Florida Board of Governors

Request to Offer a New Degree Program

University of South Florida
University Submitting Proposal

Summer 2010/Fall 2010
Proposed Implementation Date

Graduate School
Name of College or School

N/A
Name of Department(s)

Interdisciplinary
Academic Specialty or Field

Masters of Arts in Global Sustainability
Complete Name of Degree
(Include Proposed CIP Code): IDS

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

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. Indicate the program costs for the first and the fifth years of implementation as shown in the appropriate columns in Table 2. Calculate an Educational and General (E&G) cost per FTE for Years 1 and 5 (Total E&G divided by FTE).

<table>
<thead>
<tr>
<th>Implementation Timeframe</th>
<th>Projected Student Enrollment (From Table 1)</th>
<th>Projected Program Costs (From Table 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HC</td>
<td>FTE</td>
</tr>
<tr>
<td>Year 1</td>
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</tr>
<tr>
<td>Year 2</td>
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<td>Year 5</td>
<td>25</td>
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</table>

$580,000
$22,481

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.
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 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 proposed Master of Arts in Global Sustainability will initially prepare students to address complex regional, national, and global challenges related to water and sustainability and the ability to innovate in diverse cultural, geographic, and demographic contexts. The program will allow for the integration of various disciplines such as basic, natural, and social sciences, engineering, health, economics, governance and policy, and issues of diversity. The total number of credit hours is 33 with the majority of coursework being offered online. The focus of the inaugural curriculum is on water.

   The target student population for this program includes working professionals in for-profit and non-for-profit agencies and other settings that are focusing on sustainability and “green” issues; students who wish to learn problem solving skills and utilize critical thinking to advance sustainability in developed and developing nations; and students who wish to pursue policy change and perform advocacy functions to advance sustainability. This is not a Master of Science degree that trains students as discipline-specific scientists in science, technology, engineering, or math (STEM) fields but a multidisciplinary Master of Arts degree that prepares students to be leaders in working as team members to enhance global sustainability.

   There will be many opportunities for employment of students who receive this degree. Kaplan’s new College Guide’s top 10 “hot green careers” (www.kaplan.edu) are in environmental design and engineering, hydrology, solar energy, and transportation system planning — all key strengths of the University of South Florida. The “green economy” is already big business (“Growing 'Green' Jobs Is a Long-Term Task, Advocates Say,” The New York Times, Aug. 14, 2009). The new Green Collar Jobs report (www.ases.org/greenjobs) from the nonprofit American Solar Energy Society and Management Information Services, a Washington D.C. economic research firm, documents that the renewable energy and energy efficiency industries represented more than 9 million jobs and $1,045 billion in U.S. revenue in 2007.

   The renewable energy industry grew three times as fast as the U.S. economy, with the solar thermal, photovoltaic, biodiesel, and ethanol sectors leading the way, each with 25%+ annual revenue growth. By 2030, they forecast as many as 37 million jobs from renewable energy and energy efficiency. There will also be many opportunities educationally for advanced degrees in related fields such as public health, public policy, and engineering in addition to the option of dual degrees and incorporation for some students of placement in the Peace Corps.
B. Describe how the proposed program is consistent with the current State University System (SUS) Strategic Planning Goals. Identify which goals the program will directly support and which goals the program will indirectly support. (See the SUS Strategic Plan at http://www.flbog.org/StrategicResources/)

This program meets the economic development goals of the SUS Strategic Plan with its focus on Healthy Communities; Integrated Interdisciplinary Inquiry; Global Literacy and Impact; Research and Innovation; and Community Engagement. The goals that are directly supported include Access to and production of degrees; Building world-class academic programs and research capacity, Meeting statewide professional and workforce needs; and Meeting community needs and fulfilling unique institutional responsibilities. As stated earlier, this degree program addresses economic and community needs and will allow for the development of a world-class educational effort in global sustainability. There will be practice and research opportunities for students throughout the program and the ability to interact with experts statewide, nationally, and internationally.

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.

As stated earlier, there is a clear need for this degree. The recent collapse of the economy and the ongoing collapse of the environment have created remarkable new opportunities for the University of South Florida to prepare students for careers in novel and developing industries that aim to rebuild simultaneously the market and the planet (“Doing the Recovery Right,” The Nation, Jan. 28, 2009). So called “green collar” or sustainability jobs, in which professionals solve problems in energy use and transportation, are emerging in practically every commercial, governmental, and nonprofit sector—with job titles such as sustainability officer, sustainable design professional, resource manager, and energy engineer (“What Is a Green-Collar Job, Exactly?” Time Magazine, May 26, 2008; “Greening the Rustbelt”, The Economist, Aug. 13, 2009). Numerous other examples can be found at www.greenjobs.com, www.sustainablebusiness.com, and www.ecojobs.com. The 2009 Kaplan College Guide’s top 10 “hot green careers” (www.kaplan.edu) are in environmental design and engineering, hydrology, solar energy, and transportation system planning — all key strengths of the University of South Florida.

