

ACADEMIC AND STUDENT AFFAIRS COMMITTEE
April 30, 2008

SUBJECT: Proposed Masters in Environmental Education

Proposed Committee Action

Approval of a new master's degree in Environmental Education

Background Information

The Department of Teaching and Learning in the College of Education proposes to offer an interdisciplinary master's degree in Environmental Education. Over the past twenty years, the Florida Department of Education has indicated critical teacher shortage areas as part of its routine reports. Science education has always been a teacher shortage area. The need for well qualified science teachers has become increasingly critical in recent years as a result of the class size reduction amendment, retirements, the initiation of the state science FCAT, and the movement of Scripps, Torrey Pines and other biomedical corporations into our area. This proposed program will increase the number of environmentally knowledgeable elementary and secondary school teachers, aligned with the strategic plans of both the FAU Board of Trustees and the Florida Board of Governors.

The proposed program is a conversion from a track in the approved master's degree in Curriculum and Instruction to a stand-alone degree in Environmental Education; students currently in the program will be given the option of completing the track or transferring to the new degree program. Prospective students inquire regularly about environmental education opportunities. This proposed 36 credit hour master's degree program will be offered through the Department of Teaching and Learning in collaboration with the College of Education's Pine Jog Environmental Education Center, as well as environmental centers and related departments throughout Florida Atlantic University. It is structured to benefit the university, local community, and the state by meeting the needs of educators, as well as center administrators and other professionals interested in the environment and community sustainability.

The Pine Jog Environmental Education Center is one of the oldest nature centers in the nation, serving over 25,000 students, 750 teachers and 12,500 adults annually. It has operated as an auxiliary for over 40 years, receiving funds from contracts, grants, revenues, and donations. The School Board of Palm Beach County has entered into an agreement with FAU to design and construct an elementary school on the FAU/Pine Jog property. Required environmental core courses, as well as relevant electives for this new master's degree, will be offered on-site in FAU's new green Pine Jog education facility during the 2008-2009 academic year. Additional required and elective courses will be available by distance learning, or on our Jupiter and Boca Raton Campuses. It is estimated that within a few years, all courses will be available on the Pine Jog site. The confluence of all these events will result in heightened visibility for this new program.

Implementation Plan/Date

Fall 2008

Fiscal Implications

No additional state funding will be required for the commencement of this program. An existing College of Education faculty member who focuses on environmental education will be assigned responsibilities for this new degree program. For the last six years, Pine Jog has funded master's degree instructors for environmental education and the Pine Jog Board of Directors has agreed to continue with this model. Funding for this program will also come from the Pine Jog endowment and a continuing contract with the Palm Beach County School Board for professional development.

Executive Summary
Request to Offer a New Degree Program
Masters Degree in Environmental Education

➤ **Program Overview:**

- The proposed interdisciplinary Masters Degree Program in Environmental Education will be offered in collaboration with academic departments and environmental centers university-wide.
- This 36-semester hour Masters Degree will be awarded through the Department of Teaching and Learning (DT&L) in the College of Education (COE) at Florida Atlantic University (FAU).
- This interdisciplinary graduate program is designed to meet the professional goals of already certified teachers K-12, non-school based educators K-Adult, professionals interested in sustainable community planning, and non-profit nature center and environmental education center administrators.
- Courses required in the environmental education area of specialization, as well as a variety of required and elective courses offered through other FAU Colleges, will be available on-site and/or accessible by distance learning in the new professional education facility at the Pine Jog Environmental Education Center, a 135 acre living laboratory and natural preserve in the heart of Palm Beach County, scheduled to open Summer 2008.
- Located on an additional 15 acres at the Pine Jog site, is the first Leadership in Energy and Environmental Design (LEED) certified green elementary school in the State of Florida, scheduled to welcome students Fall 2008. This technologically advanced elementary school will provide outstanding educational, research, and teaching opportunities for students and faculty, as well as the surrounding community.

➤ **Program Description and Relationship to System-Level Goals:**

- Students will select an area of specialization from among the following four tracks:
 - Environmental Education plus Middle Grades General Science for Certified Teachers;
 - Environmental Education for Certified Teachers and Non-School Based Educators;
 - Environmental Education for Sustainable Community Planning; and
 - Environmental Education for Center Administrators.
- The total number of credit hours required to complete this program is 36 semester hours.
- Program graduates will have education opportunities to enter specialist and doctoral programs in a variety of fields associated with colleges of: education; science; natural resources; humanities; business; and architecture, urban, and public affairs.
- Program graduates will be prepared for employment opportunities as:
 - Middle Grades (5-9) General Science classroom teachers (critical need);
 - Classroom teachers (K-12) in other environmentally related content areas and non-school based environmental educators (K-Adult);
 - Professionals interested in sustainable community planning; and
 - Professionals interested in non-profit management and administration of nature centers and environmental education centers.

