

**Substantive Change Prospectus**  
Implementation Date: August 25, 2014



**Bachelor of Science in Biology**

Submission Date August 21, 2013

**USF Sarasota-Manatee**  
8350 N. Tamiami Trail, SMC 337  
Sarasota, FL 34243

**COVER SHEET**

**B.S. in Biology**

Substantive Change Prospectus  
Implementation Date: August 25, 2014

**Contact Person:**

**Dr. Bonnie Jones**

Regional Vice Chancellor for Academic & Student Affairs

Phone: (941) 359-4715

Email: [bjjones@sar.usf.edu](mailto:bjjones@sar.usf.edu)

**Current USF Sarasota-Manatee Degree Programs**

**Baccalaureate Degree Programs: (17)**

Applied Science  
Communication Sciences & Disorders  
Criminology  
English Literature  
Professional & Technical Communication  
History  
Interdisciplinary Social Science  
Psychology

Accounting  
Finance  
Business Administration  
Management  
Marketing

Early Childhood Education  
Elementary Education

Information Technology  
Hospitality Management

**Master's Degree Programs: (9)**

Criminal Justice Administration

Business Administration

Education (General) – approved to begin enrolling students Fall 2013  
Elementary Education  
Educational Leadership  
English Education  
Reading Education  
Teaching, K-6, MAT

Hospitality Management

**Degree programs related to the proposed program**

Communication and Sciences Disorders – Concentration in Speech Language Therapy.

### **Institutional strengths which facilitate the offering of the proposed program**

- Partnership with Mote Marine Laboratory - A world renowned research marine center located 7 miles from the USF Sarasota-Manatee campus.
- Highly qualified faculty jointly appointed from both USF Sarasota-Manatee and Mote Marine Laboratory.
- Outstanding advising and student support services.
- Robust library holdings.
- Newly built laboratory facilities located on the Mote Marine campus – including a dry teaching lab, a wet teaching lab, laboratory support room, two research labs, and offices for jointly appointed Mote Marine and USF Sarasota-Manatee faculty, two academic support rooms, and one students lounge.
- Financial support from local foundations and philanthropists, as well as state funding for STEM related projects.

### **Off-campus Sites**

**Mote Marine Laboratory  
1600 Ken Thompson Pkwy  
Sarasota, FL 34236**

Bachelor's Degree in Elementary Education – 40% of credits

**University of South Florida at North Port Instructional Site  
5920 Pan American Blvd.  
North Port, FL 34287**

Bachelor's Degree in Elementary Education – 50% of credits

Partial bachelor's degrees offered - (*a student cannot obtain 50% of credits*)

Criminology

Interdisciplinary Social Sciences

Applied Science

Psychology

## 1. ABSTRACT

*Describe the proposed change; list the initial date of implementation; projected number of students, if applicable; description of primary target audience; projected life of the program (single cohort or ongoing); instructional delivery methods and, if the change involves the initiation of an off-campus site, its complete physical address.*

The University of South Florida Sarasota-Manatee (USFSM) proposes a new Bachelor of Science (B.S.) degree in Biology at the undergraduate level. The emphasis of this degree will be a broad preparation in general biology that balances organismal and ecosystem level content with cellular and molecular content. The anticipated initial date of implementation is August 25, 2014, the start of the fall 2014 semester.

The B.S. in Biology will have ongoing enrollment with an anticipated first year headcount of 50 students and an ongoing graduation of 50 students per year; however, we have prepared for scenarios of higher numbers of graduates if enrollment exceeds our current expectations. The primary target audience of this program will be students seeking a strong foundation to prepare for graduate school, as well as those seeking careers in the health professions (MD, DDS, DVM, etc.), will pursue this degree. Currently, in the Sarasota-Manatee area, no public institutions offer a B.S. degree in Biology. Because no degree in biology is offered, the majority of local high school graduates and non-traditional students must leave our local community if they wish to obtain a degree in biology.

Faculty in the B.S. in Biology will deliver course work using three methods: traditional on-campus, traditional laboratories off-site at Mote Marine Laboratory, and in the non-traditional methods of on-line and blended formats. Mote Marine Laboratory is located at 1600 Ken Thompson Pkwy in Sarasota, Florida, 34236.

The B.S. in Biology program will help to build a world-class biology program at USFSM by partnering with Mote Marine Laboratory to provide undergraduate research opportunities and student mentorship. Mote Marine Laboratory is already world-renowned for its research; therefore, by collaborating with scientists at Mote we will directly improve the quantity and quality of scholarship and research at USFSM. Participation in collaborative research will help USFSM become an internationally recognized undergraduate research institution and strengthen the current preeminence of the USF system. Our program outcomes were developed based on standards for undergraduate education in the biological sciences recommended by the American Association for the Advancement of Sciences and the National Science Foundation.

## 2. BACKGROUND INFORMATION

*Provide a clear statement of the nature and purpose of the change in the context of the institution's mission and goals; evidence of the legal authority for the change (if authorization is required by the governing board or the state); and whether the proposed degree program or similar program is offered on the main campus or at other approved off-campus sites.*

**USFSM Mission:** (USFSM Strategic Plan 2012-2016) The University of South Florida Sarasota-Manatee provides access to professional higher education programs and scholarly research in a personalized living and learning community that graduates successful leaders who empower Florida's Suncoast to thrive locally, nationally, and globally.

### **USFSM Goals:**

1. ACCESS: Expand access to a University education that benefits students and the local, national, and global community;
2. SUCCESS: Enhance success of student outcomes, faculty productivity, and community impact.

The goals of the B.S. in Biology program align with the USFSM mission and goals through purposeful intentions of serving the students and community of Sarasota and Manatee counties. The first goal of the B.S. in Biology is to

provide a broad undergraduate biology degree that will prepare students in the USFSM service area for employment or further graduate study in a variety of STEM fields. Secondly, the program seeks to assure that this education is rich with engaged laboratory and field experiences, supervised by a faculty of active science researchers.

These goals support the following aspects of the USFSM mission and goals:

To expand academic programs in distinctive areas related to the Suncoast’s needs and strengths and across disciplines, when feasible, including the ability for students to complete the full four-year bachelor’s degree; promote innovative scholarship and community-engaged research; seek external funding from public grants, private foundations, and individual donors; partner with a variety of organizations and stakeholders, including the USF System; produce continuous improvement in student outcome measures including retention and graduation rates and student career results; track and promote faculty developed measures of scholarship; identify student success predictors; and track and share the value of the University’s and graduates’ economic and societal contributions.

**Legal Authority for Change**

As stipulated in Florida Board of Governors Regulation 8.011, “each university board of trustees shall approve for implementation new degree programs at the bachelor’s...level...” (see Appendix 1: FLBOG Regulation 8.011). The B.S. in Biology was approved by the USF System Board of Trustees on June 6, 2013 (see Appendix 2: USF BOT Approval). A detailed list of the all approval activities is provided in the table below.

<b>Date</b>	<b>Approval Activity</b>
8/28/2012	Pre-proposal approved by USFSM Academic Program Council (APC)
11/8/2012	Pre-proposal approved by USF System Academic Program and Policy Coordinating Committee (APPCC).
11/14/2012	Pre-proposal approved by USF System Provost.
12/12/2012	Pre-proposal approved by Florida Statewide University System (SUS) Coordinating Committee
3/26/2013	Full proposal approved by USFSM APC
4/15/2013	Full proposal approved by USF Academic Council (AC)
4/29/2013	Full proposal approved by USF Academic Council Environment Workgroup Advisory Committee (ACEAC).
5/23/2013	Full proposal approved by the USF Academic Campus Environment Workgroup (ACE).
6/6/2013	Full proposal approved by USF Board of Trustees (UBOT).