Management Information Services, a Washington D.C. economic research firm, documents that the renewable energy and energy efficiency industries represented more than 9 million jobs and $1,045 billion in U.S. revenue in 2007. The renewable energy industry grew three times as fast as the U.S. economy, with the solar thermal, photovoltaic, biodiesel, and ethanol sectors leading the way, each with 25%+ annual revenue growth. By 2030, they forecast as many as 37 million jobs from renewable energy and energy efficiency.

While community colleges are taking the lead in training green-collar job workers (“Community Colleges Are Key to ‘Green’ Jobs, Activist Says,” The Chronicle of Higher Education, 55(10):A20, 2008), only a small number of universities provide the kind of higher education needed to train students to take leadership roles in the Green Economy (“Green Degrees in Bloom,” Newsweek, Aug. 12, 2009; “College Students Are Flocking to Sustainability Degrees, Careers,” USA Today, Aug. 3, 2009; “Green Degrees: An Environmental Education can Lead to a Variety of Career Options, Black Enterprise, Nov., 2008). Currently in Florida, no schools offer a post-baccalaureate degree in global sustainability. With its unique strengths in research on water, coastal environments, and globalization, the University of South Florida is poised to make a significant contribution to training students for the new Green Economy with a Master of Arts degree in Global Sustainability.

With regards to Florida, The Pew Charitable Trust (www.pewtrusts.org) reports that the state’s clean energy economy grew 7.9 percent between 1998 and 2007. Florida was among the top 10 for jobs in America’s clean energy economy – and the only state in the nation with its own cap-and-trade policy, helping to create market demand for clean energy generation (southflorida.bizjournals.com). The Pew’s definition of green jobs runs the gamut and includes engineers, plumbers, administrative assistants, construction workers, machine setters, marketing consultants, teachers, and many others with annual incomes ranging from $21,000 to $111,000. For several of the higher paying jobs, a Master of Arts degree in global sustainability would be very desirable.

Last June, Governor Crist signed into law a bill enacting several new energy and climate change policies (southflorida.bizjournals.com). These included the Florida Climate Protection Act, which authorizes the Florida Department of Environmental Protection to develop an electric-utility greenhouse gas cap-and-trade program. The Governor repeatedly has expressed his support of sustainability, especially preserving safe water supplies, which is the initial focus of our degree program.

Florida is clearly on the cutting edge of the green industry and sustainability. Several USF professors are working on sustainability projects and have received national and state funding to pursue these endeavors.

**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.**
Students at the University of South Florida have consistently requested a degree in sustainability. The students have a keen interest in a “green” society as is evidenced by their organized effort last year to introduce a “green” fee at USF. This fee would be paid by the students and they were asking for no state funds.

Students in several of the environmental organizations at USF and members of the Graduate and Professional Student Council were surveyed in September online and in person to address if they would be interested in this program and why, what employment opportunities they would pursue with this degree, and what changes if any they would make to the existing curriculum structure. Several students were positive about the degree program, especially those students from Architecture. Students made a clear point that they hoped classes would include opportunities to interact with other students—such as through Elluminate and the coursework did not follow a complete online model which it will not.

Students at the University of South Florida have been actively engaged in ‘green’ efforts for several years. There are several environmental organizations and efforts continue for approval from the state to charge a “green” fee that students would pay to enhance sustainability on the USF campus.

C. If similar programs (either private or public) exist in the state, identify the institution(s) and geographic location(s). Summarize the outcome(s) of any communication with such programs with regard to the potential impact on their enrollment and opportunities for possible collaboration (instruction and research). Provide data that support the need for an additional program.

The University of Florida (UF) offers the Bachelor of Science in Sustainability and the Built Environment in the College of Design, Construction and Planning (http://www.dcp.ufl.edu/sustainability/bachelor). The degree is a four-year, 120-credit hour program of which 48 hours are required courses including a 6-credit hour capstone course, and 21 hours of approved electives. There are two tracks. The first is a general degree program accessible to students at either the sophomore or junior levels. The second track is for students interested in a combined bachelor’s and master’s degree. The combined degree is structured as a 4+1 program leading to a Master of Arts in Urban and Regional Planning. The UF also has an undergraduate certificate in sustainability.

The University of Miami offers an interdisciplinary undergraduate minor in “Global Perspectives on Sustainability”. This 19 semester hour program “introduces students to the foundations of environmental sustainability and its complexities, with an emphasis on the approaches taken by people living under different geographic and economic conditions.” (http://www.miami.muohio.edu/academics/majorsminors/minors/globalperspectives.cfm)

St. Petersburg College offers a Bachelors in Sustainability Management.

The College of Social Science at Florida State University (FSU) offers a “Global Pathways Certificate,” which is advertised as “an interdisciplinary concentration in
Environmental Studies that provides an in-depth understanding of the social and institutional context of contemporary environmental concerns” (http://global.fsu.edu/students/certificate/certificate.htm). In addition, the FSU College of Law offers a concentration in Environmental and Land Use law (http://www.law.fsu.edu/academic_programs/environmental/index.html).