- **The proposed program is consistent with, and directly supports all four of the current State University System (SUS) Strategic Planning Goals by:**
 - Promoting the production of degrees university-wide by encouraging inter-departmental collaboration that provides better access for students to a variety of courses offered throughout the University;
 - Meeting statewide professional and workforce needs in fields related to K-20 and graduate education, specifically focusing on the preparation of critically needed science and science education teachers;
 - Building world-class academic programs through fostering international collaboration on significant environmental issues like water and soil conservation, air quality, climate control, and global warming; and
 - Meeting community needs and fulfilling unique institutional responsibilities by strengthening and emphasizing existing programs in teacher training and development, sustainable community planning and non-profit management, as well as initiating collaboration among environmental entities throughout the University community.

- **Needs the proposed program would fulfill:**
 - As a means of targeting financial support over the past 20 years, the Florida Department of Education has included critical teacher shortage areas in its routine reports.
 - Over the next decade, science education is projected to be a critical teacher shortage area.
 - Due to the class size reduction amendment, the initiation of rigorous state science FCAT requirements, and accelerated teacher retirements, the need for well qualified science teachers has become increasingly critical, and has resulted in many science classes in Florida schools being taught by unqualified, uncertified teachers in a subject area deemed critical to the economic growth and well being of the United States, Florida and southeastern Florida.
 - The need for well qualified science educators becomes increasingly apparent as Scripps Florida, Torrey Pines and other major biomedical corporations are moving to this region.
 - Additionally, the University's focus on biomedical research, the cooperative medical program, and the research hospital strongly emphasize the need for well taught science, and the development of both formal and non-formal public interest in the sciences.
 - The increasing emergence of energy, environmental and engineering opportunities around issues of global warming, politics and ethics highlights demand for well informed and knowledgeable professionals, particularly in regions most affected, including coastal areas.
 - The proposed program provides a source to increase the supply of environmentally knowledgeable elementary and secondary teachers, non-formal educators/administrators and sustainability professionals through an interdisciplinary approach.

- **External resources available to support the proposed program:**

The proposed Masters Degree Program in Environmental Education is a conversion from a track in the currently approved Masters Degree in Curriculum and Instruction, to a stand-alone degree in Environmental Education. The proposed program does not require additional State funding. This program has multiple funding sources, including: endowment funds; day and summer camps; contracts and grants from a variety of government entities, clubs and foundations; the proposed after school program; scholarships; and corporate, as well as private donations.

- One half of the Pine Jog budget is generated from endowment funds. The other half is generated from grants, contracts, gifts, and revenues from Day and Summer Camps.
 - The FAU Foundation oversees an endowment for Pine Jog, with a yield that totals approximately \$500,000 yearly, of which a minimum of \$95,000, with the strong possibility of additional funding, is currently earmarked for graduate student expenses.
 - Pine Jog receives revenues and auxiliary funds through contracts and grants from a variety of government entities, clubs, and foundations, including the: Palm Beach County School Board, Palm Beach County Government, South Florida Water Management District, Environmental Protection Agency, Palm Beach Garden Club, Arthur Marshall Foundation, etc.
 - Pine Jog has a 40 history of collaboration with the Palm Beach County School Board. A \$32,000 contract with Pine Jog is imbedded in the School Board’s annual curriculum and instruction budget for professional development.
 - The agreed upon after school program to be initiated at the new school will provide a revenue stream that should net a positive cash flow, a portion of which may be allocated to support the proposed graduate program and/or its students.
 - If additional faculty lines are required during the first few years, all expenses will be funded through revenues and auxiliary funds realized from contracts and grants.
- Due to the fact that Pine Jog is in itself a living laboratory, as well as the opening of the LEED certified green Elementary School and Education Facility on-site at Pine Jog in August 2008, research and grant writing opportunities are expected to increase yearly.
- Additional external funding sources are expected to increase as the new center is completed and Pine Jog becomes more visible. A full-time development position has recently been dedicated to extend these efforts. Pine Jog funds 75% of this position, and the College of Education Dean’s Office funds the remaining 25%.
- A scholarship was established to fund graduate students completing the proposed Masters Degree in Environmental Education. Donations are expected to continue.
- A donation to “seed” the Pine Jog Graduate Mini-Library has been established and is expected to continue.

