Request for Authorization to Establish a Master of Science in Computer and Information Sciences at North Carolina Central University

Introduction

North Carolina Central University notified UNC General Administration of its intent to plan a Master of Science in Computer and Information Sciences (CIP# 11.0701) in October 2005. NCCU requests authorization to establish the program in July 2006.

Program Description

The proposed degree is a graduate-level extension of the successful BS on Computer and Information Sciences offered at NCCU, which had 57 upper division (juniors and seniors) majors in fall 2005. The Department of Mathematics and Computer Science will offer a four semester program with 30-36 hours offered in areas of concentration. Course work will be distributed among two core courses in operating systems and algorithms, elective hours, and concentrations of computer graphics, scientific computation, computational science, and software engineering. Students will have thesis, project, and written comprehensive examination options.

Program Need

In the Needs Assessment Report: UNC Report on Engineering, March 2003, the National Center for Educational Management Systems (NCHEMS) identified computer applications as an area where NC may need to produce more graduates. The report noted that a need exists in NC for computer science/software engineering graduates. The report concluded that a comparison of computer science degrees awarded relative to the number of computer application and software engineering occupations shows that NC is "slightly below" the national average. The Bureau of Labor Statistics forecasts faster growth in Science and Engineering occupations than in any other sector, with these occupations growing three times faster than the overall average during this decade. A degree program at NCCU will help increase the number of underrepresented African-Americans in these occupations. A National Science Foundation report on science and engineering (2004) reports growth in such programs for women and minority students, and the program will help address this trend. It is anticipated that after four years the program will enroll 25 full-time and 15 part-time students.

Resources

Enrollment growth funding will be used to hire a minimum of four tenure-track positions to supplement the faculty positions currently supporting the undergraduate program. The program will be housed in the new science complex that opened in September 2005, which has four general purpose computer laboratories, one general purpose laboratory, and one special purpose laboratory for student and faculty research. Some equipment has been purchased with a grant from the NSF.

Recommendation

It is recommended that the Board of Governors authorize the NC Central University request to establish a Master of Science in Computer and Information Sciences (CIP# 11.0701) effective July 2006.