	\$17,977	\$17,293
NET ASSETS UNRESTRICTED	\$(512)	\$922	\$1,913	\$2,462	\$3,085	\$3,687
Days Cash on Hand	4.10	21.26	56.45	83.50	99.80	116.28
<u>REVENUES</u>						
Program revenues	\$18,900	\$13,559	\$13,898	\$11,502	\$11,502	\$11,502
Other Revenues	504	2,140	471	529	529	529
Total Revenues	\$19,405	\$15,699	\$14,369	\$12,031	\$12,031	\$12,031
<u>EXPENSES</u>						
Salaries & Benefits	\$4,499	\$3,296	\$3,277	\$3,904	\$3,943	\$3,985
Program services	13,116	10,242	9,416	7,011	6,937	6,888
Other Expenses - interest	757	726	685	567	528	486
Total Expenses	\$18,372	\$14,264	\$13,378	\$11,482	\$11,408	\$11,359
Changes	\$1,033	\$1,434	\$991	\$549	\$623	\$672
Total Non-Cash Changes	\$0	\$0	\$0	\$0	\$0	\$0
NET OPERATING PROFIT	\$1,033	\$1,434	\$991	\$549	\$623	\$672
Operating Profit Margin	5%	9%	7%	5%	5%	6%



University Medical Service Association, Inc. and Medical Services Support Corporation

Annual Financial Plan for FY 2019

FINANCIAL PLAN STATEMENT

State the DSO's Statutory Mission which Supports the Goals of the University

- University Medical Service Association, Inc. (UMSA) is organized as a not for profit, university faculty practice plan. Pursuant to UMSA's operations and activities, exclusively for the support and benefit of the University of South Florida (USF) and its Health Sciences Center, USF Health, the specific purposes for which UMSA is organized shall include the collection, administration and distribution of funds exclusively for the support of the clinical, education and research objectives of USF Health and the University in accordance with the USF Health Faculty Practice Plan regulations.
- Medical Services Support Corporation (MSSC) is organized as a not for profit organized to operate a health care consortium which supports and enhances the University of South Florida's (USF's) approved programs of education, research and service.

List Key Drivers for the 2019 Financial Plan Over 2018 - Focus on Cash Flows and Adequacy of Reserves

- Overall, UMSA/MSSC continues to meet its financial targets and improve its operating margin and cash position presented to the Board of Trustees in 2015. After significant investments in the infrastructure using available cash reserves of the faculty practice plan over the last 2.5 years, UMSA/MSSC is now in a position to generate positive operating margins and cash flows and thus rebuild its cash reserves.
- UMSA/MSSC will essentially break even in FY2018 (-\$108K) **without** the incremental Medicaid Physician Supplemental (UPL) and Low Income Pool (LIP) payments and have \$7.5M margin **with** UPL/LIP included. For FY2019, we estimate a margin of \$3M **without** the incremental UPL/LIP dollars and a margin of \$11.7M **with** the incremental UPL/LIP dollars.
- Patient Service Revenue is projected to grow at 5% or over \$8.8M due to mostly organic growth and increased productivity of the faculty. Improvements in access, revenue cycle and managed care contracting have not been included because new leadership have just been hired in these areas. However, significant steps are being taken to improve in the areas identified.
- Grants, Contracts & Awards and Other Revenue are projected to grow approximately 4% or over \$4.3M. These line items represent the organization's hospital contracts and the money we receive for resident salary and benefits from our hospital partners.
- The biggest change impacting UMSA/MSSC is the impact of the new incremental Medicaid Physicians Supplemental (UPL) payments and Low Income Pool (LIP) payments. Historically, UMSA/MSSC would receive \$6.5M-\$7.3M in UPL payments annually. In FY2018 and through FY2022, UMSA/MSSC will receive an incremental bolus annually of UPL/LIP revenue of over \$15M annually. The UPL/LIP dollars are new dollars based on a new agreement the federal government and the State of Florida. The net effect to the bottom line in FY2018 and FY2019 is \$7.6M.
- In addition, achieving the FY2019 margin targets is dependent upon continuing the improvements in the Ambulatory Surgery Center (reducing its deficit by \$1.5M) and the Dean's Academic Support Fund continuing to grow in cash (underutilize by \$2.3M) as well as continued UPL/LIP support.

Describe Material Capital Expenditures in the 2019 Financial Plan - Provide Details and ROI Expectations

- The largest capital expenditures for UMSA/MSSC in FY2019 will be its 1) conversion to the EPIC Professional Billing System, 2) capital investments in our access area and 3) investment in the new Eye Institute. The EPIC transition will be critical to our improvements in revenue cycle (billing and collecting). The investment in the access area are critical to the success of our call center and physician scheduling. Finally, the investment in the Eye Institute will provide a state of the art eye center to the patients we serve.

Identify Key Risks That Might Affect the 2019 Financial Plan

- The amount of program investment in the medically underserved population will impact potential margins and cash reserves. CMS and AHCA will require some form of investment to demonstrate our commitment to serving the needs of this population.
- The success of the Ambulatory Surgery Center (ASC) has the greatest risk on the FY2019 financial plan. Although an improvement plan has been developed and implemented, the impact on the bottom line has been slower than expected.
- In addition, access, revenue cycle and faculty productivity improvements will also need to continue in FY2019.

List Major DSO Initiatives that will Drive Increases in Operating Earnings for 2020 and 2021

- UPL and LIP will continue to be a major contribution to the bottom line of UMSA/MSSC through 2022. UMSA/MSSC will have to demonstrate investment in improving access and outcomes of this medically underserved population. Therefore, Days Cash on Hand may be affected by the decisions made by the organization to invest in serving the needs of this population.
- The ability of the organization to improve ASC and Imaging bottom-lines will have a significant impact on the achievement of the projected margins. USF Health will need to decide whether the projected improvements can be achieved on our own or with a partner.
- EPIC Professional Billing will go live on July, 1 2019 (FY2020). UMSA/MSSC must ensure planning mitigates the risk of revenue cycle disruption during the transition.
- Improving access through increased physician productivity or increasing recruitment to support demand will also be an initiative that is important to the overall success of the earnings and cash flow of UMSA/MSSC in the future.



University Medical Service Association, Inc. and Medical Services Support Corporation

Annual Financial Plan for FY 2019

INCOME STATEMENT

(In thousands)

	FY 2019	FY 2018	Variance		FY 2018	FY 2017	FY 2016
	FINANCIAL PLAN	ESTIMATE (as of 3/31/18)	\$	%	FINANCIAL PLAN	ACTUAL RESULTS	ACTUAL RESULTS
REVENUES							
Net Patient Service	\$185,751	\$176,924	\$8,827	5 %	\$173,685	\$166,362	\$151,505
Grants, Contracts & Awards	72,217	70,113	2,104	3 %	70,332	68,336	62,551
UPL	22,560	22,560	0	0 %	6,474	7,329	6,798
Other Revenue	46,756	44,501	2,255	5 %	44,364	49,493	42,891
Total Revenues	\$327,284	\$314,098	\$13,186	4 %	\$294,855	\$291,520	\$263,745
EXPENSES							
Faculty Support	\$112,415	\$109,141	\$3,274	3 %	\$103,291	\$102,578	\$94,895
Housestaff Support	11,128	10,804	324	3 %	11,185	11,723	11,406
Other Staff Support	70,903	67,614	3,289	5 %	68,257	67,992	63,988
Depreciation/Amortization	5,400	5,312	88	2 %	5,497	5,397	5,171
UPL Program Expenses	7,616	7,616	0	0 %	0	0	0
Transfer to USF - Salary Grants	54,135	52,558	1,577	3 %	47,558	46,495	45,141
Transfer to HPCC - Program Support	790	767	23	3 %	767	1,530	2,955
Other Expenses	54,511	52,438	2,073	4 %	57,046	59,707	52,543
Total Expenses	\$316,898	\$306,250	\$10,648	3 %	\$293,601	\$295,422	\$276,099
OPERATING PROFIT BEFORE NON-CASH CHANGES	\$10,386	\$7,848	\$2,538	32 %	\$1,254	\$(3,902)	\$(12,354)
Unrealized Investment Gains (Losses)	0	912	(912)	(100)%	0	1,428	144
Change in Fair Value of Swaps	0	0	0	%	0	0	0
Non-Cash Impact of Epic Conversion	1,300	(1,254)	2,554	204 %	(1,254)	(931)	(2,168)
Total Non-Cash Changes	\$1,300	\$(342)	\$1,642	480 %	\$(1,254)	\$497	\$(2,024)
NET OPERATING PROFIT	\$11,686	\$7,506	\$4,180	56 %	\$0	\$(3,405)	\$(14,378)
Operating Profit Margin	3%	2%	1 %		0%	-1%	-5%



**University Medical Service Association, Inc. and
Medical Services Support Corporation**

Annual Financial Plan for FY 2019

STATEMENT OF CASH FLOWS

(In thousands)

	FY 2019 FINANCIAL PLAN	FY 2018 ESTIMATE (as of 3/31/18)	Variance		FY 2018 FINANCIAL PLAN	FY 2017 ACTUAL RESULTS	FY 2016 ACTUAL RESULTS
			\$	%			
<u>OPERATING ACTIVITIES</u>							
Net Operating Profit	\$11,686	\$7,507	\$4,179	56 %	\$0	\$(3,405)	\$(14,377)
Adjustments for Non-Cash Activities:							
Depreciation/Amortization	5,400	5,312	88	2 %	5,497	5,369	5,171
Non Cash Impact of EPIC	(1,300)	1,254	(2,554)	(204)%	1,254	931	2,168
Unrealized Gains	0	(912)	912	100 %	0	(1,428)	(144)
Adj for Chgs in Assets and Liabilities	466	466	0	0 %	0	(7,071)	(4,806)
Total Cash From Operating Activities	\$16,252	\$13,627	\$2,625	19 %	\$6,751	\$(5,604)	\$(11,988)
<u>INVESTING ACTIVITIES</u>							
Capital Expenditures	\$(4,750)	\$(2,835)	\$(1,915)	(68)%	\$(1,697)	\$(1,873)	\$(3,652)
Net (Purchases) Sales of Investments	0	(14,000)	14,000	100 %	0	13,382	13,580
Total Cash From Investing Activities	\$(4,750)	\$(16,835)	\$12,085	72 %	\$(1,697)	\$11,509	\$9,928
<u>FINANCING ACTIVITIES</u>							
Proceeds of Long-Term Debt	\$0	\$0	\$0	%	\$0	\$0	\$0
Transfer to USF FC - Leases on MOBs	(2,262)	(2,166)	(96)	(4)%	(2,201)	(2,368)	(2,005)
Total Cash From Financing Activities	\$(2,262)	\$(2,166)	\$(96)	(4)%	\$(2,201)	\$(2,368)	\$(2,005)
CHANGE IN CASH	9,240	(5,374)	14,614	272 %	2,853	3,537	(4,065)
Cash, Beginning of Year	7,085	12,460	(5,375)	(43)%	13,015	8,922	12,987
Cash, End of Year	\$16,325	\$7,086	\$9,239	130 %	\$15,868	\$12,459	\$8,922
Total Cash & Investments	\$41,312	\$32,073	\$9,239	29 %	\$28,955	\$23,448	\$31,912
Days Cash on Hand	48	38	10	26 %	36	29	42



**University Medical Service Association, Inc. and
Medical Services Support Corporation**

Annual Financial Plan for FY 2019

3-YEAR FORECAST

(In thousands)

	ACTUAL & ESTIMATED			FORECAST		
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
ASSETS						
Cash & Investments	\$31,912	\$23,448	\$32,073	\$41,312	\$51,213	\$63,487
Fixed Assets	60,397	58,326	55,849	55,199	56,557	57,948
Other Assets	53,681	56,768	56,535	56,302	56,070	55,839
Total Assets	\$145,990	\$138,542	\$144,457	\$152,813	\$163,840	\$177,274
LIABILITIES						
Payables	\$6,435	\$6,257	\$6,373	\$6,490	\$6,608	\$6,729
Long-Term Debt	54,979	53,528	51,362	49,100	46,937	44,870
Other Liabilities	14,104	13,931	14,048	14,164	14,282	14,400
Total Liabilities	\$75,518	\$73,716	\$71,783	\$69,754	\$67,827	\$65,999
Total Net Assets	\$70,472	\$64,826	\$72,674	\$83,059	\$96,013	\$111,275
Total Liabilities and Net Assets	\$145,990	\$138,542	\$144,457	\$152,813	\$163,840	\$177,274
Days Cash on Hand	42	29	38	48	56	66
REVENUES						
Net Patient Service	\$151,505	\$166,362	\$176,924	\$185,751	\$204,008	\$219,262
Grants, Contracts & Awards	62,551	68,336	70,113	72,217	74,383	76,615
UPL	6,798	7,329	22,560	22,560	22,560	22,560
Other Revenues	42,891	49,493	44,501	46,756	49,125	51,614
Total Revenues	\$263,745	\$291,520	\$314,098	\$327,284	\$350,076	\$370,051
EXPENSES						
Faculty Support	\$94,895	\$102,578	\$109,141	\$112,415	\$118,036	\$123,938
Housestaff Support	11,406	11,723	10,804	11,128	11,462	11,806
Other Staff Support	63,988	67,992	67,614	70,903	74,448	78,171
Depreciation/Amortization	5,171	5,397	5,312	5,400	5,490	5,581
UPL Program Expenses	0	0	7,616	7,616	7,616	7,616
Transfer to USF - Salary Grants	45,141	46,495	52,558	54,135	59,208	65,530
Transfer to HPCC - Salary Support	2,955	1,530	767	790	500	250
Other Expenses	52,543	59,707	52,438	54,511	57,479	59,491
Total Expenses	\$276,099	\$295,422	\$306,250	\$316,898	\$334,239	\$352,383
Changes	\$(12,354)	\$(3,902)	\$7,848	\$10,386	\$15,837	\$17,668
Unrealized Investment Gains (Losses)	144	1,428	912	0	0	0
Change in Fair Value of Swaps	0	0	0	0	0	0
Non-Cash Impact of Epic Conversion	(2,168)	(931)	(1,254)	1,300	(2,000)	(2,000)
NET OPERATING PROFIT	\$(14,378)	\$(3,405)	\$7,506	\$11,686	\$13,837	\$15,668
Operating Profit Margin	-5%	-1%	2%	3%	5%	5%



USF Foundation, Inc.