**3. ASSESSMENT OF NEED AND PROGRAM PLANNING/APPROVAL**

*Briefly discuss the rationale for the change, including an assessment of need; evidence of inclusion of the change in the institution’s ongoing planning and evaluation processes; and documentation that faculty and other groups were involved in the review and approval of the new site or program.*

**Assessment of Need**

The USFSM B.S. in Biology will be the only four-year biological sciences degree program in the Sarasota-Manatee area. Locally, the State College of Florida Manatee-Sarasota (SCF) offers an associate-level science courses. SCF provided USFSM data collected since Spring Semester 2010 that shows nearly 2,000 enrollments in the course work required to complete either a biological or health science degree through its AA program. Without the baccalaureate level degree program offered at USFSM, these students will need to leave the area to complete the four-year degree in biology.

Additionally, statewide need for graduates in STEM fields is at an all-time high and is projected to continue to grow. The Florida Department of Economic Opportunity predicts that careers for scientists working in the Life Sciences will grow 2.44% each year over the next seven years (<http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/employment-projections#>).

### **Program Planning/Approval from Outside Groups**

During the fall of 2012, Dr. Jane Rose (Dean of the College of Arts and Sciences) and Dr. Erin Martin (Coordinator of General Education / Instructor of Biology) met with faculty and administration from USF Tampa, USF St. Petersburg, and Florida Gulf Coast University to discuss the potential of offering a B.S. in Biology at USFSM. Additionally, Dr. Martin met with faculty at New College of Florida and State College of Florida Manatee-Sarasota to discuss potential collaborations. All parties were supportive of this program and offered excellent advice relevant to planning for this degree.

During the past academic year, Dr. Bonnie Jones (Regional Vice Chancellor for Academic and Student Affairs), Dr. Jane Rose (Dean of the College of Arts and Sciences) and Dr. Erin Martin (Coordinator of General Education / Instructor of Biology) met several times with administrators at State College of Florida, Manatee-Sarasota (SCF) and SCF faculty who teach lower-level sciences courses. The purpose of these meetings was to discuss ways in which our institutions could collaborate if USFSM was to offer a B.S. in Biology. Faculty and administration from both institutions felt it was important that students be able to begin their academic program at either SCF or USFSM. Additionally, faculty teaching lower-level science courses at SCF and USFSM plan to meet on an annual basis and discuss course content, student learning outcomes, and required competencies/skills that are part of these courses. This meeting will allow a seamless transition for SCF students to pursue their B.S. Biology degrees at USFSM. Currently, faculty advisors for the Biology Club at SCF and the future Biology Club advisor at USFSM are exploring the opportunity to hold club meetings together. This will allow our students to participate in community events as a larger group and to get to know the SCF students. Upper-division students in the Biology program at USFSM could then mentor students who start out at SCF. A letter of support for USFSM's biology program from SCF is attached (see Appendix 3: Letters of Support).

In December 2012, the SUS Council of Academic Vice Presidents (CAVP) assembled to review proposed new programming by all SUS institutions. The USFSM B.S. in Biology was reviewed and approved by this statewide committee without objection. (See Appendix 4: FL SUS Council of Academic Vice Presidents.) Letters of support from Florida International University and Florida Atlantic University were received in May of 2013 (see Appendix 3: Letters of Support).

Further detail on the planning process is provided in the table below.

<b>Date</b>	<b>Participants</b>	<b>Planning Activity</b>
02/28/12	Dr. Jane Rose (Dean Arts and Sciences, USFSM), Ricki Lindsay (Lindsay Communications), Barb Lewis (Development Director, USFSM)	Meeting regarding the "Case for Support" of the degree proposal and MOU with Mote Marine Laboratory.
04/30/12	Dr. Jane Rose (Dean Arts and Sciences, USFSM), Dr. Arthur Guilford (Regional Vice Chancellor, USFSM), and Dr. Bonnie Jones (Regional Vice Chancellor for Academic and Student Affairs, USFSM)	Meeting to discuss desired directions for science (general education and pre-degree) at USFSM.

06/28/12	Dr. Bonnie Jones (Regional Vice Chancellor for Academic and Student Affairs, USFSM), Dr. Robert Anderson (Dean College of Business, USFSM), Dr. Cihan Cobanoglu (Dean Hotel Management and Information Technology, USFSM), Laura Hoffman (Institutional Research, USFSM), Kelly Robbins (Institutional Research, USFSM), Mary Beth Wallace (Student Services, USFSM), Dr. Terry Osborn (Dean College of Education, USFSM), Dr. Rhonda Moraca (Academic Affairs, USFSM), Dr. Jane Rose (Dean Arts and Sciences, USFSM), Richard Stevens, (Director of Academic Affairs, BOG), USFSP and USF Tampa administrators.	Meeting with Florida Board of Governors staff to discuss Work Plan and new degree proposals.
07/05/12	Dennis Stover (Institutional Advancement, USFSM), Barb Lewis (Institutional Advancement, USFSM), Dr. Jane Rose (Dean Arts and Sciences, USFSM), Dr. Arthur Guilford (Regional Vice Chancellor, USFSM)	Meeting to walk through USFSM space at Mote Marine Laboratory.
07/11/12	Dr. Rhonda Moraca (Dean Academic Support Services, USFSM), Chris Starosta (Finance, USFSM), and Dr. Jane Rose (Dean, Arts and Sciences, USFSM)	Meeting to discuss hiring plan and future searches.
07/12/12	Dr. Jane Rose (Dean, Arts and Sciences, USFSM), and Richard Lyttle (Director, Facilities, USFSM)	Meeting to discuss lab space at Mote Marine Laboratory.
07/24/12	Dr. Jane Rose (Dean, Arts and Sciences, USFSM), Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Barb Lewis (Institutional Advancement, USFSM), and Dennis Stover (Director, Institutional Advancement, USFSM)	Meeting to discuss development efforts for the biology program and general education.
	Dr. Steve Klasko (USF Health), Dr. Michael Barber (USF Health), Dr. Bonnie Jones (Regional Vice Chancellor for Academic and Student Affairs, USFSM), Dr. Cihan Cobanoglu (Dean, Hospitality Management and Technology Leadership, USFSM), Dr. Jane Rose (Dean, Arts and Sciences, USFSM), Dr. Arthur Guilford (Regional Chancellor, USFSM), and Dennis Stover (Director, Institutional Advancement, USFSM)	Meeting to discuss potential collaborations between USF Health and USFSM.

7/31/12	Dr. Jane Rose (Dean, Arts and Sciences, USFSM), Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Laura Hoffman, Kelly Robbins, Rhonda Moraca (all USFSM)	Biology Course Proposal Planning Discussion
8/14/12	Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Dr. Jane Pfeilsticker (Chair, Natural Sciences, SCF Manatee-Sarasota)	Met to discuss potential collaborations between SCF Manatee-Sarasota and USFSM Biology. Also, discussed their desire to offer a B.S. in Biotechnology. They were interested in sending their students to USFSM for ecology and organismal biology, upper-division courses.
8/29/12	Dr. Jane Rose (Dean, Arts and Sciences, USFSM), Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Dr. Frank A. Biafora (Dean Arts and Sciences, USFSP), Dr. Susan Toler (Assistant Dean, Arts and Sciences USFSP), Dr. Melanie Riedinger-Whitmore (Associate Professor, Chair Biological Sciences, USFSP)	Discussed plans for a B.S. in Biology program at USFSM. USFSP provided guidance with the planning and proposal process.
8/31/12	Dr. Jane Rose (Dean, Arts and Sciences, USFSM), Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Richard Lyttle (Facilities Director, USFSM), Geoff Copeland (USFSM), Dale Drees (USFSM), Susan Barbour (USFSM), Dr. Michael Crosby (Senior Vice President for Research, Mote Marine Laboratory), Derek Templeton (Facilities Director, Mote), Henry Luciano (Mote), Michael Bryant (Fawley/Bryant Architects), Steve Padgett (Fawley/Bryant Architects), Jose Bofill (Perkins + Will, Consulting Lab Planners), Ryan Temblay (Willis A. Smith Construction)	Laboratory Project Building Committee initial meeting to discuss the build-out of the Mote building to meet the demands of the teaching labs.

