

APPENDIX G

Request for Authorization to Establish a Bachelor of Science in Systems Engineering at UNC Charlotte

Introduction

UNC Charlotte notified UNC-GA of its intent to plan a BS in Systems Engineering (BSSE) degree in September 2006 and requests authorization to establish the degree in October 2007.

Program Description

Systems Engineering addresses systems efficiency, effectiveness, and integration in engineering and business operations related to design, production and manufacturing, logistics, sales and services. As with other engineering disciplines, systems engineering involves central concepts, uses specific methodologies, includes analysis and synthesis of design, relies on mathematics to express knowledge, and stimulates research in the field. The program's curriculum will take into account industry needs, particularly in the Charlotte region. The curriculum will focus on decision and risk analysis; systems modeling and optimization; systems design, planning and analysis; supply chain and logistics engineering; quality engineering; engineering management; and global business dynamics. After a common core of courses, students will select a technical or management oriented systems area in their upper division courses, which will involve outreach and collaboration with Charlotte area industry.

Program Need

The Charlotte area is headquarters for nine Fortune 500 companies and has representation by 306 others in manufacturing, transportation and distribution, and financial services. The region's dynamic business environment and growing population make it a good location for the BSSE program. Interest in the program has been expressed both by the Charlotte business community and by currently enrolled UNCC students. The program is anticipated to be well enrolled, expanding from 30-50 students to 120-150 students within a few years. The College of Engineering Board of Advisors has endorsed the program as needed by the University's constituents.

Resources

In the second to fifth years of the program, it is anticipated that one to two new faculty members will be hired each year to keep pace with growing enrollments. These positions will be funded from enrollment increase funds. Current facility space is adequate. A systems engineering computing lab is currently being built, and other information technology services are adequate.

Recommendation

It is recommended that the Board of Governors approve the UNC Charlotte request to establish a Bachelor of Science in Systems Engineering (BSSE) degree (CIP 14.2701) effective October 2007.