Florida Atlantic University offers a certificate in Environmental Studies.

The University of Florida offers a MS and Masters of Engineering degrees with a specialization in water resources planning and management. It is a 30-hour completely on-line program that includes courses on: water resources planning, decision support systems, water resources infrastructure, water flow, and economics. For more information: http://www.ufedge.ufl.edu.

In June of 2009, the University of Florida was awarded nearly $1 million from the MacArthur Foundation for a new master’s program in sustainable development, building on UF’s strengths in tropical conservation and international development. The program does not yet exist and will be administered jointly by the Center for Latin American Studies and the Center for African Studies.

As can be seen from the preceding information we are proposing a unique Master of Arts degree in global sustainability with a concentration in water that is not found in the state of Florida. In addition, students completing our degree have the opportunity to also receive our existing graduate certificate in water, health and sustainability.

D. Use Table 1 (A for undergraduate and 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 40 credit hours per year and graduate FTE will be calculated as 32 credit hours per year. Describe the rationale underlying enrollment projections. If, initially, students within the institution are expected to change majors to enroll in the proposed program, describe the shifts from disciplines that will likely occur.

We anticipate that our student body will be comprised of a mixture of domestic (both residents and non-resident) and international students. These will be fulltime students who will be able to participate in a residency period at the University of South Florida and an internship at the conclusion of the program for at least one semester.

Due to the residency requirements of the program we anticipate the enrollment of 20 students each year in the first two years and then increasing to 25 students per year thereafter. Students will enter the program as a cohort thereby creating a specialized program for these students.

E. Indicate what steps will be taken to achieve a diverse student body in this program, and identify any minority groups that will be favorably or unfavorably impacted. The university’s Equal Opportunity Officer should read this section and then sign and date in the area below.
We will advertise this program broadly throughout Florida in all publications, including those that focus on diversity. This will include Diverse Issues in Higher Education (formerly Issues in Higher Education) [http://www.diverseeducation.com/index.asp](http://www.diverseeducation.com/index.asp) and Hispanic Outlook Magazine [http://www.hispanicoutlook.com/](http://www.hispanicoutlook.com/). We also will utilize the Voice of Hispanic Higher Education magazine. For international and domestic students we will advertise in the International Educator magazine, the Chronicle of Higher Education, and the Connections magazine through EducationUSA.

We will utilize our existing marketing and recruitment strategies through professional associations and conferences and other mediums and venues to work as partners with the Colleges and the Office of International Affairs to promote the program. We will utilize the Hispanic Association of Colleges and Universities, Florida/Georgia Louis Stokes Alliance for Minority Participation, Society of Women Engineers, National McNair Scholars Research Conference, the American Biomedical Research Conference for Minority Students, and the Southern Regional Education Board meetings and programs. We also will advertise greatly at the annual NAFSA: Association of International Educators conference. We will reach out especially to our partnering international institutions including Ocean and Nankai Universities (marine science) in China, Exeter University (environmental science and coast sustainability program) in the United Kingdom, University of Ghana-Cape Coast Africa (fisheries), and as the program matures the City of Knowledge in Panama, the University of San Francisco in Quito-Ecuador to partner with the Galapagos Island Research Center, and possibly the University of Havana in Cuba.

\[
\text{Ted Williams} \\
\text{Equal Opportunity Officer} \\
\text{9/22/09 Date}
\]

III. Budget

A. Use Table 2 to display projected costs and associated funding sources for Year 1 and Year 5 of program operation. Use Table 3 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 revenue for the program will consist of student tuition and program fees. We anticipate that approximately one-half of the first year cohort will be domestic students and one-half will be international students. Program fees include technology fees, residency, study abroad costs, etc. and will amount to approximately $10,000 per student. Expenditures for the program include instructional and program costs, an advisor to be housed in the Graduate School, marketing and recruitment costs, operating costs, and carry forward funds. This has been totaled at $580,000. We will be pursuing sponsorships
to assist with their tuition and program costs. Other support will be provided by the Graduate School, E-campus, and the School of Global Sustainability. It is predicted that the new Director of the School of Sustainability will have day-to-day responsibility for the program. Colleges and departments will receive the FTE generated by these students in their respective courses.

B. If other programs will be impacted by a reallocation of resources for the proposed program, identify the program 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).

We believe this program will not have an impact on reallocation of resources but will enhance undergraduate education and research by serving as a mechanism for students to continue their studies at USF through graduate education. Undergraduate students could have opportunities to participate with the students in this program in the development of sustainability projects.

C. 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 should be no impacts on related programs or departments. We are incorporating several of the existing Water, Health, and Sustainability courses utilized in the certificate program and will provide support to those faculty ($5,000 per course) who will be developing online versions of courses. We are requesting the hiring of one student advisor in the Graduate School. Twenty to twenty-five additional students per year should not place undue burden on departments in terms of faculty commitment nor budget.