9/5/2012	Dr. Jane Rose (Dean, Arts and Sciences, USFSM), Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Dr. Pritish Mukherjee, (Professor & Chair of Physics Department USF Tampa), Dr. Jeffrey Ryan, (Professor & Chair of Geology Department, USF Tampa), Dr. Randy Larsen, (Chairperson and Professor Department of Chemistry, USF Tampa), Dr. James R. Garey, (Chair and Professor Department of Cell Biology, Microbiology and Molecular Biology USF Tampa), Dr. Marcus McWaters, (Associate Professor & Chair, Department of Mathematics, USF Tampa), Dr. Peter Sterling, (Professor and Chair, Department of Integrative Biology USF Tampa)	Discussed plans for a B.S. in Biology program at USFSM. USF Tampa provided guidance with the planning and proposal process. Dr. Garey provided a tour of the laboratory facilities for Dr. Rose and Dr. Martin.
9/7/2012	Dr. Jane Rose (Dean Arts and Sciences, USFSM), Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Dr. Michael Crosby (Senior Vice President for Research, Mote Marine Laboratory), Dr. Rich Pierce (Associate Vice President for Research, Mote Marine Laboratory), Dr. Kevan Main, (Director of Aquaculture, Mote Marine Laboratory), Dr. Emily Hall (Director Ocean Acidification Program, Mote Marine Laboratory)	Academic Program Committee Meeting. Discussed draft curriculum, reviewed laboratory design and equipment needs, and discussed staffing issues
9/14/2012	Dr. Jane Rose (Dean Arts and Sciences, USFSM), Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Richard Lyttle (Facilities Director, USFSM), Geoff Copeland (Facilities, USFSM), Dale Drees (Technology, USFSM), Susan Barbour (Facilities, USFSM), Dr. Michael Crosby (Senior Vice President for Research, Mote Marine Laboratory), Dr. Rich Pierce (Associate Vice President for Research, Mote Marine Laboratory), Emily Hall (Director Ocean Acidification Program, Mote Marine Laboratory), Derek Templeton (Facilities Director, Mote), Henry Luciano (Mote), Michael Bryant (Fawley/Bryant Architects), Steve Padgett (Fawley/Bryant Architects), Jose Bofill (Perkins + Will, Consulting Lab Planners), Ryan Temblay (Willis A. Smith Construction)	Building Committee Meeting. Continued discussion regarding plans to build teaching laboratories at the MOTE facility.

09/18/2012	Dr. Jane Rose (Dean, Arts and Sciences, USFSM), Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Dr. Bonnie Jones (Regional Vice Chancellor for Academic and Student Affairs, USFSM), Linda deMello (USFSM) & Dr. Barber (USF Health), Dr. John Ekarius (USF Health), and Dr. Dana Tirrell (USF Health).	Discussion of potential collaborations between USF Health and USFSM biology program.
10/03/2012	Dr. Jane Rose (Dean, Arts and Sciences, USFSM), Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Dr. Bette Jackson (Chair Biological Sciences, FGCU)	Met with Dr. Jackson to discuss USFSM's biology proposal and tour the lab facilities at Florida Gulf Coast University.
10/04/2012	Dr. Jane Rose (Dean, Arts and Sciences, USFSM), Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Dr. Michael Crosby (Senior Vice President for Research, Mote Marine Laboratory), Dr. Rich Pierce (Associate Vice President for Research, Mote Marine Laboratory), Dr. Kevan Main, (Director of Aquaculture, Mote Marine Laboratory), Dr. Emily Hall (Director Ocean Acidification Program, Mote Marine Laboratory), Richard Lyttle (Facilities Director, USFSM)	The USFSM BS Biology Academic Committee met to review the teaching needs of the approved curriculum. We also discussed the progress on lab design and the equipment needs of required courses.
10/09/2012	Dr. Jane Rose (Dean Arts and Sciences, USFSM), Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Dr. Donna Petersen (Dean, College of Public Health),	Met at USF College of Public Health in Tampa to discuss possible program collaborations between USFSM and the College of Public Health. Options explored were minors in public health offered on-line and 4+1 graduate certificate programs in public health.
10/11/2012	Dr. Arthur Guilford (Regional Chancellor, USFSM), Dr. Jane Rose (Dean, Arts and Sciences, USFSM), Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Richard Lyttle (Facilities Director, USFSM), Dennis Stover (USFSM), and Ben Ellinor (USFSM)	Meeting to discuss costs associated with the developed lab plans and space needed to deliver the B.S. in Biology curriculum.
10/16/2012	Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), and Dr. Kevan Main, (Director of Aquaculture, Mote Marine Laboratory)	Meeting to tour the Mote Marine Aquaculture facility and to discuss opportunities for undergraduate research and courses focused on aquaculture.

11/01/2012	Dr. Michael Crosby (Mote), Dr. Bonnie Jones (Regional Vice Chancellor for Academic and Student Affairs, USFSM), and Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM)	Met to tour the proposed lab space at Mote Marine Laboratory.
11/14/2012	Dr. Michael Barber (USF Health), Dr. Bonnie Jones (Regional Vice Chancellor for Academic and Student Affairs, USFSM), Dr. Erin Martin, Dr. Jane Rose (Dean, Arts and Sciences, USFSM), and Linda De Mello (USFSM).	Meeting to discuss potential collaborations between USF Health and USFSM Biology.
11/28/2012	Dr. Michael Crosby (Mote), Dr. Jane Rose (Dean Arts and Sciences, USFSM), and Richard Lyttle (Facilities Director, USFSM)	Meeting to discuss response from Mote Marine's Board of Trustees regarding the build out of the lab space.
11/30/2012	Dr. Jane Rose (Dean, Arts and Sciences, USFSM), Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Dr. Michael Crosby (Senior Vice President for Research, Mote Marine Laboratory), Dr. Rich Pierce (Associate Vice President for Research, Mote Marine Laboratory), Dr. Kevan Main, (Director of Aquaculture, Mote Marine Laboratory), and Dr. Emily Hall (Director Ocean Acidification Program, Mote Marine Laboratory).	The USFSM BS Biology Academic Committee met to review the updated lab build out plans.
11/30/2012	Dr. Jane Rose (Dean, Arts and Sciences, USFSM), Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Richard Lyttle (Facilities Director, USFSM), Geoff Copeland (Facilities, USFSM), Dale Drees (Technology, USFSM), Susan Barbour (Facilities, USFSM), Dr. Michael Crosby (Senior Vice President for Research, Mote Marine Laboratory), Dr. Rich Pierce (Associate Vice President for Research, Mote Marine Laboratory), Emily Hall (Director Ocean Acidification Program, Mote Marine Laboratory), Derek Templeton (Facilities Director, Mote), Henry Luciano (Mote), Michael Bryant (Fawley/Bryant Architects), Steve Padgett (Fawley/Bryant Architects), Jose Bofill (Perkins + Will, Consulting Lab Planners), Ryan Temblay (Willis A. Smith Construction)	USF/Mote Marine Building Program Committee Meeting #4

12/13/2012	Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM) and Dr. Shelly (Principal of Booker High School)	Meeting to discuss ways in which the USFSM Biology Program could partner with Booker High School students and teachers.
12/13/2012	Dr. Dale Drees (Director of e-learning, USFSM), Stephanie Fuhr (e-learning support staff), Christian Sims (USFSM IT support staff), Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Dr. Jane Rose (Dean, Arts and Sciences).	Meeting to review the technology needs for the new biology labs.
12/19/2012	Dr. Bonnie Jones (Regional Vice Chancellor for Academic and Student Affairs, USFSM), Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Dr. Jane Rose (Dean Arts and Sciences, USFSM), and Linda De Mello (USFSM).	Meeting to develop an agenda for meeting with USF Health, MCAT Courses and Partnerships
1/23/2013	Dr. Carol Probstfield (Interim President, State College of Florida), Dr. Arthur Guilford (Regional Chancellor USFSM), Dr. Jane Rose (Dean College of Arts and Sciences USFSM) and Dr. Bonnie Jones (Regional Vice Chancellor for Academic and Student Affairs, USFSM).	Meeting to discuss how the Biology Department at SCF could collaborate with USFSM Biology Faculty. Also discussed potential partnerships and opportunities for transfer students.
1/29/2013	Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM) and Dr. Shelly (Principal of Booker High School)	Second meeting to discuss ways in which the USFSM Biology Program could partner with Booker High School students and teachers.
2/15/2013	Dr. Michael Mears (Provost, SCF), Dr. Jane Pfeilsticker (Biology Chair, SCF), Dr. Matthew Thomas (Biology Faculty, SCF), Dr. Gary Russell (Vice President of Academic Affairs, SCF), Dr. Bonnie Jones (Regional Vice Chancellor for Academic and Student Affairs, USFSM), Dr. Jane Rose (Dean Arts and Sciences, USFSM), and Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM).	Meeting on Biology Degree Proposal with State College of Florida Administration and Faculty
2/22/2013	Dennis Stover (Regional Vice Chancellor, Advancement/Marketing, USFSM), Dr. Jane Rose (Dean, Arts and Sciences, USFSM), and Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM)	Meeting to discuss outside funding opportunities for the USFSM Biology Program.

