

ACADEMIC AND STUDENT AFFAIRS COMMITTEE

April 25, 2007

SUBJECT: Approval of New Degree

PROPOSED COMMITTEE ACTION

Approval of New Bachelor of Science Degree in Geomatics Engineering

BACKGROUND INFORMATION

The Bachelor of Science degree in Geomatics Engineering at FAU will provide students with the new professional skills required of today's geospatial specialist. Geomatics is a relatively new idiom that is replacing the more traditional terms of surveying and mapping. Geomatics describes the new and emerging science and technology that brings together all forms of geospatial data activities: collection, processing, analysis, design, plotting and presentation.

This proposal stems from the strong interest and support of the civil engineering, construction, and land surveying firms and professionals in south Florida. This interest stems from the high levels of development and construction in this area, a shortage of trained professionals in geomatics engineering, and a change in Florida Statutes requiring individuals seeking licensure as professional land surveyors to be graduates of four-year baccalaureate programs in the discipline. There are currently no such academic programs in south Florida.

Program faculty and staff will be headquartered at the FAU Treasure Coast campus in Port St. Lucie but the program will be delivered throughout south Florida. While the program will initially be administered by a Director reporting to the Dean of the College of Engineering and Computer Science, it is expected that the program eventually will become part of the Department of Civil Engineering.

IMPLEMENTATION PLAN/DATE

Fall 2007

FISCAL IMPLICATIONS

The Office of the Provost and the College of Engineering and Computer Science have each committed funds for faculty and staff salaries and some operational expenses. It is anticipated that there will be support from business and industry, private contributions, and contributions in kind once the program is approved.

Supporting Documentation:
Presented by: Dean Karl Stevens

Executive Summary of Degree
Phone: 561.297.3426

New Degree Proposal
Bachelor of Science in Geomatics Engineering
Dr. Karl K. Stevens, Dean
April, 2007

Geomatics Engineering relates to the traditional tasks of surveying and mapping, as practiced in a digital world. This program brings together all forms of geospatial data activities: collection, processing, analysis, design, plotting and presentation.

Executive Summary

Impetus for this proposal: This proposal stems from the strong interest and support of the civil engineering, construction, and land surveying firms and professionals in south Florida. Their exceptionally high levels of interest and concern arise from the extensive development and construction activities in the area, from the shortage of trained professionals in Geomatics Engineering, and from a 2005-change in Florida Statutes requiring that individuals seeking licensure in Florida as professional land surveyors be graduates of a four-year baccalaureate program in the discipline. There being no such academic programs in south Florida, the professional community turned to the FAU College of Engineering & Computer Science for assistance.

Program Description: The program proposed leads to a Bachelor of Science degree in Geomatics Engineering, unique in the Southeastern United States. The 120 semester-credit curriculum is consistent with all State program requirements and is designed to meet the accreditation requirements of the Southern Association of Colleges and Schools (SACS) and of the Accreditation Board for Engineering and Technology (ABET). ABET accreditation will ensure that program graduates can seek professional registration as land surveyors anywhere in the United States. The proposed implementation date is July 1, 2007, with the first students accepted for the Fall 2007 semester.

Institutional Mission: The B.S. degree in Geomatics Engineering is included in the FAU List of New Degree Programs under Consideration (2006-2013) submitted to the Board of Governors in 2006. The program also is included in the Campus Academic Mission Statements and Programs Goals adopted by the FAU Board of Trustees in

September, 2006. The program is consistent with the Vision, Mission, and Goals statements adopted by the faculty of the College of Engineering & Computer Science in 1995 and it is supportive of Goals 1-4 of the FAU Strategic Plan.

Program Delivery: There is high need to “take this program to the students”, as opposed to “bringing the students to the program”. Program faculty and staff will be headquartered at the FAU Treasure Coast campus in Port St. Lucie, but the program will be delivered throughout south Florida. Many potential students are working professionals with two-year degrees seeking to upgrade their professional skills, unable to attend classes during normal working hours.

Students will not have to travel to St. Lucie for all their courses. The existing State articulation agreement for Engineering assures that almost all of the coursework in the freshman and sophomore years can be completed at any Florida community college. For the remaining courses, a blended system of delivery modes and formats, chosen to best fit the pedagogical requirements of each individual course, will provide the convenient access and minimum travel requirements that students need and that are critical to program success.

A new, unique on-line delivery system called GENIE (Geomatics Engineering Net Instructional Environment), developed specifically for this program, will deliver Geomatics Engineering courses directly to students’ desktops. GENIE enables students to have video and audio interaction with instructors and provides them remote access to the computer software utilized extensively in surveying and mapping.

The GENIE system will be supplemented by a variety of other delivery modes, including live courses at select FAU campuses, intense two- or three-day class sessions, and evening and weekend classes and laboratory sessions.

Program Administration: The program will be administered initially by a Director reporting directly to the Dean of the College of Engineering & Computer Science. Expectations are that the program eventually will be administered by the Department of Civil Engineering, after the required faculty and facilities are in place.

Collaborations: The departments of Geosciences, Urban & Regional Planning, and Civil Engineering will participate in delivery of the program.

Budget: Existing College staff and resources will provide strong program support. This support includes computer technician services, promotional and advertising support, assistance from the Division of Engineering Student Services and the Division of

Engineering Career Development, financial management and accounting services, and assistance with development and fundraising activities.

Additional resources are needed for faculty and staff, office equipment and supplies, promotional and advertising efforts, specialized laboratory and instructional equipment and software, and operating expenses. The program budget calls for \$265,272 in new funding for the first program year. This funding will come from existing College carry-forward monies, an allocation from the Provost, and from private and corporate contributions. A private contribution of \$25,000 in support of the program already has been received and a major donation of equipment and services to develop, implement, and maintain the GENIE program is under discussion.