Annual Financial Plan for FY 2019

FINANCIAL PLAN STATEMENT

State the DSO's Statutory Mission which Supports the Goals of the University

- The University of South Florida Foundation aids and promotes excellence in the educational, research and service activities of USF by seeking, receiving and administering private gifts for the benefit of the University. We enhance resources that support the strategic objectives of the University of South Florida System within a culture of cooperation and collaboration.

List Key Drivers for the 2019 Financial Plan Over 2018 - Focus on Cash Flows and Adequacy Reserves

- The Foundation completed the first phase of a comprehensive campaign to raise funds for USF to attract world-class scholars and students, build state-of-the-art academic and athletic facilities, and support groundbreaking research activities exceeding the \$600 million goal with over \$621 million raised. The Foundation is nearing completion of the second phase of this Campaign exceeding the goal to bring the overall Campaign total to \$1 billion. The final leg of this Campaign continues to focus on our students and faculty by strengthening the academic environment, supporting research, and making the dream of a college education more affordable. The Foundation has raised nearly \$1.1 billion through the 3rd quarter of fiscal year 2018.
- The Foundation's Investment Committee continues to actively monitor the performance and liquidity of our asset allocation and investment managers and take action when appropriate to enhance the growth and benefit of the endowment to USF over a long-term horizon. Our short-term and long-term returns are consistently in the top quartile amongst our peers. Our goal is to grow the endowment next year through continued solid investment returns and gifts.
- The Foundation supports program activities of the University for USF faculty & staff, student scholarships, research initiatives, and capital projects according to donor restrictions. These expenses can be funded by current gifts estimated on the annual plan, existing balances in accounts from gifts and distributions received in prior years, or projected endowment distributions during the year of about \$17.1 million. With the assistance of the Foundation, spending from these sources is directed by the colleges and units designated by our donors as the beneficiaries of their gifts.

Describe Material Capital Expenditures in the 2019 Financial Plan - Provide Details and ROI Expectations

- The Foundation receives contributions to support capital improvements on behalf of the USF System. As these capital projects commence, funds are transferred to USF Facilities Planning for expenditure.

Identify Key Risks That Might Affect the 2019 Financial Plan

- Budget fluctuations experienced by the USF System have led to varying levels of reliance and utilization of Foundation funds. While Foundation sources of support like the endowment provide a small percentage of the System's overall budget, this source is critical for many University programs while providing a funding catalyst for others to achieve the University's goals and aspirations.
- The Investment Committee prudently considers the risks associated with each asset class in addition to the return when conducting its annual review of the endowment asset allocation. The goal of this process is to minimize the volatility of the investment performance and provide a more consistent, reliable stream of income to the University.
- University support of the Foundation's operating budget is essential to continue the high level of fundraising demonstrated during the Unstoppable Campaign. Good financial stewardship of this support and other available resources is important to the Foundation's success. The Foundation's cost to raise a dollar remained low at 16 cents per dollar during the length of the Unstoppable Campaign. In other words, for every dollar invested in fundraising during the Campaign, the Foundation has raised over six dollars in return.
- State funding from the suspended Major Gifts matching program continues to remain unfunded by the legislature with more than \$20 million in match funds to enhance the endowment once received.

List Major DSO Initiatives that will Drive Improvements in Operating Earnings for 2020 and 2021

- The Foundation will continue to support the University's goal surrounding its Student Success initiative with fundraising for scholarships and fellowships. During the 2nd phase of the Campaign, the Foundation has secured several transformational gifts to the university including naming of the Muma College of Business, the Kate Tiedemann College of Business at USF St Pete, the Lynn Pippenger School of Accountancy, the Zimmerman School of Advertising and Mass Communications, Collier Student Success Center in the Muma College of Business and Pippenger Hall in the USF St Pete Kate Tiedemann College of Business. These gifts will attract faculty and students globally and provide for greater learning and career opportunities for students.
- Research and Innovation is continually supported through the Foundation's efforts in securing philanthropic, private research grants. During the Unstoppable Campaign approximately \$52.9 million in philanthropic grants were received to support research efforts in areas such as Health, Engineering and Education. In addition, Endowed Chair and Professorship funds provide a predictable, steady stream of earnings to support the Chair or Professors' research efforts in perpetuity.
- Cultivating university partnerships, both public and private, is a goal of the Foundation. The generosity of our donors ensures an environment rich in research, teaching, learning and discovery. The Foundation has captivated the attention of donors with the exciting opportunities to become highly visible partners of USF Health Morsani College of Medicine and the USF Heart Institute, as they relocate and construct a state of the art facility on donated property in the Channelside area of downtown Tampa.
- The Foundation enhances the economic base for USF through the annual support generated from the Foundation's endowment. The endowment provides over \$17 million each year to support USF faculty, students and programs. The endowment along with other gifts for current operations provides over \$48 million in annual support to USF.



USF Foundation, Inc.
Annual Financial Plan for FY 2019

INCOME STATEMENT

(In thousands)

	FY 2019 FINANCIAL PLAN	FY 2018 ESTIMATE (as of 3/31/18)	Variance		FY 2018 FINANCIAL PLAN	FY 2017 ACTUAL RESULTS	FY 2016 ACTUAL RESULTS
			\$	%			
REVENUES							
Gifts & donations	\$51,100	\$50,550	\$550	1 %	\$48,500	\$38,867	\$38,541
Investment earnings (loss), net	45,263	43,901	1,362	3 %	42,193	63,943	(3,626)
Transfer from USF- campaign support	-	3,058	(3,058)	(100)%	3,683	3,183	3,184
University support	12,427	9,756	2,671	27 %	9,756	10,122	9,924
Other revenues	970	448	522	117 %	2,400	2,743	394
Total Revenues	\$109,760	\$107,713	\$2,047	2 %	\$106,532	\$118,858	\$48,417
EXPENSES							
USF & DSO Program Services							
Salaries & benefits	\$24,665	\$24,421	\$244	1 %	\$23,942	\$20,786	\$23,834
Scholarship & fellowships	7,713	7,637	76	1 %	7,487	8,330	8,069
Service & independent contractors	5,169	5,068	101	2 %	4,862	4,284	4,227
Supplies	1,193	1,181	12	1 %	1,939	1,341	1,948
Other transfers & expenses	10,159	9,903	256	3 %	6,526	11,897	8,676
Total Program Service Expense	48,899	48,210	689	1 %	44,756	46,638	46,754
Fundraising & Operating Expenses							
Salaries & benefits	\$14,402	\$14,259	\$143	1 %	\$14,006	\$13,979	\$13,329
Service & independent contractors	778	613	165	27 %	628	910	811
Other expenses	1,900	2,576	(676)	(26)%	2,392	2,409	2,555
Total Fundraising & Operating Expenses	17,080	17,448	(368)	(2)%	17,026	17,298	16,695
Total Expenses	\$65,979	\$65,658	\$321	0 %	\$61,782	\$63,936	\$63,449
OPERATING PROFIT BEFORE NON-CASH CHANGES	\$43,781	\$42,055	\$1,726	4 %	\$44,750	\$54,922	\$(15,032)
	-	-	-	%	-	-	-
Total Non-Cash Changes	\$0	\$0	\$0	%	\$0	\$0	\$0
NET OPERATING PROFIT	\$43,781	\$42,055	\$1,726	4 %	\$44,750	\$54,922	\$(15,032)
Operating Profit Margin	40%	39%	1		42%	46%	-31%



USF Foundation, Inc.
Annual Financial Plan for FY 2019

STATEMENT OF CASH FLOWS

(In thousands)

	FY 2019	FY 2018	Variance		FY 2018	FY 2017	FY 2016
	FINANCIAL	ESTIMATE	\$	%	FINANCIAL	ACTUAL	ACTUAL
	PLAN	(as of 3/31/18)			PLAN	RESULTS	RESULTS
<u>OPERATING ACTIVITIES</u>							
Net Operating Profit	\$43,781	\$42,055	\$1,726	4 %	\$44,750	\$54,922	\$(15,032)
Adjustments for Non-Cash Activities:							
Investment (gains) losses	(45,263)	(43,901)	(1,362)	(3)%	(42,193)	(63,943)	3,626
Change in assets & liabilities, net	(6,171)	(6,023)	210	(3)%	(8,668)	2,042	6,982
Total Cash From Operating Activities	\$(7,653)	\$(7,869)	\$216	3 %	\$(6,111)	\$(6,979)	\$(4,424)
<u>INVESTING ACTIVITIES</u>							
Capital Expenditures	\$(650)	\$(48)	\$(602)	(1,254)%	\$0	\$(2,936)	\$(194)
Net (Purchases) Sales of Investments	13,932	13,646	286	2 %	14,256	13,605	9,953
Interest dividends reinvested	(4,989)	(4,979)	(10)	(0)%	(7,589)	(4,465)	(3,927)
Total Cash From Investing Activities	\$8,293	\$8,619	\$(326)	(4)%	\$6,667	\$6,204	\$5,832
<u>FINANCING ACTIVITIES</u>							
Proceeds of Long-Term Debt	-	-	-	%	-	-	-
Principal Payments	(371)	(362)	(9)	(2)%	(375)	(352)	(343)
Total Cash From Financing Activities	\$(371)	\$(362)	\$(9)	(2)%	\$(375)	\$(352)	\$(343)
CHANGE IN CASH	269	388	(119)	(31)%	181	(1,127)	1,065
Cash, Beginning of Year	1,191	804	387	48 %	2,726	1,931	866
Cash, End of Year	\$1,460	\$1,192	\$268	22 %	\$2,907	\$804	\$1,931
Total Cash & Investments	\$83,319	\$81,686	\$1,633	2 %	\$76,695	\$80,084	\$79,925
Days Cash on Hand	461	455	7	2 %	454	458	460



USF Foundation, Inc.

Annual Financial Plan for FY 2019

3-YEAR FORECAST

(In thousands)

	ACTUAL & ESTIMATED			FORECAST		
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
<u>ASSETS</u>						
Cash & investments	\$79,925	\$80,084	\$81,686	\$83,319	\$84,986	\$86,685
Fixed assets	7,382	9,732	9,762	10,915	10,855	10,795
Other assets	494,708	544,203	587,739	628,881	672,753	717,177
Total Assets	\$582,015	\$634,019	\$679,187	\$723,115	\$768,594	\$814,657
<u>LIABILITIES</u>						
Payables	\$1,735	\$1,444	\$2,310	\$2,832	\$2,812	\$2,395
Long-term debt	5,780	5,447	5,085	4,714	4,333	3,942
Other liabilities	34,295	32,001	34,611	34,607	36,610	37,343
Total Liabilities	\$41,810	\$38,892	\$42,006	\$42,153	\$43,755	\$43,680
NET ASSETS	\$540,205	\$595,127	\$637,181	\$680,962	\$724,839	\$770,977
Days Cash on Hand	460	458	455	461	453	450
<u>REVENUES</u>						
Gifts & fundraising revenue	\$38,541	\$38,867	\$50,550	\$51,100	\$51,611	\$52,643
University support	13,108	16,203	12,814	12,427	12,428	12,677
Other revenues	(3,232)	63,788	44,349	46,233	48,302	51,161
Total Revenues	\$48,417	\$118,858	\$107,713	\$109,760	\$112,341	\$116,481
<u>EXPENSES</u>						
Salaries & benefits	\$37,163	\$34,765	\$38,680	\$39,067	\$39,848	\$40,645
Scholarships & fellowships	8,069	8,330	7,637	7,713	7,790	7,946
Other expenses	18,217	20,841	19,341	19,199	20,827	21,750
Total Expenses	\$63,449	\$63,936	\$65,658	\$65,979	\$68,465	\$70,341
Changes	\$(15,032)	\$54,922	\$42,055	\$43,781	\$43,876	\$46,140
Total Non-Cash Changes	-	-	-	-	-	-
NET OPERATING PROFIT	\$(15,032)	\$54,922	\$42,055	\$43,781	\$43,876	\$46,140
Operating Profit Margin	-31%	46%	39%	40%	39%	40%



University of South Florida, Alumni Association

Annual Financial Plan for FY 2019

FINANCIAL PLAN STATEMENT

State the DSO's Statutory Mission which Supports the Goals of the University

- The USF Alumni Association exists to assist in the success of the University of South Florida. The Alumni Association is in the alumni engagement and cultivation ("friend raising") business. The focus of the Association is to strengthen relationships with Alumni through myriad activities, thus leading to their long-term involvement with the University of South Florida. Activities include alumni opportunities for volunteering, event participation, student mentoring, recognition programs, and financial support. All of this engagement activity by Alumni and friends supports the University as a whole. While the long term revenue associated with the Association's support is not directly reflected in the Association's financial statements, alumni engagement combined with development activity helps to facilitate fundraising success.

List Key Drivers for the 2019 Financial Plan Over 2018 - Focus on Cash Flows and Adequacy of Reserves

- The expected redesign of the USF license plate is expected to increase sales by 10%.
- Events like Homecoming, Brahman Bash, and the Outstanding Young Alumni Awards had higher than expected attendance in FY'18. Because attendance and attendee's satisfaction at the events were higher, the Association expects to sell larger sponsorships during FY'19, increasing revenue by more than 12%.

Describe Material Capital Expenditures in the 2019 Financial Plan - Provide Details and ROI Expectations

- The Alumni Association has no anticipated capital expenditures during FY 2019.

