

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.