➤ **Projected benefit of proposed program to the University, Local Community, and State:**

Implementation of this university-wide, interdisciplinary Masters Degree in Environmental Education will provide students access to a unique and highly relevant program that offers diverse educational opportunities tailored to individual students through existing electives.

- This program is designed to meet the needs of formal and non-formal educators (K-Adult), as well as professionals interested in a full range of fields related to community sustainability and nature center and environmental center administrators.
- Between Year 1 and Year 5, Annual Student FTE is projected to increase from ~4.78 to ~32.63.

➤ **Goals of the proposed program relate to the institutional mission statement in the SUS and University Strategic Plans by furthering the values to which the University is committed by:**

- Preparing students to fulfill productive destinies in the workplace and in society by encouraging the development of environmentally aware and responsible citizens who promote academic freedom in an atmosphere of free and open inquiry that assures clear and open communication and sharing of information as modeled in all class discussions and outside assignments;

- Providing a secure environment in which the curriculum emphasizes the pursuit of learning by continuously recognizing and promoting honesty in all spheres, social and moral development, ethical standards in all areas of activity, as well as rewarding superior performance, innovation and creativity in all facets of personal and professional conduct, and that demonstrates support for all public and private entities who continue to foster environmentally responsible behaviors; and
 - Fostering community service and social responsibility by demonstrating respect for all persons and displaying civility in all interactions that account for the sound use and careful stewardship of our community resources, in order to ensure responsibility for our general mission to provide equal access, equal rights and justice for all persons, while encouraging mutual regard for the rights and liberties of all persons in the community.
- **The proposed program specifically relates to existing institutional strengths, such as programs of emphasis, other academic programs, and/or institutes and centers because:**
- The proposed Masters Degree program in Environmental Education will be offered through the Department of Teaching and Learning in collaboration with the College of Education Pine Jog Environmental Education Center, as well as environmental centers and related departments throughout the Florida Atlantic University community.
 - The proposed program is structured to strengthen and emphasize existing institutional programs in teacher training, professional development, sustainable community planning, non-profit management, and nature center administration.
- **The planning process for the proposed Masters Degree in Environmental Education:**
- Planning for the proposed Masters Degree Program in Environmental Education has been ongoing since June of 2005.
 - The process has involved faculty, staff and administrators within the Florida Atlantic University community, as well as universities and associations outside of Florida Atlantic University, who have indicated interest in supporting and contributing to this unique interdisciplinary program.
 - The current planning process began with internet analyses and discussions pertaining to related undergraduate and graduate degree and certificate programs offered through Florida Atlantic University and other institutions within the State of Florida, and culminated with studies of programs offered by other colleges and universities throughout the United States and Canada.
 - The course content in many of the programs identified tended to focus on environmental science, rather than the interdisciplinary content of environmental education.
 - The initial programs chosen for study, were selected from among those reported in the most recent online surveys and directories provided by the North American Association for Environmental Education (NAAEE).
 - Throughout the planning process, relevant programs were studied and significant individuals in the field of environmental education were consulted.
 - Feedback was provided by experts in the field, who remain interested in consulting with the program administrator and faculty in the Department of Teaching and Learning.
 - Over the last few semesters, two outside consultants from other universities, have visited the Pine Jog Environmental Education Center in West Palm Beach. Each taught a multi-weekend fast track at Pine Jog for students enrolled in the currently approved Masters Degree in Curriculum and Instruction with a concentration in Environmental Education:

- During the Spring 2007 Semester, Pine Jog sponsored an associate professor, from the University of Wisconsin at Stevens Point. He taught a special topic titled “Leadership and Organizational Techniques in Environmental Education.”
- During the Fall 2007 Semester, Pine Jog sponsored another associate professor, from Simon Fraser University in British Columbia, Canada. He taught a required core course titled “Trends and Issues in Environmental Education.”
- The Board of Directors and Administration of the College of Education Pine Jog Environmental Education Center look forward to sponsoring at least one visiting professor each academic year, in order to provide our students with a broad perspective on topics in program evaluation and teaching methodology, as well as, significant issues and relevant research in the emerging field of environmental education.

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Department of Teaching and Learning
College of Education (04/05/08)