Identify Key Risks That Might Affect the 2019 Financial Plan

- The Association is in contract negotiations with the USF Federal Credit Union to extend the current affinity contract. Budgeted amounts for FY'19 are based on the Association's proposal provided to the Credit Union. If the Credit Union does not agree to the modifications, there could be an impact to royalty and sponsorship revenue.

List Major DSO Initiatives that will Drive Increases in Operating Earnings for 2020 and 2021

- Increasing the percentage of alumni members from the current 13% to 18% (which is the average percentage of 35 membership based public institutions) of the living alumni base.
- Improve alumni engagement and participation at the chapter/society level by implementing an improvement program that provides for myriad relevant connection activities. Further, establish a culture of giving through scholarships benefiting a local USF student with a goal of 60% of all chapters and societies having established scholarship endowments. USFAA currently has 42 chapters and societies, with 22 groups with established scholarship funds.
- The Association currently has 5,107 life members and continues to focus on life membership as a priority engagement initiative for alumni and friends of the university.



University of South Florida, Alumni Association

Annual Financial Plan for FY 2019

INCOME STATEMENT

(In thousands)

	FY 2019	FY 2018	Variance		FY 2018	FY 2017	FY 2016
	FINANCIAL PLAN	ESTIMATE (as of 3/31/18)	\$	%	FINANCIAL PLAN	ACTUAL RESULTS	ACTUAL RESULTS
REVENUES							
Membership	\$544	\$517	\$27	5 %	\$619	\$630	\$555
University Support	625	625	0	0 %	625	625	631
Royalties	507	519	(12)	(2)%	507	529	524
License Plate Revenue	432	393	39	10 %	397	388	392
Sponsorships	301	266	35	13 %	282	134	143
Investment Income (Loss)	259	239	20	8 %	241	218	198
Event and other Revenue	157	140	17	12 %	116	116	77
Gifts & Donations	195	183	12	7 %	179	198	224
Total Revenues	\$3,020	\$2,882	\$138	5 %	\$2,966	\$2,838	\$2,744
EXPENSES							
Salaries & Benefits	\$1,726	\$1,689	\$37	2 %	\$1,691	\$1,514	\$1,451
Membership and Membership Services	217	172	45	26 %	237	261	377
Printing & Duplicating	23	15	8	53 %	18	37	29
Event Services	274	269	5	2 %	259	237	203
Professional Services	92	90	2	2 %	84	96	87
Postage	57	58	(1)	(2)%	60	59	48
Travel	71	56	15	27 %	69	50	60
Advertising & Marketing	27	22	5	23 %	30	34	27
Insurance	50	49	1	2 %	52	41	42
Community Relations	28	30	(2)	(7)%	39	38	49
Credit Card Fees	21	22	(1)	(5)%	21	23	22
Scholarships	74	68	6	9 %	73	83	53
Other expenses	22	21	1	5 %	29	30	46
Bad debt expense	0	13	(13)	(100)%	-	3	5
Total Expenses	\$2,682	\$2,574	\$108	4 %	\$2,662	\$2,506	\$2,499
OPERATING PROFIT BEFORE NON-CASH CHANGES	\$338	\$308	\$30	10 %	\$304	\$332	\$245
Unrealized Investment Gains (Losses)	432	414	18	4 %	384	538	(399)
Total Non-Cash Changes	\$432	\$414	\$18	4 %	\$384	\$538	\$(399)
NET OPERATING PROFIT	\$770	\$722	\$48	7 %	\$688	\$870	\$(154)
Operating Profit Margin	11%	11%	0		10%	12%	9%



University of South Florida, Alumni Association

Annual Financial Plan for FY 2019

STATEMENT OF CASH FLOWS

(In thousands)

	FY 2019	FY 2018	Variance		FY 2018	FY 2017	FY 2016
	FINANCIAL PLAN	ESTIMATE (as of 3/31/18)	\$	%	FINANCIAL PLAN	ACTUAL RESULTS	ACTUAL RESULTS
<u>OPERATING ACTIVITIES</u>							
Net Operating Profit	\$770	\$707	\$63	9 %	\$688	\$870	\$(154)
Adjustments for Non-Cash Activities:							
Unrealized Gain on Investments	(432)	(414)	(18)	(4)%	(384)	(538)	399
Adjustments for Changes in Operating Assets and Liabilities	140	130	10	8 %	130	(196)	139
Total Cash From Operating Activities	\$478	\$423	\$55	13 %	\$434	\$136	\$384
<u>INVESTING ACTIVITIES</u>							
Capital Expenditures	\$0	\$0	\$0	%	\$0	\$0	\$0
Net (Purchases) Sales of Investments	(477)	(417)	(59)	(14)%	(433)	(148)	(378)
Total Cash From Investing Activities	\$(477)	\$(417)	\$(59)	(14)%	\$(433)	\$(148)	\$(378)
<u>FINANCING ACTIVITIES</u>							
Proceeds of Long-Term Debt	\$0	\$0	\$0	%	\$0	\$0	\$0
Principal Payments	0	0	0	%	0	0	0
Interest Payments	0	0	0	%	0	0	0
Total Cash From Financing Activities	\$0	\$0	\$0	%	\$0	\$0	\$0
CHANGE IN CASH	1	6	(4)	(74)%	1	(12)	6
Cash, Beginning of Year	7	1	6	556 %	15	13	7
Cash, End of Year	\$8	7	\$1	22 %	\$16	\$1	\$13
Total Cash & Investments	\$1,382	\$1,314	\$68	5 %	\$1,240	\$1,224	\$1,248
Days Cash on Hand	188	186	2	1 %	170	178	182



University of South Florida, Alumni Association

Annual Financial Plan for FY 2019

3-YEAR FORECAST

(In thousands)

	ACTUAL & ESTIMATED			FORECAST		
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
ASSETS						
Cash & Investments	\$1,248	\$1,224	\$1,314	\$1,382	\$1,416	\$1,457
Restricted Cash & Investments	4,655	5,535	5,739	5,969	6,267	6,643
Other Assets	359	365	360	360	360	360
Total Assets	\$6,262	\$7,124	\$7,413	\$7,711	\$8,043	\$8,460
LIABILITIES						
Payables	\$140	\$189	\$140	\$150	\$150	\$150
Long-Term Debt	0	0	0	0	0	0
Other Liabilities	2,079	2,022	2,111	2,206	2,301	2,211
Total Liabilities	\$2,219	\$2,211	\$2,251	\$2,356	\$2,451	\$2,361
NET ASSETS	\$4,043	\$4,913	\$5,162	\$5,355	\$5,592	\$6,099
Days Cash on Hand	182	178	186	188	186	184
REVENUES						
Membership	\$555	\$631	\$517	\$544	\$604	\$684
University Support	631	625	625	625	625	625
Other Revenues	1,558	1,582	1,740	1,851	1,944	2,041
Total Revenues	\$2,744	\$2,838	\$2,882	\$3,020	\$3,173	\$3,350
EXPENSES						
Salaries & Benefits	\$1,451	\$1,514	\$1,689	\$1,726	\$1,778	\$1,831
Event Expenses	203	237	269	274	288	302
Other Expenses	845	755	616	682	716	752
Total Expenses	\$2,499	\$2,506	\$2,574	\$2,682	\$2,782	\$2,885
Changes	\$245	\$332	\$308	\$338	\$391	\$465
Total Non-Cash Changes	(399)	538	414	432	454	481
NET OPERATING PROFIT	\$(154)	\$870	\$722	\$770	\$845	\$945
Operating Profit Margin	9%	12%	11%	11%	12%	14%



USF Research Foundation, Inc.

Annual Financial Plan for FY 2019

FINANCIAL PLAN STATEMENT

State the DSO's Statutory Mission which Supports the Goals of the University

- The University of South Florida Research Foundation was established to promote, encourage, and enhance the research activities of University of South Florida faculty, staff and students.

The USF Innovation Enterprise, which encompasses the USF Research Park, Technology Transfer, USF Office of Corporate Partnerships and the Tampa Bay Technology Incubator, contributes to a robust innovation-based ecosystem to include community startups and corporate partnerships with the University.

The Research Foundation owns and manages real property assets that include the USF Research Park and various buildings that are located within the Park. Revenue is generated primarily through long-term leases of facilities utilized by the University research enterprise and private sector entities seeking research relationships with the University.

Projected rent revenue to be received from the University for the leasing of Research Park facilities is \$7.691M in FY 2019. University rents are included in rental revenue on the accompanying Income Statement.

On behalf of the University, the Research Foundation manages the fiscal operations of the USF Tampa Bay Technology Incubator Program.

The Research Foundation provides a mechanism for the funding of licensed research and development activities at the University. As a DSO, the Research Foundation provides broad and flexible financial mechanisms to administer private research contracts and grants, including corporate and private foundation-sponsored programs. We assist the University by working in cooperation with the University's Technology Transfer Office/Patents and Licensing, in the commercialization of University inventions including license agreements, and receipt and distribution of royalties related to intellectual property.

Describe Material Capital Expenditures in the 2019 Financial Plan - Provide Details and ROI Expectations

- \$743 thousand of tenant improvements may be expended to generate additional rent revenues if needed. If the leases are not awarded or the improvements are not required for lease incentive, the funds will not be expended.
- \$793 thousand of capital expenditures are included in the FY 2019 Plan for maintaining functionality of the property and buildings. These include replacing an HVAC RTU, roofing repairs and coatings, and projects designed to reduce operating utility costs and preserve the buildings within the Research Park, as Class A properties.
- \$316 thousand of tenant improvements for space to be leased by the Research Foundation at the University Business Center (UBC), are included in the FY 2019 Plan. This space will allow for expansion of research capabilities in the Research Park (currently at 98% occupancy) until the next building comes to fruition.

Identify Key Risks That Might Affect the 2019 Financial Plan

- Financial information has been restated to exclude the University's Incubator Program revenue and expense transactions. To improve financial reporting of USFRF operations, the accounting policy will be changed in FY 2019 to account for Incubator Program receipts and expenditures as custodial funds, held on behalf of the University.
- Occupancy within the Research Park is at near capacity. While there is on-going risk of lease terminations, there continues to be encouraging interest in available space.

List Major DSO Initiatives that will Drive Increases in Operating Earnings for 2020 and 2021

- With the need for additional research space, the Research Foundation will be executing a 5-year lease for 30,177 square feet of space that adjoins the University. This interim move will permit conversion of office space to laboratory within the existing buildings. Space vacated by administrative users moving to UBC will be converted to laboratory use for incoming faculty. This allows the Research Park to welcome new faculty and private companies with research relationships with USF in advance of building a new facility.
- Should additional space become available in the IDRB building, the debt restructure (FY17) from Tax-Exempt to Taxable, would allow expanded business use to include private entities at market rate rents.



USF Research Foundation, Inc.

Annual Financial Plan for FY 2019

INCOME STATEMENT

(In thousands)

	FY 2019	FY 2018	Variance		FY 2018	FY 2017	FY 2016
	FINANCIAL PLAN	ESTIMATE (as of 3/31/18)	\$	%	FINANCIAL PLAN	ACTUAL RESULTS	ACTUAL RESULTS
REVENUES							
Rental Revenue	\$8,390	\$8,213	\$177	2 %	\$8,631	\$8,061	\$9,382
Intellectual Property Revenue	3,050	2,500	550	22 %	2,500	2,307	2,200
NMR Use License Fee (from USF)	307	307	-	0 %	244	307	307
Other Operating Revenues	266	191	76	40 %	194	185	190
Total Revenues	\$12,014	\$11,211	\$802	7 %	\$11,569	\$10,860	\$12,079
EXPENSES							
Salaries & Benefits (to USF)	\$1,384	\$1,340	\$44	3 %	\$1,389	\$1,212	\$1,149
Program Expenses	2,579	2,141	438	20 %	\$2,178	1,811	1,807
Operations - Research Park	3,116	2,960	156	5 %	\$3,450	2,895	3,154
Contractual Services & Other Operating	140	141	(1)	(0)%	\$150	131	159
UBC Net Exp (University Business Center)	199	-	199	100 %	-	-	-
Interest Expense	620	694	(74)	(11)%	686	863	1,719
Depreciation & Amortization	2,736	2,888	(152)	(5)%	2,923	2,822	2,959
Total Expenses	\$10,775	\$10,164	\$611	6 %	\$10,776	\$9,733	\$10,947
OPERATING PROFIT BEFORE NON-OPERATING REVENUE	\$1,239	\$1,047	\$191	18 %	\$793	\$1,127	\$1,132
Investment Income (Loss)	1,895	2,322	(427)	(18)%	1,474	3,465	(374)
Other Non-Operating Income (Loss)	-	-	-	%	-	(30)	(989)
Total Non-Operating Revenue	\$1,895	\$2,322	\$(427)	(18)%	\$1,474	\$3,434	\$(1,363)
NET INCOME	\$3,133	\$3,369	\$(236)	(7)%	\$2,267	\$4,562	\$(231)
Operating Profit Margin	10%	9%	-29%		7%	10%	9%



USF Research Foundation, Inc.