3/28/2013	Richard Lyttle (Facilities Director, USFSM), Dr. Jane Rose (Dean, Arts and Sciences, USFSM), and Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM)	Meeting to discuss furnishings at the new Biology Labs.
4/23/2013	Dr. Michael Mears (Provost, SCF), Dr. Jane Pfeilsticker (Biology Chair, SCF), Dr. Matthew Thomas (Biology Faculty, SCF), Dr. Gary Russell (Vice President of Academic Affairs, SCF), Dr. Bonnie Jones (Regional Vice Chancellor for Academic and Student Affairs, USFSM), Dr. Jane Rose (Dean, Arts and Sciences, USFSM), and Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Dr. Jeff Meyers (LECOM).	Articulation meeting with USFSM, SCF, and LECOM.
4/26/2013	Brian Mudd (Associate Director: Campus Computing, USFSM), Dr. Jane Rose (Dean, Arts and Sciences, USFSM), and Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM)	Meeting to finalize technology equipment orders for the biology labs.
5/2/2013	Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM), Dr. Rich Pierce (Associate Vice President for Research, Mote Marine Laboratory), Dr. Kevan Main, (Director of Aquaculture, Mote Marine Laboratory), and Dr. Emily Hall (Director Ocean Acidification Program, Mote Marine Laboratory).	Meeting to review equipment to order for the first year of the program with the curriculum committee.
5/3/2013	Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM) and Richard Lyttle (Facilities Director, USFSM).	Meeting to discuss the purchase of major pieces of equipment for the biology labs.
5/14/2013	Jose Bonfill (Perkins and Will Lab, Consultant) Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM) and Richard Lyttle (Facilities Director, USFSM).	Meeting to finalize the order for major pieces of lab equipment and decide on vendors to use.
5/21/2013	Community members, donors, USFSM administration and faculty, Mote Marine administration and researchers.	Mote/USFSM Biology Labs Sneak Peek – a fundraising event.

6/3/2013	Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM) and Richard Lyttle (Facilities Director, USFSM). Rosana Ellana (Facilities, USFSM), Christine Starosta (Purchasing and Business Services, USFSM), Michelle Krueger (Purchasing and Business Services), and Cindy Kish (Administrative Assistant, Arts and Sciences)	Meeting to finalize all other lab equipment orders, review quotes, and select vendors.
6/4/2013	Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM) and Cindy Kish (College of Arts and Sciences Administrative Assistant)	Request for purchase orders of equipment submitted to USF Tampa purchasing department. All requests were approved and delivery dates for equipment is the week of 07/22/2013.
7/19/13	Brian Mudd (Associate Director: Campus Computing, USFSM) and Dr. Erin Martin (Coordinator of General Education /Instructor of Biology, USFSM)	Meeting to preview installation of technology equipment at the biology labs.
8/2/2013	Richard Lyttle (Director, Facilities, USFSM)	Labs completed and receipt of building occupancy certified by City of Sarasota (see Appendix 5: Certificate of Occupancy)

#### 4. DESCRIPTION OF THE CHANGE

*Provide a description of the proposed change, including the specific outcomes and learning objectives of the program and a schedule of proposed course offerings. In the case of a change involving the initiation of a branch campus or an off-campus site, indicate the educational program(s) to be offered.*

*Describe any differences in admission, curriculum, or graduation requirements for students enrolled at the new site(s), or any special arrangements for grading, transcripts, or transfer policies. Demonstrate compliance with FR 4.9 (Definition of Credit Hours) of the Principles. Describe administrative oversight to ensure the quality of the program or services to be offered. A prospectus for approval of distance learning should describe the infrastructure supporting the delivery method (training of faculty, development of courses for distance delivery, technical support for student and faculty).*

#### **Description of the Proposed Change**

To graduate with the B.S. in Biology, students must take 120 credit hours, including 36 hours of required general education (general education courses in science and math are also biology prerequisites), 33 credit hours of biology prerequisites, 30 credits hours of upper-level biology core courses, 12 credit hours (minimum) of biology upper-level electives, and 6 hours of upper-level, institution-required exit courses.

#### **Outcomes and Learning Objectives**

The Student Learning Assessment Plan for the B.S. in Biology includes the following Student Learning Outcomes:

1. Demonstrate knowledge in three major sub-disciplines of biology: cellular and molecular biology, organismal biology, and ecology and evolution.

2. Demonstrate an understanding of the ways in which biology interrelates with other sciences, disciplines, and society.
3. Demonstrate the ability to engage in the scientific process through the planning, execution, and interpretation of laboratory or field studies.
4. Demonstrate understanding of the ethical challenges and practices in the biological sciences.
5. Demonstrate critical thinking in both qualitative and quantitative analysis and evaluation of scientific information.
6. Demonstrate oral and written skills in the assembly and presentation of scientific reports on biological investigations.

Faculty developed outcomes to align with outcomes presented in the report "Vision and Change in Undergraduate Biology Education: A Call to Action", NSF (National Science Foundation) and AAAS (American Association for the Advancement of Science) compiled and published this report in 2011.

To ensure program quality, faculty assess student learning outcomes are assessed on an annual cycle through multiple measures including the ETS Major Field Test in Biology, Laboratory Manuscripts, Capstone Essays, faculty assessment of outcomes, and student assessment of outcomes.

### **Proposed Course Offerings**

**\*General Education Requirements – (36 hrs.)** Courses must be completed in the following five state-mandated subject areas: communications, mathematics, social sciences, natural sciences, and the humanities.

**Biology Prerequisites (33 hrs.)** *A \* indicates that the course also fulfills the new general education requirement recommendations of the statewide steering committee.*

*BSC 2010/2010L	Cellular Processes (3) and Cellular Processes Laboratory (1)
*BSC 2011/2011L	Biodiversity (3) and Biodiversity Laboratory (1)
*CHM 2045/2045L	General Chemistry I (3) and General Chemistry I Laboratory (1)
*CHM 2046/2046L	General Chemistry II (3) and General Chemistry II Laboratory (1)
*CHM 2210/2210L	Organic Chemistry I (3) and Organic Chemistry I Laboratory (2)
*CHM 2211/2211L	Organic Chemistry II (3) and Organic Chemistry II Laboratory (2)
*MAC 2311	Calculus I (4)
*STA 2023	Introductory Statistics I (3)

### **Biology Core Requirements (30 hrs)**

BSC 3450 Research Methods (3)  
 PHY 2053/PHY 2053L General Physics I (3) and General Physics I Laboratory (1)  
 PHY 2054/2045L General Physics II (3) and General Physics II Laboratory (1)  
 PCB 3023/PCB 3023L Cell Biology (3) and Cell Biology Laboratory (1)  
 PCB 3043/PCB 3043L Principles of Ecology (3) and Principles of Ecology Laboratory (1)  
 PCB 3063/PCB 3026 L General Genetics (3) and General Genetics Laboratory (1)  
 PCB 3712/PCB 3713L General Physiology (3) and General Physiology Laboratory (1)  
 PCB 4679 Biology Capstone Course: Evolution (3)