D. 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 explored several grant opportunities to assist with the funding of this degree program. We will be able to submit to the MacArthur Foundation for funding in addition to several federal agencies (National Science Foundation) for support of students. We also will be in communication with several industries that recently have put forth green initiatives. These include SweetBay and Lykes.
IV. Projected Benefit of the Program to the University, Local Community, and State

A. Use information from Table 1, Table 2, 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.

There will be immense benefit to USF with the development of this program. Issues pertaining to water and global sustainability are being addressed throughout several universities nationally and internationally and there are many courses at USF that contain a focus or sub-focus on sustainability. However this program is unique in that it directly focuses on water whereas other noted programs (Arizona State University) are broad and some (University of Florida) focus on development issues. Also, the majority of programs researched were at the undergraduate and/or certificate level whereas this is a graduate program with the potential of growing into dual degree programs with other disciplines (public health, engineering, business), developing a research track leading to a Master of Science degree, and/or developing a track whereby students will be able to participate in the Masters International Programs in the Colleges of Public Health and Engineering that involves a 2 year commitment to serving in the Peace Corps. A special feature of our program is the ability of our students to not only receive the degree but also the graduate certificate in Water, Health, and Sustainability. The graduates from this degree program will clearly benefit the State of Florida, the nation, and the world due to their ability to enhance sustainability. A recent report from the Council of Graduate Schools clearly showed that the majority of domestic students stay and work in the state where they received their master’s degree.

V. Access and Articulation – Bachelor’s Degrees Only-N/A

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 request to the BOG for an exception along with notification of the program’s approval. (See criteria in BOG Regulation 6C-8.014)

Insert response here.

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 Common Prerequisite Manual http://www.facts.org). 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.

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 community college transfer students are not disadvantaged by the Limited Access status. NOTE: The policy and criteria for Limited Access are identified in BOG Regulation 6C-8.013. Submit the Limited Access Program Request form 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 Statewide Articulation Manual http://www.facts.org). List the prerequisites, if any, including the specific AS degrees which may transfer into the program.

Insert response here.
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.

The Masters of Arts program in Global Sustainability at the University of South Florida trains students to become leaders in studying and creating sustainable, healthy communities throughout the world. Graduates of the program are creative scholar scientists and scholar activists who address complex human-environmental problems in sustainability by integrating social, economic, and environmental variables in a holistic and interdisciplinary way. They have the intellectual skills for critical thinking and problem solving that interconnect local and global scales. They have the technical skills to construct positive policy and advocacy plans for clean energy and sustainable urban systems. They have the management skills to lead others in developing sustainable solutions to problems involving land, water, and air resources. Graduates come from or move into careers in higher education and informal science education; local, state, and federal government and intergovernmental institutions; international non-governmental and not-for-profit organizations; and consultancies for business, industry, utilities, and regulatory and compliance agencies.

The initial goals of the Master of Arts in Global Sustainability Program are for students to develop a comprehensive understanding of issues pertaining to global sustainability and water so that they may develop innovative solutions that will enhance the health and welfare of populations throughout the world. These goals directly relate to the missions of the SUS Strategic Plan and the University Strategic Plan through excellence in education and meeting economic needs of the State of Florida. Also, this program directly relates to the mission of USF which includes student access and success in an engaged, and interdisciplinary, learner-centered environment, research and scientific discovery, including the generation, dissemination, and translation of new knowledge across disciplines; to strengthen the economy; and, most importantly, to design and build sustainable, healthy communities embracing innovation to build a community of learners together with significant and sustainable university-community partnerships and collaborations. This program is interdisciplinary involving several academic disciplines and will capture the expertise of faculty throughout the world. The focus on global issues and sustainability directly align with the strategic plan of USF. The inaugural concentration focus is on water with later concentrations developed on other major sustainability issues such as the designed environment. We anticipate that this degree program will be inclusive and holistic and eventually involve the STEM sciences, the social sciences, the humanities, arts, and health.
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.

USF’s strategic plan is clearly focused on global initiatives of which this program emanates. Utilizing existing expertise in various disciplines including anthropology, public health, business, and engineering, students will be able to develop innovative solutions to water issues and global sustainability.

This program will interface with several partnering universities and draw on the expertise of our new global initiatives which include a united effort to bring together international functions at USF through USF World and the further development of Offices of Sustainability and Community Engagement. Our Office of International Affairs will be directly involved with the program, especially in terms of international student recruitment. The Graduate School will house the program due to its interdisciplinary nature and the Director of the School of Sustainability will have day to day responsibility for the operation of program and interaction with students. The Office of Sustainability will be directly involved in terms of providing students resources and potential faculty exchanges and our Office of Community Engagement will be instrumental in establishing links with internship sites and potential projects. The students will have the opportunity to work with the Office of Sustainability on several conferences and activities such as the Going Green Expo and statewide Sustainability Conference.