Annual Financial Plan for FY 2019

STATEMENT OF CASH FLOWS

(In thousands)

	FY 2019	FY 2018	Variance		FY 2018	FY 2017	FY 2016
	FINANCIAL PLAN	ESTIMATE (as of 3/31/18)	\$	%	FINANCIAL PLAN	ACTUAL RESULTS	ACTUAL RESULTS
<u>OPERATING ACTIVITIES</u>							
Net Income	\$3,133	\$3,369	\$(236)	(7)%	\$2,267	\$4,562	\$(231)
Adjustments for Non-Cash Activities:							
Add back Depreciation/Amortization Exp	2,736	2,888	(152)	(5)%	2,923	2,822	2,959
Add back Other Non Cash Expenses	75	38	38	100 %	75	158	126
Less Non Cash Investment (Gain) Loss	(1,895)	(2,322)	427	18 %	(1,474)	(3,447)	374
Less Other Non Cash Revenue	(30)	(27)	(2)	(8)%	(29)	(79)	1,583
Add Restatement - Other Income	-	722	(722)	(100)%	469	640	551
Adjustments for Changes in Other							
Operating Assets and Liabilities (net)	-	-	-	%	(60)	346	1,646
Total Cash From Operating Activities	\$4,020	\$4,668	\$(648)	(14)%	\$4,172	\$5,002	\$7,008
<u>INVESTING ACTIVITIES</u>							
Capital Expenditures	\$(1,852)	\$(960)	\$(892)	(93)%	\$(1,598)	\$(698)	\$(516)
Net Purchase of Investments	-	(1,000)	1,000	100 %	0	(2,000)	(3,600)
Transfer from Venture Investment Fund	150	75	75	100 %	150	150	-
Seed Capital Loan Funding	(150)	(75)	(75)	(100)%	(150)	(150)	(175)
Total Cash From Investing Activities	\$(1,852)	\$(1,960)	\$108	6 %	\$(1,598)	\$(2,698)	\$(4,291)
<u>FINANCING ACTIVITIES</u>							
Redeem Investments for Debt Payoff	\$0	\$0	\$0	%	\$0	\$9,254	\$0
Pay Off Debt	-	-	-	%	0	(9,525)	-
Principal Payments	(1,720)	(1,590)	(130)	(8)%	(1,590)	(1,565)	(1,680)
Total Cash From Financing Activities	\$(1,720)	\$(1,590)	\$(130)	(8)%	\$(1,590)	\$(1,836)	\$(1,680)
CHANGE IN CASH	448	1,117	(669)	(60)%	983	469	1,037
Cash, Beginning of Year	6,026	4,909	1,117	23 %	4,909	4,440	3,403
Cash, End of Year	\$6,474	\$6,026	\$448	7 %	\$5,892	\$4,909	\$4,440
Total Cash & Investments	\$41,209	\$38,866	\$2,343	6 %	\$37,887	\$35,430	\$38,894
Days Cash on Hand	298	313	(15)	(5)%	281	253	468



USF Research Foundation, Inc.

Annual Financial Plan for FY 2019

3-YEAR FORECAST

(In thousands)

	ACTUAL & ESTIMATED			FORECAST		
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
<u>ASSETS</u>						
Cash & Investments	\$38,894	\$35,430	\$38,866	\$41,209	\$45,604	\$50,478
Fixed Assets	36,148	34,100	31,476	30,699	28,765	27,534
Other Assets	18,740	18,244	18,966	18,850	18,734	18,618
Total Assets	\$93,782	\$87,774	\$89,308	\$90,758	\$93,104	\$96,630
<u>LIABILITIES</u>						
Payables	\$1,871	\$2,205	\$1,651	\$1,700	\$1,751	\$1,804
Long-Term Debt	31,555	20,465	18,875	17,155	15,410	14,635
Other Liabilities	8,334	7,880	7,568	7,795	8,029	8,270
Total Liabilities	\$41,760	\$30,550	\$28,094	\$26,650	\$25,190	\$24,708
NET ASSETS	\$52,022	\$57,224	\$61,215	\$64,108	\$67,913	\$71,922
Days Cash on Hand	468	253	313	298	439	561
<u>REVENUES</u>						
Rental Revenue	\$9,382	\$8,061	\$8,213	\$8,390	\$8,696	\$8,741
Intellectual Property Revenue	2,200	2,307	2,500	3,050	3,150	3,250
Other Revenues	497	492	498	573	591	609
Total Revenues	\$12,079	\$10,860	\$11,211	\$12,014	\$12,437	\$12,600
<u>EXPENSES</u>						
Salaries & Benefits	\$1,149	\$1,212	\$1,340	\$1,384	\$1,425	\$1,468
Operations - Research Park	3,154	2,895	2,960	3,116	2,977	3,065
Other Expenses	6,644	5,627	5,864	6,275	6,030	5,970
Total Expenses	\$10,947	\$9,733	\$10,164	\$10,775	\$10,432	\$10,503
Operating Profit Before Non-Operating	\$1,132	\$1,127	\$1,047	\$1,239	\$2,004	\$2,097
Total Non-Operating	(1,363)	\$3,434	\$2,322	\$1,895	\$1,991	\$2,109
NET OPERATING PROFIT	\$(231)	\$4,562	\$3,369	\$3,133	\$3,995	\$4,206
Operating Profit Margin	9%	10%	9%	10%	16%	17%



USF Financing Corporation & USF Property Corporation

Annual Financial Plan for FY 2019

FINANCIAL PLAN STATEMENT

State the DSO's Statutory Mission which Supports the Goals of the University

- The Financing Corporation is the University's financing arm and is expected to provide low cost, low risk, long-term financing for the University's major capital projects.

List Key Drivers for the 2019 Financial Plan Over 2018 - Focus on Cash Flows and Adequacy of Reserves

- Refunding / Conversion of the \$18 M Series 2013B Health Bonds (Medical Faculty Office Building) - Closing June 15, 2018
 - The Corporation has issued a Request for Proposals to 11 banks to refund the Series 2013B Health bonds, with the objectives of locking in attractive long-term fixed rates and reducing credit risk, put risk, and rate risk. The effective date of the transaction will be July 1, 2018, along with the expiration of the swap and the current direct purchase of bonds facility.
- Comprehensive Program to Amend All 7 Bank Direct Purchase of Bond Agreements, totaling \$168 M, in FY 2018
 - The Corporation requested that the banks eliminate, in their loan agreements, subjective acceleration clauses (material adverse change) and other bank-favorable covenants, and reduce the effect of the reduction in corporate tax rate to 21%.

- \$59 M Series 2012B Housing Bonds (Juniper-Poplar Hall) - Wells Fargo Bank	Completed September 2017
- \$16 M Series 2010 CAMLS Note (CAMLS) - BB&T	Completed March 2018
- \$18 M Series 2010A&B Athletics Notes (Athletics District) - BB&T	Completed March 2018
- \$36 M Series 2013A Health Bonds (Morsani & South Tampa Clinics) - JP Morgan Chase Bank	Expected May 2018
- \$17 M Series 2013 Arena Note (Sun Dome Arena) - SunTrust Bank	Expected May 2018
- \$4 M Series 2003A Athletics Bonds (Athletics Training Facility) - SunTrust Bank	Expected May 2018

Describe Material Capital Expenditures in the 2019 Financial Plan - Provide Details and ROI Expectations

- \$6 Million Eye Institute Relocation Project - Approved by USF Board of Trustees on August 25, 2016, will be completed in June 2018; the related \$0.8 M Clinical Research Center will be completed by September 2018; USF transaction with Moffitt will close June 30, 2018.

Identify Key Risks That Might Affect the 2019 Financial Plan

- The Corporation manages exposures to adverse operating and financial performance on a monthly basis for each of its 13 debt programs, its 2 interest rate swaps (with 1 expiring on July 1, 2018), and the related University auxiliaries or DSOs.
- USF's tax-exempt borrowing rates have been affected by changes in the Federal Tax Code and the rising yield curve.

List Major DSO Initiatives that will Drive Increases in Operating Earnings for 2020 and 2021

- The Corporation will continue to work with University and campus leaders to assist with structuring new debt programs or restructure existing programs to meet their needs.
- The Corporation will continue to maintain positive relationships with Moody's / Standard & Poor's, Board of Governors, Division of Bond Finance, and commercial and investment banks.



USF Financing Corporation & USF Property Corporation

Annual Financial Plan for FY 2019

INCOME STATEMENT

(In thousands)

	FY 2019	FY 2018	Variance		FY 2018	FY 2017	FY 2016
	FINANCIAL	ESTIMATE	\$	%	FINANCIAL	ACTUAL	ACTUAL
	PLAN	(as of 3/31/18)			PLAN	RESULTS	RESULTS
REVENUES							
Transfer from USF - Housing debt payment	\$46,437	\$46,177	\$260	1 %	\$44,058	\$44,522	\$42,863
Transfer from USF - Marshall Center debt	1,459	1,496	(37)	(2)%	1,496	1,523	944
Transfer from USF - Athletics debt payment	1,787	1,957	(170)	(9)%	1,978	1,985	1,992
Transfer from USF - Arena debt payment	813	878	(65)	(7)%	878	883	952
Transfer from UMSA - debt payment	4,392	4,262	130	3 %	4,107	4,085	4,612
Transfer from HPCC - debt payment	1,455	1,750	(295)	(17)%	1,854	1,851	1,853
Total Revenues	\$56,343	\$56,520	\$(177)	(0)%	\$54,371	\$54,849	\$53,216
EXPENSES							
Transfer to USF - Housing operating expense	\$26,906	\$27,664	\$(758)	(3)%	\$25,435	\$25,994	\$22,019
Transfer to USF - management fee	706	691	15	2 %	691	672	665
Interest expense on debt	11,829	12,156	(327)	(3)%	12,001	12,330	13,076
Depreciation expense	8,005	7,827	178	2 %	7,854	7,811	7,811
General and administrative expenses	560	573	(13)	(2)%	549	541	523
Total Expenses	\$48,006	\$48,911	\$(905)	(2)%	\$46,530	\$47,348	\$44,094
OTHER REVENUES (EXPENSES)							
Transfers to USF/UMSA/HPCC	\$(8,457)	\$(7,687)	\$(770)	(10)%	\$(7,888)	\$(7,502)	\$(9,140)
Loss on debt extinguishment	(28)	(71)	43	61 %	0	(54)	0
Interest income	221	204	17	8 %	47	71	18
Total Expenses	\$(8,264)	\$(7,554)	\$(710)	(9)%	\$(7,841)	\$(7,485)	\$(9,122)
OPERATING PROFIT BEFORE NON-CASH CHANGES	\$73	\$55	\$18	33 %	\$0	\$16	\$0
Gain in INTO USF equity investment	600	473	127	27 %	1,700	1,835	2,224
Change in fair value of swaps	0	3,313	(3,313)	(100)%	0	6,945	(3,344)
Transfers (to) from USF/UMSA to offset swaps	0	(3,313)	3,313	100 %	0	(6,945)	3,344
Total Non-Cash Changes	\$600	\$473	\$127	27 %	\$1,700	\$1,835	\$2,224
NET OPERATING PROFIT	\$673	\$528	\$145	27 %	\$1,700	\$1,851	\$2,224
Operating Profit Margin	0%	0%		0%	0%	0%	0%



USF Financing Corporation & USF Property Corporation

Annual Financial Plan for FY 2019

STATEMENT OF CASH FLOWS

(In thousands)

	FY 2019	FY 2018	Variance		FY 2018	FY 2017	FY 2016
	FINANCIAL PLAN	ESTIMATE (as of 3/31/18)	\$	%	FINANCIAL PLAN	ACTUAL RESULTS	ACTUAL RESULTS
<u>OPERATING ACTIVITIES</u>							
Net Operating Profit	\$673	\$528	\$145	27 %	\$1,700	\$1,851	\$2,224
Adjustments for Non-Cash Activities:							
Amortization of debt issuance costs	91	89	2	2 %	89	89	89
Loss on debt extinguishment	28	71	(43)	(61)%	0	54	0
Depreciation expense	8,005	7,827	178	2 %	7,854	7,811	7,811
Amortization of premiums on debt	(1,580)	(1,724)	144	8 %	(1,724)	(1,840)	(2,234)
Change in fair value of swaps	0	(3,313)	3,313	100 %	0	(6,945)	3,344
Change in INTO USF equity investment	(600)	(473)	(127)	(27)%	(1,700)	(1,835)	(2,224)
Cash dividend received from INTO USF	0	0	0	%	0	6,000	0
Adjustments for Changes in Operating Assets and Liabilities	21,253	27,010	(5,757)	(21)%	26,611	21,936	22,454
Total Cash From Operating Activities	\$27,870	\$30,015	\$(2,145)	(7)%	\$32,830	\$27,121	\$31,464
<u>INVESTING ACTIVITIES</u>							
Capital Expenditures	\$(800)	\$(6,000)	\$5,200	87 %	\$(6,000)	\$0	\$0
Purchase of CD - INTO USF dividend	(72)	(24)	(48)	(200)%	0	(6,000)	0
Net (Purchases) Sales of Investments	(2,242)	(1,342)	(900)	(67)%	(1,312)	(3,155)	(4,100)
Total Cash Used In Investing Activities	\$(3,114)	\$(7,366)	\$4,252	58 %	\$(7,312)	\$(9,155)	\$(4,100)
<u>FINANCING ACTIVITIES</u>							
Cash Paid for Debt Issuance Costs	\$(53)	\$(98)	\$45	46 %	\$0	\$(53)	\$0
Proceeds of Long-Term Debt - Refunding	17,925	33,708	(15,783)	(47)%	0	37,920	0
Principal Payments - Refunding	(17,925)	(33,708)	15,783	47 %	0	(37,920)	0
Principal Payments	(12,198)	(11,733)	(465)	(4)%	(11,733)	(11,076)	(7,040)
Interest Payments	(13,505)	(13,818)	313	2 %	(13,785)	(12,337)	(15,074)
Return of Cash Pledged to Counterparty	1,000	3,000	(2,000)	(67)%	0	5,500	(5,250)
Total Cash Used In Financing Activities	\$(24,756)	\$(22,649)	\$(2,107)	(9)%	\$(25,518)	\$(17,966)	\$(27,364)
CHANGE IN CASH	0	0	0	%	0	0	0
Cash, Beginning of Year	3	3	0	0 %	3	3	3
Cash, End of Year	\$3	\$3	\$0	0 %	\$3	\$3	\$3
Total Cash & Investments	\$42,080	\$39,766	\$2,314	6 %	\$39,647	\$38,400	\$29,245
Days Cash on Hand*	370	340	30	9 %	359	339	278

* Not adjusted for funds restricted for debt service and capital expenditures.