### **Upper Division Biology Electives (minimum 12 hrs.)** selected from the following courses:

BCH 3023 Introductory Biochemistry (3)  
 BOT 3152C Field Botany (3)  
 BOT 3850 Medical Botany (3)  
 BSC 3312 Marine Biology (3)  
 BSC 4052 Conservation Biology (3)  
 BSC 4905 Independent Study (1-3)  
 BSC 4910 Undergraduate Research (1-4)  
 BSC 4933 Selected Topics In Biology (1-4)  
 BSC 4937 Seminar in Marine Biology (2)  
 MCB 3020C General Microbiology (4)  
 MCB 4202 Ecology of Infectious Diseases (3)

PCB 4024 Molecular Biology of the Cell (3)  
 PCB 4026 Molecular Biology of the Gene (3)  
 PCB 4234 Principles of Immunology (3)  
 ZOO 2303 Vertebrate Zoology (3)  
 ZOO 4454 Fish Biology (3)  
 ZOO 4513 Animal Behavior (3)  
 ZOO 4694 Developmental Biology (4)  
 ZOO 4753C Human Histology and Histopathology (4)

**Exit Courses (Institutional Requirements - 6 hrs):** The current course catalog provides a list of approved exit courses. <http://www.usfsm.edu/catalog/>

**Total credits required by program = 105 hrs. Total credits to graduate = 120 hrs.**

Students are encouraged to make the most of their educational experience by participating in undergraduate research and internships and by pursuing a minor in another academic field. A maximum of 4 credit hours in undergraduate research (BSC 4910) or internship (BSC 4905) credits may be applied towards the degree as upper-division science elective requirements.

**Schedule of Course Offerings**

Fall 2014	Spring 2015	Summer 2015	Fall 2015	Spring 2016
CHM 2045/2045L	CHM 2046/2046L	BSC 2010/2010L	CHM 2045/2045L	CHM 2046/2046L
BSC 2011/2011L	BSC 2010/2010L	UPPER-DIVISION BIO ELECTIVE	BSC 2011/2011L	BSC 2010/2010L
CHM 2210/ 2210L	CHM 2211/2211L	UPPER-DIVISION BIO ELECTIVE	CHM 2210/ 2210L	CHM 2211/2211L
PHY 2053/2053L	PHY 2054/2054L		PHY 2053/2053L	PHY 2054/2054L
BSC 3453 (2 SECTIONS)	BSC 3453 (2 SECTIONS)		BSC 3453	BSC 3453 (2 SECTIONS)
PCB 3063/3063L	PCB 3023/3023L		BCH 3023	PCB 3023/3023L
PCB 3043/3043L	PCB 3712/3713L		UPPER-DIVISION BIO ELECTIVE	PCB 3712/3712L
	UPPER-DIVISION BIO ELECTIVE – BOT 3152C		UPPER-DIVISION BIO ELECTIVE	UPPER-DIVISION BIO ELECTIVE
	UPPER-DIVISION BIO-ELECTIVE – PCB 4024		UPPER-DIVISION BIO ELECTIVE	UPPER-DIVISION BIO-ELECTIVE
			UPPER-DIVISION BIO ELECTIVE	UPPER-DIVISION BIO-ELECTIVE
			PCB 3063/3063L	PCB 4679 (2 SECTIONS)
			PCB 3043/3043L	

*Note: Two sections of all laboratory courses will be offered.*

**Other Requirements**

Students majoring in Biology must meet all degree requirements of USFSM and the CAS, as well as the following:

1. To continue in the program, students must have a GPA of at least 2.5 in BSC 2010, BSC 2010L, BSC 2011, and BSC 2011L.
2. A 2.5 GPA in the major is required for graduation.
3. A minimum of 30 credit hours in the major coursework taken at USF Sarasota-Manatee.

## Compliance with FR 4.9 Definition of Credit Hours

Rule 6A-10.033 of the Florida Administrative Code defines postsecondary college credit as “the equivalent of fifteen (15) fifty-minute periods of classroom instruction; with credits for such activities as laboratory instruction, internships, and clinical experience determined by the institution based on the proportion of direction instruction to laboratory exercise, internship hours, or clinical practices hours” (see Appendix 6: Rule 6A-10.033: Postsecondary Instructional Unit Definitions).

### **5. FACULTY**

*Provide a complete roster (using the Faculty Roster form) of those faculty employed to teach in the program(s) referred to in the prospectus, including a description of those faculty members’ academic qualifications and other experiences relevant to the courses to be taught in the program in question, course load in the new program, and course work taught in other programs currently offered. Please consult the “Faculty Roster Instructions” for guidance in completing the Roster for current faculty who will be supporting the change. Provide a narrative with supporting evidence that the number of full-time faculty members is adequate to support the program; and describe the impact of the new initiative on faculty workload.*

*For distance learning programs, describe processes in place to ensure that students have structured access to faculty. For graduate programs, document scholarship and research capability of faculty; for doctoral programs, document faculty experience in directing student research.*

### **Faculty Roster**

The faculty roster provides evidence of faculty qualifications and experiences relevant to courses taught, scholarship, and research capabilities (see Appendix 7: Faculty Roster).

### **Full-Time Faculty and Faculty Workload**

It is anticipated that 53% of the student credit hours in year 1 will be taught by the three full-time Biology faculty members. Currently, USFSM has on staff one full-time Biology faculty member, Dr. Erin Martin. Two full-time faculty hired to begin teaching in the program during the inaugural semester, fall 2014. The table below shows their effort towards the Biology program and their total effort. Remaining course work will be taught by Mote Marine scientists holding courtesy appointments with USFSM. USFSM faculty and Mote scientists will work in a coordinated fashion, creating a collaborative learning environment for students that is typically reserved for graduate students: small-lab and field-focused classes taught by active researchers with opportunities for involvement in national and international research projects.

Faculty	Fall 2014	Spring 2015	AY 2014-15
E. P. Martin, instructor Biology, botany, ecology	BSC 2011/L (x2) PCB 3043/L (x2)	BOT 3152C  (Other course will be a biology for non-majors)	<u>12 month contract</u> approx. 50% fte – teaching approx. 40% fte – admin approx. 10% fte – service
New USFSM full-time faculty member, associate professor biological sciences, genetics	PCB 3063/L (x2)  (Other course will be a biology for non-majors)	BSC 2010/L (x2)  PCB 4024	<u>9-month contract</u> approx. 50% fte – teaching approx. 40% fte – research approx. 10% fte – service
New USFSM faculty member assistant professor biological sciences, cell biology	BSC 3453 (x2)  (Other course will be a biology for non-majors)	BSC 3453  PCB 3023/L (x2)	<u>9-month contract</u> approx. 50% fte – teaching approx. 40% fte – research approx. 10% fte – service

USFSM will hire a full-time faculty member with a specialization in chemistry to begin teaching in 2015-16. With this new hire it is anticipated that 62% of student credit hours will be taught by full-time faculty. USFSM is

currently seeking additional funding to hire an instructor in physics for year 2. With this additional hire nearly 80% of the student credits hours will be taught by full-time faculty members.

## 6. LIBRARY AND LEARNING RESOURCES

*Describe library and information resources – general as well as specific to the program – and staffing and services that are in place to support the initiative. If reliant upon other libraries, describes those collections and their relevance to the proposed program(s) and include a copy of formal agreements in the appendix. Relative to electronic resources, describe how students and faculty will access information, training for faculty and students in the use of online resources, and staffing and services available to students and faculty. If you are citing electronic databases accessed through consortial or statewide groups, please describe the discipline-specific suites or resources and not just the name of the consortium (such as Viva, Tex-Share, Galileo, Louis, etc.). For doctoral programs, document discipline-specific refereed journals and primary source materials.*

### Libraries

#### USF Libraries

Library services are shared across the USF System through USF Libraries with many services available globally (see Appendix 8: USF Library Agreement). Students and faculty members at USF Sarasota-Manatee have access to extensive print and electronic library collections and services and to other learning/information resources both on-line and in-person. USF Libraries provide an extensive collection of on-line resources to which all USF Sarasota-Manatee students and faculty have access. These resources include over 50,000 e-journals, over 900 electronic databases and reference sources, just under 600,000 e-books, and over twenty on-line datasets. Additional electronic collections include access to USF electronic theses/dissertations, image collections, digital archives, and oral histories. USF Libraries hold membership in the Center for Research Libraries (CRL) providing students and faculty access to over four (4) million rarely-held books, journals, and other primary-source materials from all over the globe and listed in the USF Libraries on-line catalog. USF Sarasota-Manatee students and faculty may search either the on-line catalog or the USF Libraries catalog and request materials through Interlibrary Loan (ILL).