C. Provide a narrative of the planning process leading up to submission of this proposal. Include a chronology (table) of 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.

See Table Below.

The planning process has been extensive and has largely involved Drs. Whiteford, Liller, and Wells and the SGS Advisory Committee in addition to discussions and several meetings with Department Chairpersons, Associate Deans, Deans, Faculty, and the Faculty Senate. Sustainability has been a major strategic emphasis of USF for several years and there have been a multitude of meetings throughout the years focused on this topic within departments, colleges, and at the University level. Discussions began to become much more formalized in August as the Provost put forth his vision for a School of Global Sustainability and a graduate degree within the School on August 14th, 2009 at the annual Council of Deans Retreat. He charged Drs. Whiteford and Liller to lead the process. Since that time we have had several meetings with the Provost along with the parties above during the proposal development process. Planning was also coordinated with Dr. Kathleen Moore in terms of the contributions of E-campus.
### Planning Process

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<tr>
<th>Date</th>
<th>Participants</th>
<th>Planning Activity</th>
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<tr>
<td>8/18/09</td>
<td>Linda Whiteford, Kathleen Moore, Karen Liller</td>
<td>Planning meeting</td>
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<tr>
<td>8/20/09</td>
<td>Christian Wells, Karen Liller</td>
<td>Planning meeting to discuss proposed program and the Office of Sustainability</td>
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<tr>
<td>8/21/09</td>
<td>Linda Whiteford, Karen Liller</td>
<td>Planning meeting</td>
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<td>8/26/09</td>
<td>Linda Whiteford, Karen Liller</td>
<td>Program Development meeting</td>
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<td>8/28/09</td>
<td>Carol Hines-Cobb, Rick Pollenz, Karen Liller</td>
<td>Proposal planning meeting</td>
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<td>8/28/09</td>
<td>Linda Whiteford, David Jacobson, James Mihelcic, Christian Wells, Sharon Hanna West, Boo Kwa, Bill Hogarth, Karen Liller</td>
<td>Program Proposal Development and Office of Sustainability meeting</td>
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<tr>
<td>9/4/09</td>
<td>Linda Whiteford, Christian Wells, Karen Liller</td>
<td>Continued program development</td>
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<tr>
<td>9/4/09</td>
<td>Linda Whiteford, Christian Wells, Karen Liller, Provost Wilcox</td>
<td>Discussion of Degree Program and School of Global Sustainability</td>
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<td>9/9/09</td>
<td>Linda Whiteford, Karen Liller, Christian Wells, Provost Wilcox</td>
<td>Discussion with Faculty Senate Executive Committee of the SGS and MA Program</td>
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<td>9/11/09</td>
<td>Karen Liller, Associate Deans, Course Instructors</td>
<td>Discussion about course conversions and overall degree</td>
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<td>9/14/09</td>
<td>Karen Liller, Linda Whiteford, Provost Wilcox, Deans</td>
<td>Discussion with Deans about the Program and School of Global Sustainability (Council of Deans meeting)</td>
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<td>9/15/09</td>
<td>Karen Liller, Linda Whiteford, Steve Permuth, Art Shapiro</td>
<td>Discussion of SGS and MA proposal to be discussed at the upcoming Faculty Senate meeting</td>
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<td>9/16/09</td>
<td>Karen Liller, Linda Whiteford, Eric Eisenberg, Department Chairs</td>
<td>Discussion about the MA proposal and SGS including curricular suggestions.</td>
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<td>9/21/09</td>
<td>Karen Liller, Linda Whiteford, Deans</td>
<td>Presentation of program and SGS to Academic Deans</td>
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<td>9/21/09</td>
<td>Karen Liller, Provost</td>
<td>Discussion of Program Budget and Admission Requirements</td>
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<tr>
<td>9/22/09</td>
<td>Karen Liller</td>
<td>Finalize Program Proposal for submission</td>
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### Events Leading to Implementation

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<tr>
<th>Date</th>
<th>Implementation Activity</th>
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<td>August 2009</td>
<td>Program planning and development</td>
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<td>September 23, 2009</td>
<td>Submission to Graduate Council Curriculum Committee</td>
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<td>October 5, 2009</td>
<td>Graduate Council Curriculum Committee Review</td>
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<td>October 19, 2009</td>
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<td>Academic Affairs Management Council Review</td>
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<tr>
<td>October 28, 2009</td>
<td>Submission to the Academic Campus Environment (ACE) Workgroup</td>
</tr>
<tr>
<td>November 19, 2009</td>
<td>Review by the ACE Workgroup</td>
</tr>
<tr>
<td>December 3, 2009</td>
<td>Review by the Board of Trustees (BOT)</td>
</tr>
<tr>
<td>Spring 2010</td>
<td>Implementation of program</td>
</tr>
</tbody>
</table>
VII. Program Quality Indicators - Reviews and Accreditation

A. 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. N/A

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.