USF Financing Corporation & USF Property Corporation

Annual Financial Plan for FY 2019

3-YEAR FORECAST

(In thousands)

	ACTUAL & ESTIMATED			FORECAST		
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
ASSETS						
Cash & Investments	\$29,245	\$38,400	\$39,766	\$42,080	\$43,295	\$44,511
Fixed Assets	249,465	241,654	240,627	232,622	224,617	216,612
Due from USF & Other Assets	98,898	83,567	67,783	58,694	53,113	44,850
Total Assets	\$377,608	\$363,621	\$348,176	\$333,396	\$321,025	\$305,973
LIABILITIES						
Payables - Interest and Construction	\$3,964	\$5,708	\$6,680	\$5,493	\$5,511	\$5,303
Long-Term Debt	347,802	334,976	321,609	307,922	294,803	280,192
Interest Rate Swap & Other Liabilities	22,260	17,504	13,926	13,347	13,374	12,402
Total Liabilities	\$374,026	\$358,188	\$342,215	\$326,762	\$313,688	\$297,897
NET ASSETS	\$3,582	\$5,433	\$5,961	\$6,634	\$7,337	\$8,076
Days Cash on Hand*	278	339	340	370	378	385
REVENUES						
Transfer from USF - Housing Debt Payment	\$42,863	\$44,522	\$46,177	\$46,437	\$47,709	\$48,671
Transfer from UMSA - Debt Payment	4,612	4,085	4,262	4,393	4,324	4,320
Transfer from HPCC - Debt Payment	1,853	1,851	1,750	1,455	1,481	1,508
Transfers from USF - Other Debt Payments	3,888	4,391	4,331	4,058	3,960	3,894
Total Revenues	\$53,216	\$54,849	\$56,520	\$56,343	\$57,474	\$58,393
EXPENSES						
Transfer to USF - Housing Operating Expense	\$22,019	\$25,994	\$27,664	\$26,906	\$28,138	\$29,020
Interest Expense on Debt	13,076	12,330	12,156	11,829	11,018	10,598
Depreciation Expense	7,811	7,811	7,827	8,005	8,005	8,005
Other Expenses	1,189	1,213	1,264	1,266	1,315	1,366
Total Expenses	\$44,095	\$47,348	\$48,911	\$48,006	\$48,476	\$48,989
OTHER REVENUES / EXPENSES						
Transfers to USF/UMSA/HPCC	(9,139)	(7,502)	(7,687)	(8,457)	(9,123)	(9,519)
Other Revenues - Interest Income	18	17	133	193	223	225
Total Expenses	\$(9,121)	\$(7,485)	\$(7,554)	\$(8,264)	\$(8,900)	\$(9,294)
Changes	\$0	\$16	\$55	\$73	\$98	\$110
Total Non-Cash Changes - INTO USF	\$2,224	\$1,835	\$473	\$600	\$630	\$665
NET OPERATING PROFIT	\$2,224	\$1,851	\$528	\$673	\$728	\$775
Operating Profit Margin	0%	0%	0%	0%	0%	0%

* Not adjusted for funds restricted for debt service and capital expenditures.

Agenda Item: FL 115

USF Board of Trustees

June 12, 2018

Issue: 2018-19 Continuation Operating Budget

Proposed action: Approve 2018-19 Continuation Operating Budget at last year's Operating Budget level. A subsequent approval will be needed once the USF System annual budget has been established.

Executive Summary:

The University of South Florida System Board of Trustees (the BOT) is required to adopt an annual budget for the operation of the University. The BOT must approve the budget prior to July 1, 2018 for the State Comptroller to process cash releases for state funds. The universities are still required to submit a detailed operating budget to the BOG by August 21, 2018.

We are requesting approval of the following:

Approval of a Continuation Operating Budget at the same level as 2017-18 Operating Budget. We are requesting approval of a continuation budget due to pending performance based funding decisions. Once those decisions have been finalized, the USF System will prepare an operating budget according to our guidelines and the laws and regulations of the Board of Governors and submit to the BOT for approval at a later meeting.

Financial Impact: See attached.

Strategic Goal(s) Item Supports: Goal 4 – Sound Financial Management

Committee Review Date: Finance Committee - May 22, 2018

Supporting Documentation Online (please circle): Yes **No**

2018-19 Continuation Operating Budget Summary

USF System or Institution specific: USF System

Prepared by: Nell Peterson

974-6884

University of South Florida System
2018-19 Continuation Operating Budget Summary

	2016-17 BOT Approved Budget	2017-18 BOT Approved Budget	Requested Continuation Operating Budget for 2018-19
Budgeted Revenues:			
Educational & General (E&G)			
General Revenue	\$ 334,265,925	\$ 377,695,480	\$ 377,695,480
Lottery	\$ 50,284,142	\$ 43,354,188	\$ 43,354,188
Tuition (Budget Authority)	\$ 281,483,557	\$ 271,423,177	\$ 271,423,177
Interest	\$ 932,919	\$ 1,322,569	\$ 1,322,569
Total E&G	\$ 666,966,543	\$ 693,795,414	\$ 693,795,414
Contracts & Grants	\$ 426,186,590	\$ 474,697,590	\$ 474,697,590
Auxiliaries	\$ 261,411,616	\$ 274,425,511	\$ 274,425,511
Student Activities	\$ 27,019,460	\$ 27,854,373	\$ 27,854,373
Financial Aid	\$ 389,883,143	\$ 400,554,217	\$ 400,554,217
Concessions	\$ 685,750	\$ 690,718	\$ 690,718
Athletics	\$ 46,033,592	\$ 45,415,592	\$ 45,415,592
Technology Fee	\$ 10,037,626	\$ 9,832,273	\$ 9,832,273
Board Approved Fees	\$ 1,160,444	\$ 1,154,583	\$ 1,154,583
Self-Insurance Trust Funds	\$ 7,575,293	\$ 7,917,004	\$ 7,917,004
Faculty Practice	\$ 267,580,005	\$ 298,345,879	\$ 298,345,879
Total Revenue	\$ 2,104,540,062	\$ 2,234,683,154	\$ 2,234,683,154
Budgeted Expenditures:			
Salaries & Benefits	\$ 964,616,358	\$ 1,037,422,685	\$ 1,037,422,685
Expenses	\$ 551,904,004	\$ 588,767,970	\$ 588,767,970
Operating Capital Outlay	\$ 10,060,369	\$ 8,036,624	\$ 8,036,624
Risk Management Insurance	\$ 6,370,064	\$ 6,302,450	\$ 6,302,450
Financial Aid	\$ 388,553,140	\$ 398,231,544	\$ 398,231,544
Library Resources	\$ 6,923,047	\$ 6,794,387	\$ 6,794,387
Debt Service	\$ 3,265,748	\$ 3,243,855	\$ 3,243,855
Carry Forward	\$ 80,656,006	\$ 118,716,239	\$ 118,716,239
Non-Operating Expenses	\$ 193,175,671	\$ 209,226,782	\$ 209,226,782
Total Budgeted Expenditures	\$ 2,205,524,407	\$ 2,376,742,536	\$ 2,376,742,536

Note: The 2018-19 Continuation Budget is requested at last year's level with adjustments for reserves, transfers out, and carry forward expenditures. The USF System will prepare a 2018-19 budget for submission to the BOG by August 21, 2018 and for presentation to the Board of Trustees at a future meeting.

Agenda Item: FL 116

USF Board of Trustees
June 12, 2018

Issue: 2018-19 Preliminary Fixed Capital Outlay Budget

Proposed action: 1) Approval of 2018-19 Preliminary Fixed Capital Outlay Budget
2) Authorize the President to make necessary non-material adjustments to the 2018-19 Fixed Capital Outlay Budget, with the requirement that any material changes be approved by the University Board of Trustees Executive Committee.

Executive Summary:

Pursuant to 1011.012, Florida Statutes, the University Board of Trustees must adopt a fixed capital outlay budget for the fiscal year that designates proposed expenditures for the year from all fund sources.

Preliminary 2018-2019 Fixed Capital Outlay Budget:

The preliminary fixed capital outlay budget includes state appropriated funds and nonstate appropriated funds.

The budget for USF 2018-2019 State Appropriated Fixed Capital Outlay funds is based on the 2018 Appropriation Act and is consistent with approved legislative spending authority.

The preliminary budget for USF 2018-2019 Non-State Appropriated Fixed Capital Outlay Funds includes projects previously identified and approved by the UBOT to be funded from the issuance of debt.

Financial Impact:

The financial impact of the preliminary 2018-19 fixed capital outlay budget is \$97,449,491.

Strategic Goal(s) Item Supports: Goals 1, 2, 3 and 4

Committee Review Date: Finance Committee, May 22, 2018

Supporting Documentation Online (*please circle*):

2018-19 Preliminary Fixed Capital Outlay Budget

Yes

No

USF System or Institution specific: USF System

Prepared by: Nick Trivunovich, Vice President for Business & Finance and CFO

2018- 2019 PRELIMINARY FIXED CAPITAL OUTLAY BUDGET**State Appropriated Fixed Capital Outlay Budget**

Projected Remaining Budget Authority Prior Year Appropriations - Maintenance, Repair, Renovation	\$ 5,191,028
CPH Roof \$309K; Traffic Signal \$350K; CPT Cooling Tower \$588K; LIB Elevator \$577K; MDC Exhaust Fans \$289K	<u>2,113,000</u>
Other \$2.3M; STP \$603K; SM \$124K	3,078,028
2016-2017 Appropriations - Maintenance, Repair, Renovation	\$ 5,612,993
Feeder Replacement \$665K; Cooling Tower \$1.8M; LIB Elevator \$595K; Chiller Repairs \$188K	<u>3,248,000</u>
Other projects with small residual balances	2,364,993
Projected Remaining Budget Authority Critical Deferred Maintenance Appropriation	<u>\$ 53,771</u>
Projected Remaining Budget Authority Prior Year Appropriations Major Projects and Infrastructure	<u>\$ 73,122,956</u>
Projected Remaining Budget Authority Prior Year CITF Appropriations	<u>\$ 13,468,744</u>
Wellness Complex \$10.9M; Smart Parking \$ 900K; STP \$926K; SM \$506K	
Total	\$ 97,449,491

Non-State Appropriated Fixed Capital Outlay Budget**Prior Year Appropriation Major Projects and Infrastructure Details**

Morsani College of Medicine and Heart Health Institute (FY 2014-2018)	<u>68,732,703</u>
Davis Hall Remodel (FY 2018)	3,090,835
College of Business - St. Petersburg Campus (FY 2014-2016)	812,775
Other Projects	<u>486,274</u>
Total	<u>\$ 73,122,587</u>
Projected 2019 PECO Appropriation	<u>\$ 7,000,000</u>
Morsani College of Medicine and Heart Health Institute	

Agenda Item: FL 117

USF Board of Trustees
June 12, 2018

Issue: USF System Fixed Capital Outlay Legislative Budget Request – Five-Year Capital Improvement Plan (2019-20/2023-24)

Proposed action: 1) Approval of the USF System Five-Year Capital Improvement Plan
2) Authorize the President to make necessary nonmaterial adjustments to the Five-Year Capital Improvement Plan, with the requirement that any material changes be approved by the University Board of Trustees Executive Committee.

Executive Summary:

Pursuant to Sections 216.158, 216.043 and 1013.64, Florida Statutes, the preparation and submission of the State University System (SUS) Fixed Capital Outlay (FCO) Budget Request requires that each college and university update its Capital Improvement Plan (CIP). The CIP, as used by the Florida Board of Governors, is intended to present the additional academic and academic support facilities needed for a five-year period for which state funds are requested. Separate sections on the CIP are provided for CITF projects and future projects which require state funding or may be funded from non-state sources, such as debt. Each institution's CIP will be used to select projects for inclusion within the SUS Three-Year PECO Project Priority List, to prepare the SUS Five-Year Capital Improvement Plan.

Each University Board of Trustees must approve the University's Capital Improvement Plan prior to submittal. The due date for submission is August 1, 2018.