The Jane Bancroft Cook Library is a shared resource between USF Sarasota-Manatee and New College of Florida (NCF), a SACS-accredited institution that serves honors-level liberal arts students. The library is located a half-mile south of USF Sarasota-Manatee and employs seven (7) full-time librarians, with master's degrees in library science (M.L.S.). The USF Board of Trustees on behalf of USF Sarasota-Manatee and the New College of Florida (NCF) Board of Trustees signed the Jane Bancroft Cook Library Management Agreement on June 11, 2002 (see Appendix 7: Jane Bancroft Cook Library Agreement) .

The Cook Library provides the traditional physical facility for use by USF Sarasota-Manatee students and faculty and houses the USF Sarasota-Manatee and NCF print and media collections. The library provides individual and group study spaces, including computer workstations for students and faculty from both institutions. USF Sarasota-Manatee librarians purchase print and audio-visual materials that USF Libraries catalogs. The materials are transferred to the Cook Library and placed in circulation. Reference services, with USF Sarasota-Manatee and NCF librarians, are available during most hours of library operation. Students can access both the Cook Library website and the USF Libraries website remotely from home or anywhere and conduct their research, using electronic journal article searches, interlibrary loan requests, and e-book downloads.

Under the Cook Library agreement, NCF library staff provide interlibrary loan service for USF Sarasota-Manatee students and faculty. NCF librarians hold a courtesy instructor librarian appointment with USF Sarasota-Manatee, and USF Sarasota-Manatee librarians hold research scholar appointments with NCF to better serve all students. USF Sarasota-Manatee librarians interact with USF librarians from other campuses in workshops, training sessions, and in the delivery of on-line services to users. They are included in discussions regarding overall USF

Libraries collection development planning. In addition, USF Sarasota-Manatee librarians participate in meetings with NCF librarians and attend other Cook Library meetings, as necessary.

**Library Services** has two full-time librarians with M.L.S. degrees who provide library instruction and research assistance to USF Sarasota-Manatee students and faculty based in the Information Commons. They are available to USF Sarasota-Manatee students, both on campus in Sarasota and in North Port, and through distance education services such as Elluminate, "Ask-a-Librarian" chat, and as an embedded librarians operating within courses in Blackboard and Canvas. Additionally, they employ Skype to assist the commuter students.

**Volumes available and specific to the three major Biology sub-disciplines:**

<b>Subject Heading</b>	<b>Print</b>	<b>Electronic</b>
Cellular and Molecular Biology	258	65
Organismal Biology	185	23
Ecology and Evolution	289	59
<b>Total</b>	<b>732</b>	<b>147</b>

USFSM students have access to 58 biology databases, such as the following:

- Web of Knowledge includes the databases Web of Science, Current Contents Connect, Journal Citation Reports (JCR) and Biosis Previews. It is the most commonly used database by biologists.
- BioOne aggregates over 80 high impact bioscience research journals. Most of BioOne's titles are published by small societies and non-commercial publishers. BioOne journals focus on the biological, ecological and environmental sciences. Articles are available in both HTML and PDF formats.
- General Science Full Text is designed specifically for students and non-specialists, General Science Full Text features full text, plus the graphs, charts, diagrams, photos, and illustrations that convey an abundance of scientific information. High quality indexing goes back to 1984; full text back to 1995.
- Access Science is a starting point for non-science majors needing general information. Daily updates provide full access to 7100+ articles, 115,000 dictionary terms, and hundreds of Research Updates in all areas of science and technology, along with over 2000 biographies of leading scientists, weekly updates of breakthroughs and discoveries in science and technology, a science dictionary, and links to related websites.

USF Libraries provide 391 electronic journals for Biology studies. The more notable titles are listed below.

**Journals and Serials**

- Applied and Environmental Microbiology
- Biochemical and Biophysical Research Communications
- Biophysical Journal
- Cell
- Clinical Genetics
- Current Biology
- Ethology
- Journal of Hazardous Materials
- Journal of Virology
- Journal of Zoology
- Molecular Cell
  
- Nature Genetics
- Nucleic Acids Research

USF Libraries lists 14,418 items for Biology and related subject terms, of which 5,880 are available online.

**Learning Support Services** provides tutoring in writing and specific subject areas as part of the Information Commons. Faculty members who are experts in specific subject matters provide oversight for student tutors as well as tutoring services for students. Faculty writing consultants and graduate student tutors provide writing support for all types of writing assignments. Subject area and writing resource services are open to all USF Sarasota-Manatee students on campus and at the North Port instructional site. Students can make appointments in advance for assistance in-person, by telephone, by Skype, or by e-mail.

Academic and Student Affairs have worked closely with the USF Sarasota-Manatee Student Government Association to provide funding for student tutors as part of learning support services to offer writing and specific subject areas through collaboration with the Information Commons. A faculty coordinator and instructor of English leads the Learning Support Services and the peer tutoring program. Two faculty mathematics instructors teach math and statistics courses and provide tutoring hours in those subject areas. With USF Sarasota-Manatee's low student-to-faculty ratio (15:1), faculty members continue to encourage students to meet with them directly as much as possible rather than relying only on peer tutoring for academic discipline courses.

## **7. STUDENT SUPPORT SERVICES**

*Provide a description of student support programs, services, and activities – general as well as specific to the change – in place to support this initiative.*

### **Registration**

Registration at USF Sarasota-Manatee provides registration services and information for both prospective and current students. Registration provides assistance with questions related to the Family Educational Rights and Privacy Act (FERPA) and acts as a training resource for staff on use of the student information system (SCT Banner). The staff collaborates with other departments at USF Sarasota-Manatee to ensure the timely processing of documentation related to student records and registration of new and continuing students, as well as the accurate publication of academic policies and registration dates and deadlines. Students can register on-line through the Online Access Student Information System (OASIS), or in-person, as needed. Assistance is provided on-site and through telephone and e-mail, making course registration convenient for the students both in-person and at a distance.

### **Student Life**

Student Life, in partnership with the academic community, creates a student-centered environment conducive to learning and the full development of the student as a healthy, successful, and responsible citizen within the diverse society and the global community. Student Life's responsibilities include implementing the USF Sarasota-Manatee diversity initiative, advising the Student Government Association, overseeing and creating clubs and organizations, orienting new students (undergraduate and graduate), facilitating Commencement, and encouraging international awareness by participation in the campus-wide Global Initiative Committee. Student Life encourages and supports student leadership opportunities, including travel to regional, state, and national conferences. Student Life collaborates with other USF departments to assure participation of USF Sarasota-Manatee students in system-wide events, including sports activities, leadership workshops and seminars, homecoming activities, and diversity events. Student Life staff serve on University committees to ensure representation and input into the creation and implementation of new or the revision of pre-existing policies and procedures affecting students system-wide. Students at the North Port instructional site and distance-learning students have the opportunity to participate in all Student Life activities, clubs, and events.

### **Biology Club and Beta Beta Beta Biological Honors Society**

Faculty advisors for the Biology Club at SCF and the future biology Club advisor at USFSM are exploring opportunities to hold club meetings together. This will allow USFSM students to participate in community events as a larger group and to get to know the SCF students. Upper division students in the Biology program at USFSM will mentor students the SCF students before their transfer to USFSM.