The specific learning outcomes for the Master of Arts in Global Sustainability:

1. Develop a thorough understanding of the environmental, economical, historical, health, and engineering issues that relate to global sustainability.
2. Develop program development and leadership skills that will allow for the development of innovative solutions related to sustainability in developed and developing nations.
3. Determine the efficacy of present and future measures to enhance sustainability.
4. Develop an innovative master’s project that will show direct benefits related to sustainability of targeted populations.

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

This program will follow USF Admission Standards in that a minimum of 3.0 GPA will be required for entrance. Applicants whose native language is not English or who have not earned a degree in the United States must also submit TOEFL scores earned within two (2) years of the desired term of entry. A minimum total score of 79 on the internet-based test or 550 on the paper-based test are required. Applications submitted with TOEFL scores that do not meet the minimum requirements will be denied.

The TOEFL requirement may be waived if the applicant meets one of the following conditions:

- The applicant’s native language is English, or
- Has scored 500 or higher on the GRE Verbal Test, or
- Has earned a college degree at a U.S. institution of higher learning, or
- Has earned a college degree from an institution whose language of instruction is English (must be noted on the transcript), or
- Has scored 6.5 on International English Language Testing System (IELTS) http://www.ielts.org/.

The GRE will not be required. We also will require a 250-500 word essay that includes the student’s academic and professional background, reasons for pursuing this degree,
and their professional goals in terms of contributing to global sustainability. The student may provide a portfolio demonstrating prior work that focuses on sustainability of populations.

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.

**Curriculum—33 semester hours**

There are four core courses for the degree program. These courses provide students an overall understanding of global sustainability including environmental, historical, humanities, culture, engineering, health and other overarching components along with practical experience (internship).

**IDS 6xxx Interdisciplinary Seminar in Global Sustainability**
**PHC 6934 Public Health Topics in Global Sustainability**
**GEB 6930 Special Topics in Management and Sustainability**
**IDS 6xxx Required Internship**

**Curriculum Schedule:**

**Summer Semester:** Required Two-Three Week Residency of the full semester course at USF or other location (dependent on the student body):

IDS 6xxx  Interdisciplinary Seminar in Global Sustainability (3) (Core)

**Fall and Spring Semester Courses** (21 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHC 6934</td>
<td>Public Health Topics in Global Sustainability</td>
<td>(3) (Core)</td>
</tr>
<tr>
<td>GEB 6930</td>
<td>Special Topics in Management and Sustainability</td>
<td>(3) (Core)</td>
</tr>
<tr>
<td>ANG 6469</td>
<td>Foundations of Medical Anthropology</td>
<td>(3)</td>
</tr>
<tr>
<td>PHC 6301</td>
<td>Water Pollution and Treatment</td>
<td>(3)</td>
</tr>
<tr>
<td>ENV 6666</td>
<td>Aquatic Chemistry</td>
<td>(3)</td>
</tr>
<tr>
<td>EVR 6216</td>
<td>Advances in Water Quality Policy and Management</td>
<td>(3)</td>
</tr>
<tr>
<td>GEO 6286</td>
<td>Advances in Water Resources</td>
<td>(3)</td>
</tr>
</tbody>
</table>

**Other courses in global sustainability may be substituted for the proposed non-core concentration courses as approved by the program director.**

**Spring/Summer Semesters:** Required Internship (at USF or Partnering Institution): The internship will be preceded with several online learning sessions focused on preparation for and how to achieve internship success.

IDS 6xxx  Internship (6) (Core)
Final Summer Semester: Required Sustainability Project (3 credit hours)

IDS 6xxx  Project (3)

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

The initial emphasis of this program is on water and global sustainability. The courses will follow the sequence as shown above and will be offered on alternative calendars in the summer, fall, and spring semesters to allow flexibility for the student so that he/she can complete the program within one year and spend a greater portion time on the development of the culminating project. During the first summer the required residency seminar will be offered. Between the following fall and spring semesters, students will be able to complete coursework and the final summer will be reserved for the internship and completion of the special project. All courses except the interdisciplinary seminar will be fully online. The seminar will be taught live on the Tampa Campus but will utilize the technology of Elluminate so that students throughout the world can participate. However students will be required to physically meet together in one location for a set period of time, most likely two weeks.

USF will arrange housing for the students during this period. Podcasts will also be developed for the lectures and incorporated into ITunes University. This assistance will be provided through our E-Campus. E-Campus will also assist with the conversion of courses into online formats. The internship modules will be developed through the expertise of faculty, E-Campus, the Office of International Affairs, and the Graduate School. Each student will be assigned a faculty director who will oversee the sustainability project. Students will formally present their projects and be able to physically meet again as a cohort for at least one week for this experience. Thirty-three semester hours are required and entail 495 contact hours.

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

Core:
IDS 6xxx  Interdisciplinary Seminar in Global Sustainability (3 credit hours)
For the inaugural curriculum, this interdisciplinary course will feature leading experts in the field to discuss issues pertaining to global sustainability and water with an emphasis on determinants and potential solutions for global sustainability. We will include information on a broad array of topics related to water (including geological information) and broader information focused upon ethics, social sciences and humanities, and historical and cultural influences on sustainability.