Strategic Goal(s) Item Supports: Goals 1, 2, 3 and 4

Committee Review Date: Finance Committee, May 22, 2018

Supporting Documentation Online (please circle):

Yes

No

USF System Five-Year Capital Improvement Plan (2019-20/2023-24)

USF System or Institution specific: USF System

Prepared by: Nick Trivunovich, Vice President for Business & Finance and CFO

Board of Trustees Meeting - New Business - Action Items

STATE UNIVERSITY SYSTEM
Five-Year Capital Improvement Plan (CIP-2) and Legislative Budget Request
Fiscal Years 2019-20 through 2023-24
CIP-2, Summary of Projects

University of South Florida System

6.1.18

PECO-ELIGIBLE PROJECT REQUESTS

Priority No.	Project Title	Pre 2014-15	2014-15	2015-16	2016-17	2017-18	2018-19	Total Request	Total Received To Date	Balance/Unfunded	2019-20					2021-22	2022-23	2023-24	Academic or Other Programs to Benefit from Projects	Net Assignable Square Feet (NASF)	Gross Square Feet (GSF)	Project Cost	Project Cost Per GSF (Proj. Cost/ GSF)	Educational Plan Survey Recommended 2017	Approved by Law - includes CAA reference
											Year 1	Year 2	Year 3	Year 4	Year 5										
1	TPA/Utilities/Infrastructure/Capital Renewal/Roots	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 77,604,040	\$ -	\$ 77,604,040	\$ 20,070,032	\$ 15,240,120	\$ 13,923,788	\$ 11,426,100	\$ 16,945,000	\$ 77,604,040	All	Not Applicable	Not Applicable	\$ 77,604,040	Not Applicable	1.3a			
2	STP/Utilities/Infrastructure/Capital Renewal/Roots	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 19,337,200	\$ -	\$ 19,337,200	\$ 3,057,200	\$ 12,645,000	\$ 1,045,000	\$ 896,000	\$ 1,895,000	\$ 19,337,200	All	Not Applicable	Not Applicable	\$ 19,337,200	Not Applicable	1.3a			
3	SM/Utilities/Infrastructure/Capital Renewal/Roots	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,000,000	\$ -	\$ 7,000,000	\$ 1,000,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 1,500,000	\$ 7,000,000	All	Not Applicable	Not Applicable	\$ 7,000,000	Not Applicable	1.3a			
4	TPA/USF Health Morsani College of Medicine and Heart Institute	\$ 19,383,118	\$ 20,000,000	\$ 17,000,000	\$ 22,500,000	\$ 12,000,000	\$ 7,000,000	\$ 112,148,118	\$ 97,883,118	\$ 14,265,000	\$ 14,255,000	\$ -	\$ -	\$ -	\$ -	\$ 14,255,000	Health	174,450	241,584	\$ 152,600,000	***	\$ 52	6.1		
5	TPA/Interdisciplinary Science Research Lab Build Out	\$ 74,732,583	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 83,763,787	\$ 74,732,583	\$ 9,031,204	\$ 9,031,204	\$ -	\$ -	\$ -	\$ -	\$ 9,031,204	Academic	8,975	8,975	\$ 9,031,204	***	\$ 1,008	5.2		
6	TPA/Cybersecurity/State Center	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 43,056,415	\$ -	\$ 43,056,415	\$ 6,396,357	\$ 18,659,058	\$ 18,000,000	\$ -	\$ -	\$ 43,056,415	Multiple	30,372	42,501	\$ 43,056,415	***	\$ 640	3.1		
7	SM/Academic STEM Facility	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 44,548,038	\$ -	\$ 44,548,038	\$ 4,015,138	\$ 36,510,794	\$ 5,000,759	\$ -	\$ -	\$ 44,548,038	Multiple	45,450	75,000	\$ 44,548,038	***	\$ 584	3.9		
8	TPA/Health College of Pharmacy	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 58,979,897	\$ -	\$ 58,979,897	\$ 8,848,283	\$ 46,429,310	\$ 3,726,304	\$ -	\$ -	\$ 58,979,897	Health	65,333	102,000	\$ 58,979,897	***	\$ 578	3.2		
9	TPA/Engineering Research Building 4	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 99,568,797	\$ -	\$ 99,568,797	\$ 17,156,074	\$ 29,647,492	\$ 2,726,321	\$ -	\$ -	\$ 99,568,797	Multiple	108,975	174,915	\$ 159,000,000	***	\$ 869	3.3		
10	TPA/STEM Research/Lantern Center	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 72,833,109	\$ -	\$ 72,833,109	\$ 19,899,565	\$ 32,064,226	\$ 29,669,370	\$ -	\$ -	\$ 72,833,109	Multiple	89,960	133,440	\$ 72,833,109	***	\$ 544	3.4		
11	STP/Facility Purchase and Renovation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,000,000	\$ -	\$ 18,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,000,000	Multiple	54,000	87,000	\$ 18,000,000	***	\$ 212	pending		
12	TPA/Public Safety Building Phase I	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 31,656,835	\$ -	\$ 31,656,835	\$ -	\$ -	\$ 4,487,485	\$ 19,859,349	\$ 7,300,000	\$ 31,656,835	All	40,000	80,000	\$ 31,656,835	***	\$ 538	3.5		
TOTAL										\$ 495,687,535	\$ 112,727,852	\$ 191,889,913	\$ 130,150,321	\$ 33,679,448	\$ 27,440,000	\$ 495,687,535									

*** includes anticipated fundraising

CITF PROJECT REQUESTS

Priority No.	Project Title	YTD Cumulative Totals	Year 1	Year 2	Year 3	Year 4	Year 5	Academic or Other Programs to Benefit from Projects	Net Assignable Square Feet (NASF)	Gross Square Feet (GSF)	Project Cost	Project Cost Per GSF (Proj. Cost/ GSF)	Committee Approval Date
2	USF Health Student Resource Center - Phase I	\$ 404,684	\$ 975,547	\$ 580,939				Student Affairs	8,400	12,600	\$ 1,961,170	\$ 156	5.9.18
3	USFSP Occurance Hall Student Space Modification Phase I	\$ -	\$ 738,114	\$ 328,667				Student Affairs	3,950	4,850	\$ 1,068,781	\$ 220	4.26.18
4	USF Sarasota-Manatee Co-curricular and Wellness Support Facilities Phase VII	\$ 767,109	\$ 328,913	\$ 194,323				Student Affairs	3,108	4,780	\$ 1,288,345	\$ 270	4.13.18
TOTAL		\$ 7,847,217	\$ 4,099,048										

REQUESTS FROM OTHER STATE SOURCES

Priority No.	Project	Year 1	Year 2	Year 3	Year 4	Year 5	Academic or Other Programs to Benefit from Projects	Net Assignable Square Feet (NASF)	Gross Square Feet (GSF)	Project Cost	Project Cost Per GSF (Proj. Cost/ GSF)
TOTAL		0	0	0	0						

REQUESTS FROM NON-STATE SOURCES, INCLUDING DEBT

Project	Year 1	Year 2	Year 3	Year 4	Year 5	Academic or Other Programs to Benefit from Projects	Net Assignable Square Feet (NASF)	Gross Square Feet (GSF)	Project Cost	Project Cost Per GSF (Proj. Cost/ GSF)	Expected Source of Funding (if known)	Master Plan Approval Date
TPA-Global Studies Center		\$ 21,400,000				Academic	48,000	73,000	\$ 21,400,000	\$ 293	private	12/15/15
TPA-Honors College	\$ 40,000,000		\$ 30,000,000			Academic	47,383	78,971	\$ 40,000,000	\$ 507	private	12/15/15
TPA-Center for Veterans and Military Transition		\$ 738,114	\$ 328,667			Academic/Supp	26,155	59,858	\$ 30,000,000	\$ 501	private	12/15/15
TPA USF Football Center	\$ 40,000,000					Athletics	131,600	190,000	\$ 40,000,000	\$ 250	private	pending
TOTAL	\$ 117,000,000	\$ 51,400,000	0	0								

Agenda item: FL 118a – FL 118f

USF Board of Trustees

June 14, 2018

Issue: Naming Projects (6)

Proposed Action: Approve the Six (6) Naming Projects based on Philanthropic Giving

Background Information:

Pursuant to BOG Regulation 9.005, the University of South Florida Board of Trustees is vested with naming authority for all buildings, facilities and academic units of the USF System. USF Policy 0-220 provides that the USF President may recommend a naming to the USF Board of Trustees in recognition of philanthropic support of the University. Therefore, in accordance with University regulations, rules and processes President Genshaft proposes the following in recognition of the 6 gifts to the USF System:

USF Tampa/USF Health

- a. Genshaft Greenbaum Plaza at the USF Football Center (\$1 million gift)*
- b. Genshaft Greenbaum Student Center at the MCOM-HI Water Street building (\$1 million gift)*
- c. Joseph A. Savage, Jr. and Jane G. Savage Field at the USF Football Center Indoor Practice Facility (\$1 million gift)*
- d. David Vesely, M.D., PH.D. Lobby at the MCOM-HI Water Street building (\$350,000 gift)*
- e. Fishman Family Foundation Equipment Room at USF Athletics (\$100,000 gift)*
- f. Tas Mirza Varsity Tennis Court (\$50,000 gift)*

Strategic Goal(s) Item Supports: Revenue Generation

Committee Review Date: None

Supporting Documentation:

Resolutions

USF System

Prepared by: Travis Miller

UNIVERSITY OF SOUTH FLORIDA BOARD OF TRUSTEES

RESOLUTION

WHEREAS, Judy Genshaft and Steven Greenbaum have provided support to the USF System and USF Intercollegiate Athletic Department including a gift of \$1,000,000, toward the construction of the USF Football Center, including the indoor practice facility, to promote the future success of USF student-athletes and the educational mission of the university; and

WHEREAS, pursuant to BOG Regulation 9.005, the University of South Florida Board of Trustees is vested with naming authority for all buildings, facilities and academic units of the USF System; and

WHEREAS, in recognition of this donation, the President of the University recommends naming the entrance to the USF Football Center indoor practice facility in honor of Judy Genshaft and Steven Greenbaum;

NOW, THEREFORE, BE IT RESOLVED THAT THE UNIVERSITY OF SOUTH FLORIDA BOARD OF TRUSTEES AFFIRMS THE DECISION TO NAME THE ENTRANCE TO THE USF FOOTBALL CENTER INDOOR PRACTICE FACILITY THE "GENSHAFT GREENBAUM PLAZA" IN HONOR, RECOGNITION AND APPRECIATION OF PHILANTHROPIC SUPPORT PROVIDED TO THIS UNIVERSITY.

PASSED AND ADOPTED by the University of South Florida Board of Trustees, a public body corporate of the State of Florida, at a public meeting thereof duly called and held this 12th day of June 2018.

Brian Lamb, Chair

Cynthia S. Visot, Asst. Corporate Secretary

UNIVERSITY OF SOUTH FLORIDA BOARD OF TRUSTEES

RESOLUTION

WHEREAS, Judy Genshaft and Steven Greenbaum have provided support to the USF System and USF Health including a gift of \$1,000,000, toward the Morsani College of Medicine in the Downtown Tampa Water Street Building, to promote the future success of USF students, faculty and the educational and research mission of the university; and

WHEREAS, pursuant to BOG Regulation 9.005, the University of South Florida Board of Trustees is vested with naming authority for all buildings, facilities and academic units of the USF System; and

WHEREAS, in recognition of this donation, the President of the University recommends naming the Student Center located on the second floor of the Morsani College of Medicine in the Downtown Tampa Water Street Building in honor of Judy Genshaft and Steven Greenbaum;

NOW, THEREFORE, BE IT RESOLVED THAT THE UNIVERSITY OF SOUTH FLORIDA BOARD OF TRUSTEES AFFIRMS THE DECISION TO NAME THE STUDENT CENTER LOCATED ON THE SECOND FLOOR OF THE MORSANI COLLEGE OF MEDICINE IN THE DOWNTOWN TAMPA WATER STREET BUILDING THE "GENSHAFT GREENBAUM STUDENT CENTER" IN HONOR, RECOGNITION AND APPRECIATION OF PHILANTHROPIC SUPPORT PROVIDED TO THIS UNIVERSITY.

PASSED AND ADOPTED by the University of South Florida Board of Trustees, a public body corporate of the State of Florida, at a public meeting thereof duly called and held this 12th day of June 2018.

Brian Lamb, Chair

Cynthia S. Visot, Asst. Corporate Secretary

UNIVERSITY OF SOUTH FLORIDA BOARD OF TRUSTEES

RESOLUTION

WHEREAS, Joseph A. Savage, Jr. and Jane G. Savage have provided support to the USF System and USF Intercollegiate Athletic Department including a gift of \$1,000,000, toward the construction of the USF Football Center, including the indoor practice facility, to promote the future success of USF student-athletes and the educational mission of the university; and

WHEREAS, pursuant to BOG Regulation 9.005, the University of South Florida Board of Trustees is vested with naming authority for all buildings, facilities and academic units of the USF System; and

WHEREAS, in recognition of this donation, the President of the University recommends naming the turf field within the USF Football Center indoor practice facility in honor of Joseph A. Savage, Jr. and Jane G. Savage;

NOW, THEREFORE, BE IT RESOLVED THAT THE UNIVERSITY OF SOUTH FLORIDA BOARD OF TRUSTEES AFFIRMS THE DECISION TO NAME THE TURF FIELD AT THE USF FOOTBALL CENTER INDOOR PRACTICE FACILITY THE "JOSEPH A. SAVAGE, JR. AND JANE G. SAVAGE FIELD" IN HONOR, RECOGNITION AND APPRECIATION OF PHILANTHROPIC SUPPORT PROVIDED TO THIS UNIVERSITY.

PASSED AND ADOPTED by the University of South Florida Board of Trustees, a public body corporate of the State of Florida, at a public meeting thereof duly called and held this 12th day of June 2018.

Brian Lamb, Chair

Judy Genshaft, Corporate Secretary

UNIVERSITY OF SOUTH FLORIDA BOARD OF TRUSTEES

RESOLUTION

WHEREAS, David Vesely, M.D., Ph.D., former USF Professor of Internal Medicine, Molecular Pharmacology and Physiology has provided many years of support to the USF System and USF Health's Morsani College of Medicine, including a gift of \$350,000 to benefit the Morsani College of Medicine and Heart Institute at Water Street, Tampa, in support of an advanced educational environment to better prepare future physicians, and;

WHEREAS, pursuant to BOG Regulation 9.005, the University of South Florida Board of Trustees is vested with naming authority for all buildings, facilities and academic units of the USF System; and

WHEREAS, in recognition of these contributions, the President of the University recommends naming the Auditorium Lobby in the Morsani College of Medicine and Heart Institute at Water Street in honor of David Vesely, M.D., Ph.D.;

NOW, THEREFORE, BE IT RESOLVED THAT THE UNIVERSITY OF SOUTH FLORIDA BOARD OF TRUSTEES AFFIRMS THE DECISION TO NAME THE AUDITORIUM LOBBY IN THE MORSANI COLLEGE OF MEDICINE AND HEART INSTITUTE AT WATER STREET THE "DAVID VESELY, M.D., PH.D. LOBBY" IN HONOR, RECOGNITION AND APPRECIATION OF HIS ACADEMIC AND PHILANTHROPIC SUPPORT PROVIDED TO THIS UNIVERSITY.

PASSED AND ADOPTED by the University of South Florida Board of Trustees, a public body corporate of the State of Florida, at a public meeting thereof duly called and held 12th day of June 2018.