USFSM Biology faculty are currently applying to host a new chapter of the Beta Beta Beta Biological Honors Society. Biology majors who meet the requirements for this honors society will be invited to join in their junior year. This society will also participate in activities with the Biology Club and other student associations in addition to sponsoring their own student life activities.

### **Students with Disabilities Services**

Students with Disabilities Services (SDS) coordinates accommodations for all eligible students to ensure equal access to, and rewarding experiences with, USF Sarasota-Manatee academic programs and activities. The SDS Office is conveniently located in Student Services on the first floor. SDS provides services to the North Port instructional site via telephone, e-mail, and personal appointments. The Coordinator develops an accommodation plan specific to each student's needs that may include note-takers, sign-language interpreters, FM system for hearing impaired, CART (Communication Access Real Time Translation), extended test time, quiet-testing environment, use of computer for testing, readers for testing, test scribe, Dragon Naturally Speaking (Voice Recognition Software), CCTV/Video Magnifier, Zoom Text Magnifier, JAWS (Screen Reader Program), and adaptive classroom equipment and/or furniture.

### **Veterans Services**

The Department of Veterans Affairs provides veteran students, eligible dependents, active duty servicepersons, and members of the Selected Reserve specialized assistance with educational benefits. Services are offered in-person, by telephone, by e-mail, or through the website. USF Sarasota-Manatee is committed to providing excellent assistance in conjunction with the USF System by assisting with appropriate paperwork, documentation, information, and referral resources to veterans. The Veterans Committee, comprised of faculty, staff, students, and veteran services from a three-county area, meet monthly to discuss and strategize how to improve communications and services for veteran students.

### **Other Services**

Students have access to the full-service Copy Center and the Café's food service, both located near the Student Government Association's offices. Also located near the Student Government offices are the Student Activities Center (with television, games, pool table, seating, and courtesy telephone) and the Fitness Room (open to all students, faculty, staff, and alumni). The USF Sarasota-Manatee Cashier's Office is conveniently located on the first floor near the Student Services wing. The Bookstore, an auxiliary of USF Sarasota-Manatee and operated by Barnes & Noble, is shared with New College of Florida and is located halfway between the two (2) campuses on State Route 41. Students who cannot make it to the Bookstore during regular or extended hours, or those who do not wish to drive, may order textbooks on-line. Campus Police are available 24-hours-a-day, seven-days-a-week. Security guards offer escort service for any students who would like to be accompanied to their vehicles in the parking lots during evening hours.

## 8. PHYSICAL RESOURCES

Provide a description of physical facilities and equipment to support this initiative. Assess the impact that the proposed change will have on existing programs and services.

USF Sarasota-Manatee facilities include 23 classrooms in varying sizes and in the most-preferred teaching environments; each classroom is equipped with advanced instructional technology, projection, and recording capabilities.

Lab courses will be held on the Mote Marine Laboratory campus, 7 miles from the USF Sarasota-Manatee campus. The facility will include a dry teaching lab, a wet teaching lab, laboratory support room, two research labs, and offices for jointly appointed Mote Marine and USF Sarasota-Manatee faculty, two academic support rooms, and one student lounge.

Below is a table of the specific science equipment for the laboratories. The total cost for equipment of \$109,478.96 was covered through reserve funds.

<b>Equipment</b>	<b>Cost</b>	<b>Quantity</b>	<b>Total</b>
Beaker 1000ml (case of 24), PYREX® Griffin Beakers, Graduated, Corning	\$244.18	2	\$488.36
Beaker 100ml (case of 48), PYREX® Griffin Beakers, Graduated, Corning	\$181.33	2	\$362.66
Beaker 400ml (case of 48), PYREX® Griffin Beakers, Graduated, Corning	\$204.04	2	\$408.08
Beaker 600ml (case of 36), PYREX® Griffin Beakers, Graduated, Corning	\$194.37	2	\$388.74
Bunsen Burner, Adjustable High-Temperature, All Gases, 600–3200 BTU/cu. Ft	\$63.90	48	\$3,067.20
C1000 Touch™ Thermal Cycler	\$5,956.00	1	\$5,956.00
Carolina Blue Box, holds 25 Microscope Slides	\$2.95	20	\$59.00
Celestron UpClose Roof Prism Series 10 x 25 Binoculars	\$17.95	48	\$861.60
Centrifuge - Eight Place Variable Speed Centrifuge	\$406.95	1	\$406.95
Centrifuge Tubes in Paper Racks, 15ml Clear Plastic (case of 500)	\$111.64	1	\$111.64
<b>Equipment</b>	<b>Cost</b>	<b>Quantity</b>	<b>Total</b>
Centrifuge Tubes, 50 ml Clear Plastic in Paper Racks (case of 500)	\$160.00	1	\$160.00
Corning Hot Plate/Stirrer, 9 1/2"L x 7 3/4"W x 4 1/2"H, 5" x 7"	\$474.00	4	\$1,896.00
Crucible Cradle	\$29.85	12	\$358.20
Crucible Tongs, 10"	\$6.15	30	\$184.50
Crucible Tongs, 18"	\$14.45	30	\$433.50
Cylinder, Plastic Graduated, 10 mL	\$1.35	24	\$32.40
Digital Dry Bath with 4 heating Blocks, 120 V	\$675.00	1	\$675.00
Digital Stopwatch, Water Resistant	\$15.85	24	\$380.40
Dissecting Needle, Plastic Handle, Curved Point	\$1.25	24	\$30.00
Dissecting Needle, Plastic Handle, Straight Point	\$1.20	24	\$28.80
DNA Model	\$252.00	1	\$252.00
Easy-Read Enviro-Safe Total Immersion Thermometer (-20 to 110 in. C), 12" long	\$12.30	24	\$295.20
Flask 1 L PYREX® Erlenmeyer, Graduated, Narrow Mouth, Corning (case of 24)	\$214.27	4	\$857.08
Flask 250 ml PYREX® Erlenmeyer, Graduated, Narrow Mouth, Corning (case of 48)	\$211.03	2	\$422.06
Flask 500 ml PYREX® Erlenmeyer, Graduated, Narrow Mouth, Corning (case of 36)	\$197.64	2	\$395.28
Flask, 2 L PYREX® Erlenmeyer, Graduated, Narrow Mouth, Corning (case of 8)	\$168.22	1	\$168.22
Forestry Suppliers Metric Fabric Diameter Tape, 10 m	\$44.95	12	\$539.40