PHC 6934  Public Health Topics in Global Sustainability (3 credit hours)
This core course introduces students to the interface between public health and global sustainability and will be built upon current issues and trends.

GEB 6930  Special Topics in Management and Sustainability (3 credit hours)
This core course is designed to focus on those economic and management issues
that affect sustainability in developed and developing nations.

**IDS 6xxx Internship (6 credit hours)**
Required domestic or international internship of all Master of Arts in Global Sustainability students.

**Concentration Focus:**

**ANG 6469 Foundations of Medical Anthropology (3)**
“Selected Topics in Medical Anthropology” (3) – Current topical issues in Medical Anthropology. This course will focus on culture and water-related issues.

**PHC 6301 Water Pollution and Treatment (3)**
A study of treatment technologies for water and wastewater. Emphasis is given to treatment technologies appropriate for developing countries. PR: CI.

**ENV 6666 Aquatic Chemistry (3)**
An introduction to the form, structure, and chemical activities of the important processes essential to treatment of domestic and industrial wastewater. PR: CI.

**EVR 6216 Advances in Water Quality Policy and Management (3)**
Conceptual structure and practical implementation of U.S. watershed-based water quality regulations and policies. Practical application of scientific information and quantitative methods in management/policy decisions for water quality protection. PR: Graduate standing in EVR, ENV, GEO, GLY, GPY, PCB or PHC; or consent of instructor.

**GEO 6286 Advances in Water Resources (3)**
Water resources policies are viewed from theoretical and practical perspectives focusing on management strategies in different physical and human environments. PR: GS in Geography or CI.

**IDS 6xxx-Sustainability Project (3)**
Required project for all Master of Arts in Global Sustainability students that will focus on innovative solutions to sustainability issues. The project will be supervised by the project director.

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

**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.** N/A
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. 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.

The delivery mechanism of this program will be mostly online except for the initial interdisciplinary seminar. However, international students will be able to participate due to our use of Elluminate which will allow them to join the other students in each live lecture presentation delivered on the Tampa campus. Other courses will be offered online (and with Elluminate when appropriate) through modules and this will be coordinated with the faculty and their colleges. We will work directly with our E-campus and provide faculty stipend support in spring, 2010 to develop the courses into online formats. In terms of the internships, we have working relationships with the partnering institutions and will work with them to determine internship opportunities for students.

Students will be enrolled in the program as a cohort and will be able to communicate with one another through a Blackboard Organization site. We will also use this site to post announcements and materials that directly relate to the program.

The inaugural concentration for the MA in Global Sustainability will be focused on water however we fully anticipate that additional concentrations will be created to grow the degree program. We anticipate future concentrations in the designed environment and other sustainability focus areas. Also, we may develop a Master of Science in Global Sustainability in the future.

IX. Faculty Participation

A. Use Table 4 to identify existing and anticipated ranked (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).
B. Use Table 2 to display the costs and associated funding resources for existing and anticipated ranked faculty (as identified in Table 2). 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.

C. Provide the number of master's theses and/or doctoral dissertations directed, and the number and type of professional publications for each existing faculty member (do not include information for visiting or adjunct faculty).

<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Theses</th>
<th>Dissertations</th>
<th>Professional Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linda Whiteford</td>
<td>30+</td>
<td>34</td>
<td>100+</td>
</tr>
<tr>
<td>Karen Liller</td>
<td>10</td>
<td>21</td>
<td>100+</td>
</tr>
<tr>
<td>Christian Wells</td>
<td>5</td>
<td>3</td>
<td>100+</td>
</tr>
<tr>
<td>Graham Tobin</td>
<td>26</td>
<td>5</td>
<td>100+</td>
</tr>
<tr>
<td>Ricardo Izurieta</td>
<td>1</td>
<td>3</td>
<td>50+</td>
</tr>
<tr>
<td>Daniel Yeh</td>
<td>6</td>
<td>6</td>
<td>50+</td>
</tr>
<tr>
<td>Maya Trotz</td>
<td>2</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Kamal Alsharif</td>
<td>5</td>
<td>-</td>
<td>30+</td>
</tr>
<tr>
<td>Sharon Hanna-West</td>
<td></td>
<td>2</td>
<td>-</td>
</tr>
</tbody>
</table>

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, and qualitative indicators of excellence.

The academic units affiliated with this degree have been very productive and interdisciplinary. The Colleges of Arts and Sciences, Public Health, Engineering, and Business lead in research dollars (apart from the College of Medicine) and produce the most doctoral and masters graduates. Out of 288 doctoral degrees granted at USF in 2008/2009, 136 (47.2%) were granted in these Colleges. In terms of Masters degrees, in 2008/2009 2,079 were awarded of which 1,059 (51%) were awarded in these Colleges. These Colleges also graduate students in a timely fashion. The trends over the last three years have been positive in Anthropology, Geography/Environmental Science Policy, Public Health, Engineering, and Business. The Colleges represent over 40% of the student headcount and over 50% of student FTE per year.