Brian Lamb, Chair

Judy Genshaft, Corporate Secretary

UNIVERSITY OF SOUTH FLORIDA BOARD OF TRUSTEES

RESOLUTION

WHEREAS, the Fishman Family Foundation has provided support to the USF System and USF Intercollegiate Athletic Department including a gift of \$100,000, to promote the future success of USF student-athletes and the educational mission of the university; and

WHEREAS, pursuant to BOG Regulation 9.005, the University of South Florida Board of Trustees is vested with naming authority for all buildings, facilities and academic units of the USF System; and

WHEREAS, in recognition of this donation, the President of the University recommends naming the USF Athletics Equipment Room in honor of the Fishman Family Foundation:

NOW, THEREFORE, BE IT RESOLVED THAT THE UNIVERSITY OF SOUTH FLORIDA BOARD OF TRUSTEES AFFIRMS THE DECISION TO NAME THE USF ATHLETICS EQUIPMENT ROOM THE "FISHMAN FAMILY FOUNDATION EQUIPMENT ROOM" IN HONOR, RECOGNITION AND APPRECIATION OF PHILANTHROPIC SUPPORT PROVIDED TO THIS UNIVERSITY.

PASSED AND ADOPTED by the University of South Florida Board of Trustees, a public body corporate of the State of Florida, at a public meeting thereof duly called and held this 12th day of June 2018.

Brian Lamb, Chair

Judy Genshaft, Corporate Secretary

UNIVERSITY OF SOUTH FLORIDA BOARD OF TRUSTEES

RESOLUTION

WHEREAS, Monica and Erik Mirza have provided support to the USF System and USF Intercollegiate Athletic Department including a gift of \$50,000, to benefit the USF Athletics Varsity Tennis program through the James Tennis Center Fund of the USF Foundation, in honor of Erik Mirza’s father, Tas Mirza; and

WHEREAS, pursuant to BOG Regulation 9.005, the University of South Florida Board of Trustees is vested with naming authority for all buildings, facilities and academic units of the USF System; and

WHEREAS, in recognition of this donation, the President of the University recommends naming a designated USF Athletics Varsity Tennis Court at the James Tennis Center in honor of Tas Mirza;

NOW, THEREFORE, BE IT RESOLVED THAT THE UNIVERSITY OF SOUTH FLORIDA BOARD OF TRUSTEES AFFIRMS THE DECISION TO NAME A DESIGNATED USF ATHLETICS VARSITY TENNIS COURT AT THE JAMES TENNIS CENTER THE “TAS MIRZA VARSITY TENNIS COURT” IN HONOR, RECOGNITION AND APPRECIATION OF PHILANTHROPIC SUPPORT PROVIDED TO THIS UNIVERSITY.

PASSED AND ADOPTED by the University of South Florida Board of Trustees, a public body corporate of the State of Florida, at a public meeting thereof duly called and held this 12th day of June 2018.

Brian Lamb, Chair

Judy Genshaft, Corporate Secretary

USF Tampa/USF Health Naming Projects

Genshaft Greenbaum Plaza at the USF Football Center (\$1 million gift)

Genshaft Greenbaum Student Center at the
MCOM-HI Water Street building (\$1 million gift)

Joseph A. Savage, Jr. and Jane G. Savage Field at the
USF Football Center Indoor Practice Facility (\$1 million gift)

David Vesely, M.D., PH.D. Lobby at the
MCOM-HI Water Street building (\$350,000 gift)

Fishman Family Foundation Equipment Room at USF Athletics (\$100,000 gift)

Tas Mirza Varsity Tennis Court (\$50,000 gift)



Agenda item: FL 119

USF Board of Trustees

June 12, 2018

Issue: Re-Designation of Johnnie B. Byrd, Sr., Alzheimer's Center and Research Institute

Proposed Action: Re-designate the existing Byrd Building as the USF Health Neuroscience Institute (Home of the Johnnie B. Byrd, Sr., Alzheimer's Center)

Background Information:

Pursuant to BOG Regulation 9.005, the University of South Florida Board of Trustees is vested with naming authority for all buildings, facilities and academic units of the USF System. USF Policy 0-220 provides that the USF President may recommend a naming to the USF Board of Trustees. Therefore, in accordance with University regulations, rules and processes President Genshaft recommends this re-designation

The Johnnie B. Byrd, Sr., Alzheimer's Center and Research Institute was originally established by the Florida Legislature in 2002 to serve as a statewide resource for advancing research, education, treatment, prevention and the early detection of Alzheimer's disease. For these past fifteen plus years, the Center has fulfilled its statutory mission by providing direct treatment to hundreds of Floridians and provided support to their caregivers.

Since the inclusion of the Center within the University of South Florida, (administered by USF Health), the trajectory of interdisciplinary education and research holding optimum promise for detection, treatment and cure of these diseases has rapidly accelerated; research which depends upon collaborative and simultaneous findings/treatments for Alzheimer's and related neurological diseases.

To both recognize this new paradigm of collaboration to accordingly enable the expansion of the Byrd mission and to honor the Legislature's original tribute to Johnnie B. Byrd, Sr. as facilitated by his son, Johnnie B. Byrd, Jr., it is desirable to re-designate the Byrd Center to include the broader mission of neurosciences education, research and treatment resources sharing within that current building.

UNIVERSITY OF SOUTH FLORIDA BOARD OF TRUSTEES

RESOLUTION

WHEREAS, the Johnnie B. Byrd, Sr., Alzheimer's Center and Research Institute (the "Byrd" or the Center") was originally established by the Florida Legislature in 2002 to serve as a statewide resource for advancing research, education, treatment, prevention and the early detection of Alzheimer's disease; and

WHEREAS, an estimated 520,000 (a number expected to grow to 720,000 by 2025) Floridians currently struggle with the devastating effects of Alzheimer's Disease and these represented lives do not even include those additionally suffering from other debilitating neurological diseases; and

WHEREAS, in combination, these neurological diseases affect not only the person diagnosed, but his/her surrounding caregivers; thereby, in effect, changing the lives of an extremely large and uncounted population - making it an urgent Florida priority to educate about, treat and complete research as quickly as possible on these diseases with the goal of cure; and

WHEREAS, for these past fifteen plus years, the Center has fulfilled its statutory mission by providing direct treatment to hundreds of Floridians and provided support to their caregivers;

WHEREAS, in addition, exciting and cutting research occurring at the Center continues to quickly expand with the goal of prevention, detection and cure of Alzheimer's and other neurological diseases; and

WHEREAS, since its inception, the Byrd Alzheimer's Center has enjoyed the unwavering support of Johnnie B. Byrd, Jr., son of the man after which the Center was named to honor his life and his accomplishments;

WHEREAS, from its inception, Johnnie Byrd, Jr. has served the Center in various leadership roles and continues today to provide strategic direction advice through his service on the community-based Council advising Byrd leadership; and

WHEREAS, all these activities; education, research and treatment occur at the signature Byrd Building at the University of South Florida; a building facing a major and heavy traffic Tampa thoroughfare, thereby providing maximum opportunity for location by the public seeking such services; and

WHEREAS, since the inclusion of the Byrd within the University of South Florida, (administered by USF Health), the trajectory of interdisciplinary education and research holding optimum promise for detection, treatment and cure of these diseases has rapidly accelerated; research which depends upon collaborative and simultaneous findings/treatments for Alzheimer's and related neurological diseases; and

WHEREAS, to both recognize this new paradigm of collaboration to accordingly enable the expansion of the Byrd mission and to honor the Legislature's original tribute to Johnnie B. Byrd, Sr. as facilitated by his son, Johnnie B. Byrd, Jr., it is desirable to re-designate the Byrd Center to include the broader mission of neurosciences education, research and treatment resources sharing within that current Building; and

WHEREAS, The University of South Florida Board of Trustees wishes to express its strong support for the efforts undertaken by USF Health to expand the scope of the Center to encourage the exciting and attainable goal of cure discovery; and

WHEREAS, Johnnie B. Byrd, Jr. supports this re-designation (via the attached letter); and

WHEREAS, therefore, the President of the University recommends this re-designation;

WHEREAS, to accomplish these purposes and in recognition of these recommendations, the University of South Florida Board of Trustees pursuant to Florida Board of Governors Regulation 9.005 and USF System Policy 0-220, respectively, authorize the re-designation of the Byrd Building on the USF campus with the building name to be "USF Health Neuroscience Institute (Home of the Johnnie B. Byrd, Sr., Alzheimer's Center)"; and

NOW, THEREFORE, BE IT RESOLVED THAT THE UNIVERSITY OF SOUTH FLORIDA BOARD OF TRUSTEES ACCEPTS THE RECOMMENDATION OF THE UNIVERSITY PRESIDENT AND THEREBY, EFFECTIVE JUNE 12, 2018, RE-DESIGNATES THE CURRENT JOHNNIE B. BYRD, SR., ALZHEIMER'S CENTER AND RESEARCH INSTITUTE ON THE TAMPA CAMPUS AS "USF HEALTH NEUROSCIENCE INSTITUTE (HOME OF THE JOHNNIE B. BYRD, SR. ALZHEIMER'S CENTER)".

PASSED AND ADOPTED by the University of South Florida Board of Trustees, a public body corporate of the State of Florida, at a public meeting thereof duly called and held this 12th day of June, 2018.

Brian Lamb, Chair

Judy Genshaft, Corporate Secretary



May 30, 2018

University of South Florida
Office of the Board of Trustees Operations
c/o Judy Genshaft, Ph.D., USF President/Corporate Secretary
4202 East Fowler Avenue, CGS 401
Tampa, FL 33620

Dear Board Members and President Genshaft:

On behalf of the Johnnie B. Byrd, Sr., Alzheimer's Center and Research Institute's community-based Advisory Council and as its Chair, I write to convey our support (along with that specifically provided by one of our Council members, Johnnie B. Byrd, Jr.) for the re-designation of the USF Johnnie B. Byrd, Sr., Alzheimer's Center and Research Institute as the "USF Health Neuroscience Institute (Home of the Johnnie B. Byrd, Sr., Alzheimer's Center)" to reflect its expanded mission to advance research, education, treatment, prevention and early detection of not only Alzheimer's Disease, but other related neurological diseases as well.

Our Council members are honored to provide time and respective expertise as contribution to the vitally important research and treatment occurring at the Center and, in that capacity, we have learned, as a result of exciting breakthroughs in the field of neuroscience research, it now appears the quickest and most efficient way to find a cure for any one of these devastating diseases is by interdisciplinary efforts focused on the relationship of each to all.

To take advantage of this exciting strategic direction, the University of South Florida (which houses the Byrd and provides professional staff to perform the education, research and treatment therein) has reorganized its internal structure to take maximum advantage of the interdisciplinary nature of work already performed by the neurosciences units within USF Health.

Obviously, our Council shares a joint commitment with the University of South Florida to find effective treatments for and, ultimately, cures of not only Alzheimer's (which currently incapacitates an estimated 520,000 Floridians with effect on countless additional caregivers), but other related neurological diseases. We believe the re-designation furthers that expanded goal and pledge our efforts to work with USF to make that goal a reality within our lifetimes.

We thank you - the University of South Florida Board of Trustees - for your continued sustaining support of the Byrd Institute and ask for your favorable consideration of the attached proposed Resolution at your June 12, 2018 meeting.

Sincerely,

A handwritten signature in black ink that reads "Dennis J. Herrichs".

Dennis Herrichs, Chair
Byrd Alzheimer's Advisory Council

USF HEALTH BYRD ALZHEIMER'S INSTITUTE
University of South Florida • 4001 E. Fletcher Avenue, MDC36 • Tampa, FL 33613-4808
Clinic (813) 974-4355 Reception (813) 396-0606 • Fax (813) 866-1601 • alz.health.usf.edu

BYRD & BARNHILL, P.L.

ATTORNEYS AT LAW
206 North Collins Street
Plant City, FL 33563

Telephone: (813) 759-1224
Fax: (813) 759-1101
johnnie@byrd-barnhill.com

Johnnie B. Byrd, Jr.
David H. Barnhill

May 28, 2018

University of South Florida
Office of the Board of Trustees Operations
c/o Judy Genshaft, Ph.D., USF President/Corporate Secretary
4202 East Fowler Avenue, CGS 401
Tampa, FL 33620

Dear Board Members and President Genshaft:

As you may know, I have devoted a good deal of my public service life to support for vitally important educational, research and treatment efforts to address the devastating effects of Alzheimer's disease. Such efforts are of personal meaning to me; being undertaken in tribute to and memory of my late father, Johnnie B. Byrd, Sr.

While serving in the Florida Legislature as House Speaker, I was instrumental, among others, in obtaining the funds necessary to build the Johnnie B. Byrd, Sr. Alzheimer's Center and Research Institute and have, since that time, have continued in various leadership roles providing strategic direction and advice to its leadership. The goal of my endeavors has been to facilitate the detection, treatment and cure of Alzheimer's to the benefit of Floridians with the disease and to their caregivers whose lives are also significantly affected.

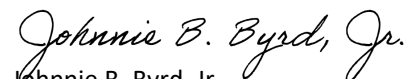
Now, because of the exciting research that has occurred in this field here at the Byrd and nationwide, it is known that research in the broader field of related neurological diseases holds utmost promise for finding a cure for Alzheimer's. The University of South Florida, which houses the Byrd and provides its professional staff to perform the education, research and treatment therein, has reorganized its internal structure to take maximum advantage of the interdisciplinary nature of work already performed by the neurosciences units within USF Health.

To take advantage of these collaborations and to portray this inclusiveness to the public, I agree it is advisable to re-designate the Building name and appropriate signage as the "USF Health Neurosciences Institute – Home of the Johnnie B. Byrd, Sr. Alzheimer's Center".

I look forward to continuing my contribution to the promising goal of providing a cure for not only Alzheimer's, but other related neurological diseases; a goal that with faith, hard work and the backing of Floridians and their representatives, is attainable within the very near future.

Thank you for your consideration and sustained support.

Sincerely,



Johnnie B. Byrd, Jr.