Gel Doc EZ system	\$5,096.00	1	\$5,096.00
GENESYS™ 20 Spectrophotometers, Thermo Scientific	\$2,095.00	12	\$25,140.00
Graduated Cylinder, Plastic, 10 mL	\$1.35	24	\$32.40
Graduated Cylinder, Polypropylene, 1,000 mL	\$12.90	12	\$154.80
Graduated Cylinder, Polypropylene, 100 mL	\$5.00	24	\$120.00
Graduated Cylinder, Polypropylene, 50 mL	\$4.15	24	\$99.60
Graduated Cylinder, Pyrex, Glass, Single Metric Scale, 1,000 mL	\$72.95	8	\$583.60
Graduated Cylinder, Pyrex, Glass, Single Metric Scale, 10 mL	\$14.55	8	\$116.40
Graduated Cylinder, Pyrex, Glass, Single Metric Scale, 100 mL	\$21.35	8	\$170.80
Graduated Cylinder, Pyrex, Glass, Single Metric Scale, 500 mL	\$48.70	4	\$194.80
Iron stands - Rectangular Support, 6 1/2" x 11" base, 1/2" x 36"	\$19.35	48	\$928.80
Labnet Vortex mixer	\$200.00	8	\$1,600.00
Laboratory Scoops, 6 1/2"L Scoops, Pkg. of 12	\$19.80	6	\$118.80
Markable Microscope Slides, Box of 72	\$11.64	24	\$279.36
Meter Tape, Windup, 10 meter	\$16.82	12	\$201.84
Meter Tape, Windup, 50 meter	\$52.50	12	\$630.00
Microcentrifuge Tube Racks (pack of 5)	\$34.36	5	\$171.80
Microcentrifuge Tube Racks, 96-Well (case of 20)	\$260.00	1	\$260.00
Micropipettes (100-1000 ul)	\$215.00	6	\$1,290.00
Micropipettes (20-200 ul)	\$215.00	12	\$2,580.00
Micropipettes (2-20 ul)	\$215.00	12	\$2,580.00
Micropipette racks	\$31.00	6	\$186.00
Microscope repair/tune up	\$800.00	1	\$800.00
Micro-Spoon	\$6.18	48	\$296.64
Microwave	\$60.00	1	\$60.00
Minicentrifuge	\$341.71	2	\$683.42
Mini-sub gel electrophoresis tank	\$312.00	6	\$1,872.00
Olympus CX31 Binocular Microscope - Four Objectives (Compound Microscopes)	\$1,499.00	24	\$35,976.00
Pipette calibration	\$600.00	1	\$600.00
PowerPac Basic Power Supply (gel electrophoresis)	\$316.00	6	\$1,896.00
Ruler, Transparent Vinyl, pack of 12	\$7.10	4	\$28.40
Silva® Trekker, Compass	\$20.50	12	\$246.00
Student-Grade Crucible with Cover, High Form, 30 mL	\$3.98	48	\$191.04
Student-Grade Crucible with Cover, Low Form, 15 mL	\$3.98	48	\$191.04
Support Ring, 3"	\$7.15	50	\$357.50
<b>Equipment</b>	<b>Cost</b>	<b>Quantity</b>	<b>Total</b>
Support Ring, 4"	\$7.98	50	\$399.00
Support Ring, 5"	\$9.25	50	\$462.50
Temperature Controlled Water Bath	590	2	\$1,180.00
Test Tube Clamp, Stoddard	\$1.85	48	\$88.80
Thermometer Rack, Polypropylene	\$40.00	1	\$40.00
Toobers	\$7.00	30	\$210.00
VWR Compact Scale, 200 g x 0.1g	\$93.00	6	\$558.00
VWR® Test Tube Racks, 13 mm Green Holds 72 (case of 8)	\$109.68	4	\$438.72
VWR® Test Tube Racks, 16 mm Blue Holds 72 (case of 8)	\$109.68	4	\$438.72
VWR® Test Tubes, Borosilicate Glass, 10 ml, 13X100mm (case of 720)	\$340.18	1	\$340.18
VWR® Test Tubes, Borosilicate Glass, 24 ml, 16X150mm (case of 720)	\$371.73	1	\$371.73
Total Cost			\$109,478.96

## 9. FINANCIAL SUPPORT

*Provide a business plan that includes all of the following:*

- a. a description of financial resources to support the change, including a budget for the first year of the proposed change (a three-year budget is requested for a new branch campus). The budget must be specific to the proposed change. Do not send a copy of the institutional budget.*
- b. projected revenues and expenditures and cash flow.*
- c. the amount of resources going to institutions or organizations for contractual or support of services.*
- d. the operational, management, and physical resources available for the change.*

Funding of the costs in year 1 (fall 2014 and spring 2015) originate from two sources: other new recurring (E&G) and student fees in an auxiliary fund. The Florida Legislature granted USFSM other new recurring funds in May 2013. Beginning in FY 2013, \$1,117,400 in recurring funding will be added to USFSM's E&G budget to cover costs related to the Biology program, as well as other STEM programming. By year 5, the Biology program is projected to be "self-sufficient," generating enough in tuition and student fees to cover costs.

Budget Table

Expenses – Year 1	Funding Sources		
	Other New Recurring	Auxiliary Funding (Student Fees)	TOTAL
Faculty Salaries & Benefits	\$164,832	\$0	\$164,832
A&P Salaries & Benefits	\$46,200	\$0	\$46,200
USPS Salaries and Benefits	\$46,201	\$0	\$46,201
Other Personnel Services	\$43,516	\$0	\$43,516
Expenses Related to Laboratories	\$80,631	\$23,267	\$103,898
Total Costs	\$381,380	\$23,267	\$404,647

The expenses related to the USF Sarasota-Manatee laboratories at Mote Marine are shown in the budget table above. These costs are related to utilities at the site and maintenance, custodial, and grounds services. As stated earlier, laboratory equipment has already been purchased for installation at the laboratory and will remain the property of USF Sarasota-Manatee. Thus, it is not included in the budget for year 1 above.

In addition to the recurring funding provided by the Florida State Legislature to fund USFSM STEM programs, including Biology (\$1,117,396), the following table shows the revenues to be generated by student tuition and fees in year 1.

Anticipated Credit Hours in Year 1	Matriculated Tuition (Credit Hours * Rate)	Fees	Revenues to be Generated
1,075	\$148,845	\$23,267	\$172,112

## 10. EVALUATION AND ASSESSMENT

*Describe how the institution assess overall institutional effectiveness as well as the means used to monitor and ensure the quality of degree program(s), off-campus site(s), or other changes. Summarize procedures for systematic evaluation of instructional results, including the process for monitoring and evaluating programs at the new site, as well as using the results of evaluation to improve institutional programs, services, and operations. For compressed time frames describe the methodology for determining that levels of knowledge and competencies comparable to those required in traditional formats have been achieved.*

USFSM assesses its degree programs annually and completes a complete program review every seven years (see Appendix 10: FLBOG 8.015 Academic Program Review). Student learning outcomes are assessed with multiple measures to ensure program quality. Assessment results are reviewed and analyzed by program faculty. Faculty

members in each program provide a narrative of how they will use the results for program improvement to the Dean. The Dean responds in the academic assessment report, addressing the assessment results and use of results for each student learning outcome. The B.S. in Biology will follow the same procedure and has developed an assessment for immediate use upon the implementation of the program (see Appendix 11: Academic Assessment Plan). This program's student learning outcomes will be assessed in five ways:

1. ETS Major Field Test in Biology: Students take Major Field Test (MFT) in Biology developed by the Educational Testing Service (ETS), during the capstone course in their last semester of the undergraduate program. The exam contains 120 multiple-choice questions designed to measure students' subject knowledge and the ability to apply facts, concepts, theories, and analytical methods in the areas of cell biology, molecular biology and genetics, organismal biology, population biology, evolution, and ecology. Experienced faculty committees in all relevant areas develop and revise test questions every five years. ETS assessment experts conduct rigorous tests of sensitivity and reliability on each question.
2. Lab Manuscripts: In the required core, upper-division biology laboratory courses (Cell Biology, Ecology, Genetics, and General Physiology), students design independent research projects and write scientific manuscript that reports their results. A team of faculty externally evaluate these manuscripts for evidence of good research methodology, evidence of effective arguments constructed on sound reasoning, and effective writing using an agreed-upon scoring rubric. The faculty work with the Office of Institutional Research and Effectiveness to monitor inter-rater reliability.
3. Capstone Essays: In the senior capstone course, Evolution, students write essays for exams that explore ethical cases and interdisciplinary connections between biology and other subjects. A team of faculty evaluate these essays using an agreed-upon scoring rubric. The faculty work with Institutional Research and Effectiveness to monitor inter-rater reliability.
4. Faculty Assessment of Outcomes Survey: At the end of every semester, faculty members teaching the senior capstone course and the upper-division required biology courses (Cell Biology, Genetics, Ecology, and General Physiology) rate students' degree of competency in each outcome as demonstrated in the senior capstone on the following scale: (1) Far Below Expectation, (2) Below Expectation, (3) Meets Expectation, (4) Exceeds Expectation.
5. Student Assessment of Outcomes Survey: Faculty Survey students in the senior capstone course and the upper-division required core biology courses (Cell Biology, Genetics, Ecology, and General Physiology) about the degree of emphasis placed in the major on developing each outcome using the following scale: (1) No Attention, (2) Little Attention, (3) Some Attention, (4) A Lot of Attention. Faculty also survey students in the senior capstone course about the degree of improvement they feel they have achieved in each outcome through the courses they took within the major using the following scale: (1) Not Improved; (2) Improved a Little, (3) Improved Some, (4) Improved a Lot.