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 for all doctoral level proposals.

The USF Libraries provide access to more than 2 million volumes and an extensive
collection of electronic resources including approximately 25,156 e-journal subscriptions, 736 aggregator databases, 256,306 e-books, and 826,000 digital images. In addition, students have access to over 65,000 audio/visual materials including videos, CDs, and DVDs.

<table>
<thead>
<tr>
<th>SELECT MONOGRAPH HOLDINGS</th>
<th>Total</th>
<th>Tampa</th>
<th>St. Pete</th>
<th>PolyT</th>
<th>Hlt</th>
<th>Online</th>
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</thead>
<tbody>
<tr>
<td>Global Sustainability (inc. Environmental Policy &amp; Economic Development, Sustainable Development)</td>
<td>2,377</td>
<td>1,479</td>
<td>426</td>
<td>6</td>
<td>0</td>
<td>466</td>
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<tr>
<td>Water General</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Water -- Hydrology</td>
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<td>107</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>Water -- Resources/supply</td>
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<td>213</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>213</td>
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<td>Water -- Chemistry</td>
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<td>0</td>
<td>0</td>
<td>30</td>
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<td>Public Health General</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Public health -- Global/world health</td>
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<td>34</td>
<td>0</td>
<td>15</td>
<td>50</td>
<td></td>
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<tr>
<td>Public health -- Infectious diseases</td>
<td>361</td>
<td>83</td>
<td>0</td>
<td>128</td>
<td>165</td>
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</table>

<table>
<thead>
<tr>
<th>SELECT JOURNAL HOLDINGS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Sustainability (inc. Environmental Policy &amp; Economic Development, Sustainable Development)</td>
<td>41</td>
</tr>
<tr>
<td>Water General</td>
<td>398</td>
</tr>
<tr>
<td>Groundwater</td>
<td>10</td>
</tr>
<tr>
<td>Public Health General</td>
<td>84</td>
</tr>
<tr>
<td>Environmental Pollution</td>
<td>54</td>
</tr>
<tr>
<td>Environmental Protection</td>
<td>25</td>
</tr>
<tr>
<td>Environmental Technology</td>
<td>29</td>
</tr>
</tbody>
</table>

**USF Libraries - Geography, Engineering, and Public Health Databases**

- Academic Search Premier
- ACS Publications
- Algology, Mycology & Protozoology Abstracts (Microbiology C)
- Applied Science & Technology Full Text
- ASCE Research Library
- Bacteriology Abstracts
- CINAHL
- Civil Engineering Abstracts
- Compendex
- Corrosion Abstracts
- EIS, digests of environmental impact statement
- Environmental Engineering Abstracts
- Environmental Issues & Policy
- Environmental Sciences & Pollution Management
- GEOBASE
- GEOREF
- Health and Safety Science Abstracts
See Appendix 1 for a listing of journals online and print that focus on sustainability and water resource issues, including engineering and environmental technology.

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 3.

Library Dean ___________________________ Date ______________________________

B. 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.

Only one or two classrooms should be needed at this time and these will be provided by the Graduate School and School of Global Sustainability.

C. 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. Do not include costs for new construction because that information should be provided in response to X (J) below. N/A

D. Describe specialized equipment that is currently available to implement the proposed program through Year 5. Focus primarily on instructional and research requirements. N/A

E. 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. N/A

F. 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. N/A

G. Describe fellowships, scholarships, and graduate assistantships to be allocated to the proposed program through Year 5. Include the projected costs in Table 2.

We will make a concerted effort to locate scholarships for students to assist with their program costs. The School of Global Sustainability is developing an external advisory committee that will include industry sponsors whom we hope will provide funding and support to the students in the MA program.

H. Describe currently available sites for internship and practicum experiences, if
appropriate to the program. Describe plans to seek more sites in Years 1 through 5.

There are several current sites for internship related to water and global sustainability. Our international partners are able to provide several opportunities within their facilities. As for sites for students doing their internships in Florida there are many opportunities. These sites will be coordinated with the respective Colleges (Public Health, Arts and Sciences, Business, and Engineering) and the School of Sustainability based on the interests of the students in terms of project focus and targeted population. A few examples include Health Departments and Environmental Health Agencies, Water Management Districts, Center for Urban Transportation and Research at USF, Tampa Electric, Solar Companies, Construction Firms, Florida Power, Disney, Earth First, Clean Energy Research Center, Office of Sustainability at USF, USF Water Institute, Office of Community Engagement at USF, Patel Center at USF, International Oceanographic Institute within the College of Marine Sciences, Sweet Bay, and Lykes.


We will continue to pursue internship sites throughout Years 1 through 5 by working with our international partners and especially of Office of Sustainability that will be instrumental in securing not only internship sites but faculty exchanges.

I. 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 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. N/A