Byrd Alzheimer's Advisory Council

Agenda item: FL120

**USE Board of Trustees
June 11, 2018**

Issue: Board Officers

Proposed actions: **a.** Elect Chair of the Board and **b.** Elect Vice Chair of the Board

Background information:

a. The Board of Trustees is granted the legal authority to elect its Chair. The Chair shall preside at all meetings of the Board of Trustees, call special meetings of the Board when necessary, attest to actions of the Board and notify the Governor in writing whenever a Board member fails to attend three consecutive meetings in any fiscal year, which failure may be grounds for removal.

The Chair shall serve a two-year term.

b. The Board of Trustees is granted the legal authority to elect its Vice Chair. The Vice Chair shall act as Chair during the absence or disability of the Chair and, in that event, shall perform those duties of the Chair.

The Vice Chair shall serve a two-year term.

Supporting Documentation: None
Prepared by: Dr. Cindy Visot, 813-974-1678

USF SYSTEM

Tampa

PERFORMANCE UPDATE

USF BOARD OF TRUSTEES

Judy Genshaft
June 12, 2018



Student Access & Success

Update on Future New Student Recruitment Strategy

- Engaged with Microsoft to develop a state-of-the-art CRM system to enhance recruitment
- Joined the Coalition Application, a highly selective group of 131 universities, that will likely improve quantity and quality of undergraduate applications
- Hosted a visit from the University of Alabama to discuss student success initiatives



Research - Commercialization

- **Utility patents awarded (over three calendar years)*:**
 - 2015-2017 Plan: 273
 - 2015-2017: 324 (Goal Met)

 - 2016-2018 Plan: 325
 - 2016-2018: 264 (as of 5/29/2018)

**Preeminence metric*



Facilities – Projects Over \$2M

Project	Funded	Budget	Scope	Schedule
USF Health Morsani College of Medicine & Heart Institute	Y	●	●	●
USF Residence Village (P3)	Y	●	●	●
USF Grocery (P3)	Y	●	●	●
USF New Entry/Laurel Drive Extension	Y	●	●	●
USF Honors College	Y*	●	●	●
USF Football Center	Y*	●	●	●

**Design and CM cost have been funded*



Leadership Talent

Critical hires:

- *Sunil Mithas, Professor, Information Systems & Decision Sciences*
- *Ramon Gonzalez, World Class Scholar, Chemical & Biomedical Engineering*
- *David Simmons, Associate Professor, Chemical & Biomedical Engineering*
- *Matthias Majetschak, Professor, Surgery*
- *Hayward Brown, Professor, Obstetrics & Gynecology*
- *Ramesh Ayyala, Professor, Ophthalmology*



General

Next 90-day Strategic Priorities:

- Fundraising & Financial Feasibility Studies for Stadium
- Branding Plan

Success stories/institutional highlight:

- Ranked **1st** in Florida and tied for **5th** in the U.S., with **26** USF teams selected for the national **NSF Innovation Corps** program
- One of only 5 universities to receive the *Healthy Campus Award*, from Active Minds a national nonprofit organization (May 2018)
- Recognized as one of the top ten public universities in the country (and the best in Florida) at serving lower-income students, according to a report published by Third Way, a national think tank in Washington, D.C.
- Ranked **1st** in Florida, **5th** in the U.S. and **12th** globally for new utility patents among public universities—116 total for 2017



THE 2018 “Golden Age” Universities

(est. 1945–1967)

United States	(World)
1 UC San Diego [AAU]	(1)
2 UC Irvine [AAU]	(9)
3 UC Santa Cruz	(19)
4 UC Riverside	(24=)
5 Brandeis (private) [AAU]	(31)
6 USF	(36=)
6 Illinois Chicago	(36=)
8 Stony Brook [AAU]	(38)
9 Binghamton, SUNY	(65=)
10 UMD Baltimore County	(70)

USF #5 among U.S. Public “Golden Age” Universities in 2018 (up from #7 last year)

USF #6 among All U.S. “Golden Age” Universities in 2018 (up from #8 last year)

USF is the **only Florida university** ranked in the top 100



USF SYSTEM

St. Petersburg

PERFORMANCE UPDATE

USF BOARD OF TRUSTEES

Martin Tadlock
June 12, 2018



Student Access

New Student Recruitment Strategy:

- Windward Scholarships
- Blue/Gold Scholarships
- FUSE Scholarships
- Emerging Scholars Program
- Chancellor's Leadership Council
- Adviser/recruiters with St. Pete College
- Unified approach to admissions

Student Success

Points of Pride:

- Seven percent increase in Bachelor's Degrees awarded and a 17% increase in Bachelors Degrees awarded in Areas of Strategic Emphasis.
- Fifteen percentage point increase in APR over previous academic year – 65.5% to 75.6%.
- Ten percentage point increase in 4-year grad rate over previous year – 18.6 % to 30%.
- Textbook affordability efforts are yielding substantial savings for our students.
- Eliminating course conflicts for students to maximize ability to complete in four years.
- USFSP Statewide Civic Fellows Program to be implemented in the fall.
- Four of top Pinellas County high school graduates - valedictorians/salutatorians - enrolled at USFSP enrolled at USFSP for coming academic year.
- Increased utilization of Debbie Nye Sembler Student Success Center by 15% over previous year.

Academic Programs

Progress of new programs:

- Sustainability Studies (STEM) and Computational Analysis & Applied Mathematics (STEM) approved by BOT.
- Pre-proposals for next year:
 - Environmental Chemistry (STEM)
 - Management Science (STEM) with USFSM.
 - Hospitality and Insurance with USFSM.
 - Engineering assessment for Pinellas County with USFT.

Program reviews and accreditation:

- KTCOB received accreditation report from AACSB.
- USFSP 5th Year Interim Report to SACSCOC submitted.

Research - Funding

Points of Pride:

Continued growth in the numbers of research proposals and research expenditures.

- Federal research expenditures all-time high of just over \$4.5 million.
- Private and federal new awards for FY 16-17 reached new high of approximately \$5 million.
- Faculty Research Council established and meeting monthly.

Fundraising

- **Total Pledges/gifts received against prior year and plan:**
 - FY 2018 Plan: \$3,000,000; Actual: \$1,398,266
- **Major Gifts received (>\$100,000):**
 - FY 2018: 4 Donors; Total: \$900,000
- **Endowment against prior year and plan:**
 - FY 2017 Actual: \$16,595,131.31
 - FY 2018 Actual: \$18,308,858.40

Facilities - St. Petersburg

Project	Funded	Budget	Scope	Schedule
Housing – Residence Life	Y (Developer)	●		
Harbor Hall Re-roof & HVAC	Y (E&G)	●	●	●
Waterfront Bldgs/Site - Master Plan	Y (E&G)		●	●
New HVAC – Library/Davis/Coquina	Y (Carry forward)	●	●	●
Davis Hall Renovation	Y (PECO)	●		



General

90-day priorities: *(tied to strategic plan/work plan goals)*

- Move residential hall initiative to BOT approval
- Implement new recruitment/scholarship initiatives and partnerships

Success stories/institutional highlights:

- National launch of *La Florida: The Digital Archives of the Americas*
- USFSP students organized a fishing tournament and raised more than \$15,000 for childhood cancer research
- USFSP alum Jack Davis awarded Pulitzer for his book *The Gulf: The Making of an American Sea*

UNIVERSITY of SOUTH FLORIDA

St. Petersburg Housing

Informational Presentation to Board of Trustees

June 12, 2018



USF

UNIVERSITY of SOUTH FLORIDA

Today's Objectives:

- Review the change in methods of Financing/Construction
- Share a Tentative Timeline to the goal line

Today's Objectives:

- Review the change in methods of Financing/Construction
- Share a Tentative Timeline to the goal line



Comparison of Approaches:

Former P3 Approach:

- Developer + D/B
- P3 Debt + Sub Debt
- Higher Interest Rates
- “Skinny” Debt Coverage
- Shared Control

Internally Funded Approach:

- USF hires D/B
- USF System Debt
- Lower Interest Rates
- Good Debt Coverage
- Total Control
- Keeps BOT promises

Timeline

- Goal: August 2020 Completion



Timeline

- Goal: August 2020 Completion
- Necessitates:
 - Begin Construction – January 2019
 - BOG approval – November meeting
 - BOG Briefings – October 16 (?)
 - BOG Staff/DBF Briefings – Early August
 - BOG submittal – August 1
 - BOT approval – before August 1
 - Campus Board Meeting – Early July 2018
 - USF Finance Corp Meeting – July 2018
 - RFP Issued – July 1



UNIVERSITY of SOUTH FLORIDA

**Ability to deliver a high quality, affordable,
much needed asset to
the St. Petersburg campus
using the financial strength of the system and
engaging expertise across the USF system.**

UNIVERSITY of SOUTH FLORIDA

**Ability to deliver a high quality, affordable,
much needed asset to
the St. Petersburg campus
using the financial strength of the system and
engaging expertise across the USF system.**

Board Recommendation: Authorization to Proceed

UNIVERSITY of SOUTH FLORIDA

Questions

USF SYSTEM

Sarasota-Manatee

PERFORMANCE UPDATE

USF BOARD OF TRUSTEES

Dr. Karen Holbrook
June 12, 2018



Student Access

- Freshman profile
- Articulation for current students
 - Lake Erie College of Osteopathic Medicine (LECOM)
 - Stetson Law
 - USF Health College of Nursing/Pre-nursing USFSM 2018
 - USF College of Engineering/Pre-Engineering
 - USF Health College of Pharmacy - Master's degree in Pharmaceutical Nanotechnology under discussion
- On-line Programs
 - 75% USFSM courses on-line in summer; 63% fall/winter
 - 4 bachelor's and 3 master's degrees fully on-line
 - Virtual/Online Graduate information sessions
- Cross College Alliance course exchange



Student Success

- Fall to Spring retention 2017-2018 – 94%
- Persistence Committee/ Persistence Advisors – weekly meetings; retained all students interested in returning to USFSM
- Programs
 - Career Success Speaker Series; County Career Connection events; Women’s Forum
- Experiential Opportunities
 - 408 Internships; Undergraduate research; 65 courses with a service learning component
- Partnership with New College for an on-campus mental health counselor
- Summer Beginnings program to acclimate entering freshmen
- 6-week Mentoring Program
- Green to Gold – individual support and workshops
- Archivum allows faculty to make student referrals to their advisors



Academic Programs

New or in development 2017-18

- Bachelor's Degree in Risk Management Insurance (Fall 2018)
- Bachelor's of Science in Cybersecurity & Information Technology (Fall 2018)
- Bachelor's Degree in Management Science (preproposal approved)
- Nursing partnership with USF Health College of Nursing. First pre-nursing students will enter fall 2018 and complete the BSN at USFSM in 2022

Program reviews and accreditation 2017-18

- Program Review: English – successfully completed
- Accreditation: AACSB – Approval with no follow-up

Other

- 4 + 1 articulation in Education with New College (MAT-EE)



Research

- Largest ever Student Showcase for Projects, Research & Innovation. Over 40 student researchers shared their work via posters and oral presentation
- Prestigious publications are raising the visibility of faculty research



- First research magazine – *Research USFSM* - published and on the web at usfsm.edu/research/ - 7,500 copies mailed
- Competitive grant submissions and awards

	2016	2017	2018 - TD
Submissions	\$755,948	\$1,210,877	\$7,120,158
Awards	\$19,420	\$454,197	\$230,430



Fundraising

- Total pledges/gifts received against prior year and plan:
 - 2016-17 Goal: \$2,150,000 Secured: \$1,616,642
 - 2017-18 Goal: \$3,000,000 Secured (to date): \$799,852
- 48.8% faculty/staff response to the 24 hour Giving Challenge; our best, and surpassing the 40% benchmark
- Major gifts solicited (>\$100,000):
 - Two 7 figure gift discussions underway
 - Twelve gift discussions underway for 5 figures – doubled since last report
- Endowment against prior year and plan:
 - Principal Value: 2016-17 (P/E June 2017): \$8,430,818;
 - 2017-18 (P/E December 2017): \$8,433,727
- Inaugural bimonthly, digital Advancement Newsletter – *This is USFSM*
- Strategic Priority Areas for Advancement
 - Scholarships; Rowing; Integrated Science and Technology Complex



Facilities – Sarasota-Manatee

Progress update on approved new facilities/construction:

Project	Funded	Budget	Scope	Schedule
CHTL Expansion/Addition	Y (E&G)	●	●	●
Capital Improvement Trust Fund Proj.	Y (CITF)	●	●	
Academic STEM Facility	N (PECO)	●	●	
Utilities/Infrastructure/Cap Renewal	N (PECO)	●	●	



Leadership Talent

- **Critical hires (including VCs, Deans):**
 - Regional Vice Chancellor for Academic Affairs; 133 applications; 11 Zoom interviews; 5 campus visits
 - Offer Accepted: Dr. Brett Kemker
- **Current searches**
 - Interim Dean College of Business – 3 potential candidates from the Muma College of Business
 - Chief Diversity and Inclusion Officer



General

- Conducted four focus groups with community leaders Re: Impact of USFSM
- 90-day priorities: *(tied to strategic plan/work plan goals)*
 - Received ITN proposals for a residence needs analysis study – under review
 - Integrated Science and Technology Complex (ISTC) revisioned and ready for review
- Success stories/institutional highlight
 - Second Annual Financial Literacy Day with Global Interdependence Center
 - Annual student survey shows an increase in school pride, growth and development, and overall satisfaction
 - First Winter session – 6 on-line courses, 143 students
 - New partnership with Innovative Education (Tampa); Communications; Admissions, USF Foundation
- The “Analysis of the Economic Impact and Return on Investment of Education” of the 4/5 Cross College Alliance schools has been published
- The 25th Brunch on the Bay will be held Nov. 4. Save the date cards sent



Recognition of Service: Former Trustees

Stephen Mitchell, Esq., May 2011 – March 2016

Stan Levy, January 2013 – January 2018

Scott Hopes, June 2013 – July 2017

James Stikeleather, May 2016 – October 2017

James Garey, August 2016 – May 2018

