

## APPENDIX K

### **Request for Authorization to Establish a Bachelor of Science in Elementary Education at North Carolina State University**

#### **Introduction**

North Carolina State University notified the Office of the President of its intent to plan a Bachelor of Science degree in Elementary Education (13.1202) on February 22, 2005.

#### **Program Description**

The proposed program reflects the traditions and strengths of NCSU in science and technology. NCSU has a graduate licensure program in elementary education that was established in 1992 for teachers with the bachelor's level license. The proposed program would be the first undergraduate, Bachelor of Science Degree in Elementary Education (K-6) to be offered at North Carolina State University. The proposed program will be housed in a newly created Department of Elementary Education in the College of Education. The Bachelor of Science in Elementary Education is a teaching degree program and consists of three components: 1) general studies required by the University, 2) interdisciplinary subject-matter, and 3) professional studies that include pedagogical courses and field experiences. The proposed program is a cohort program; thus, students must keep up with the cohort in order to complete courses within four years. Students who do not maintain the cohort's pace will have to wait until the courses are offered again. Graduates of the program are expected to be teachers of quality for all children; use developmentally appropriate, child-centered pedagogy in teaching young children; have depth of knowledge in the content areas of the elementary school curriculum (especially in math, science, technology, and literary); implement research-verified practices in all areas of elementary education curriculum; foster sound and collaborative relationships with students, families and colleagues; make instructional decisions based on sound evidence of student work; and contribute to the continuous assessment and improvement of preparing elementary education professionals.

#### **Program Need**

The mission of North Carolina State University has included service to the public school system of North Carolina. The establishment of a baccalaureate degree program in Elementary Education contributes to the mission of the University to serve the people of North Carolina by enhancing its historic strengths with an extension of its comprehensive range of academic disciplines to include the preparation of K-6 teachers. Statewide there is a well-publicized shortage of teachers. There are 47 public and private institutions of higher education in the State that have baccalaureate programs. The demand for elementary school teachers exceeds the supply by approximately 70 percent, despite programs in 47 institutions. There are other elementary education degree programs in the UNC system, but the proposed program will emphasize math and science in both content and pedagogy courses. It is expected that the program will produce a graduation of 60 new elementary teachers beginning in 2009.

**Resources**

Faculty who will staff the Elementary Education program will be new hires. The Provost and Dean of Education have committed to providing start-up funds for the program. Once the program is established, enrollment change funding will be used to support the program and hire new faculty. Classroom space will be shared with existing university programs. Library and media resources will be housed in the current College of Education Resource Center. Start-up funds will be used to expand the elementary library collection. Technology resources will be shared with other programs and supplemented from student fees for electronic technology.

**Recommendation**

It is recommended that the Board of Governors approve the request to establish the Bachelor of Science in Elementary Education, effective January 2006.

# **Request for Authorization to Establish a Bachelor of Science in Interdisciplinary General Engineering at North Carolina Agricultural and Technical State University**

## **Introduction**

North Carolina Agricultural and Technical State University notified the Office of the President of its intent to plan a Bachelor of Science in Interdisciplinary General Engineering (14.0101) on February 9, 2004.

## **Program Description**

The proposed Bachelor of Science in Interdisciplinary General Engineering is consistent with the University's mission to become a learner-centered, interdisciplinary university. The proposed program provides a unique opportunity for both faculty and students to engage in interdisciplinary engineering focused programs of study. The objectives of the Bachelor of Science Program include producing engineers for an interdisciplinary workplace and producing engineers prepared for graduate and professional programs in management, medicine, law, engineering and other areas. The proposed program will be administered by the Industrial and Systems Engineering department that currently offers the Industrial Engineering degree program. The program is intended for students whose interests and abilities would be best served by a course of study that builds on several engineering and non-engineering disciplines rather than focusing on a single engineering discipline. North Carolina A & T State University offers eight engineering degree programs at the undergraduate level. These include Architectural, Bio-environmental, Civil, Chemical, Computer, Electrical, Industrial and Mechanical Engineering. The proposed interdisciplinary program will provide students with a unique opportunity to explore a variety of options within interdisciplinary engineering education not present within traditional engineering program, such as concentrations in teaching, energy and environment, biochemistry, business and international studies. The proposed interdisciplinary program will be supported by, and complement, the existing engineering programs.

## **Program Need**

Each year engineering programs around the nation lose students because students want to explore more career interests beyond the traditional engineering programs. Because of this trend in student enrollment, a growing number of interdisciplinary general engineering programs are developing around the country at institutions such as the University of Illinois at Urbana Champaign, the University of Michigan and Purdue University. Graduates of these programs are highly recruited. Additionally, the proposed program responds to industry's need for engineers with much broader technical and non-technical backgrounds to build complex systems beyond specialized fields. The College of Engineering at NC A&T is recognized nationally as a leading producer of African-American engineers. The proposed interdisciplinary degree program expands options for students interested in engineering by allowing greater flexibility in the engineering programs of study for students. By the fourth year, the institution expects 35 majors in the proposed B.S. in Interdisciplinary General Engineering.

**Resources**

Since no new courses are being proposed, the faculty and resources are adequate for the proposed interdisciplinary degree program.

**Recommendation**

It is recommended that the Board of Governors approve the request to establish the Bachelor of Science in Interdisciplinary General Engineering effective January 2006.