

## APPENDIX G

### **Request for Authorization to Establish a Master of Science Degree in Mathematics at Elizabeth City State University**

#### **Introduction**

Elizabeth City State University notified the UNC Office of the President of its intent to plan a Master of Science degree in Mathematics (CIP# 27.0101) in April 2003. The university requests authorization to establish the program in March 2004.

#### **Program Description**

ECSU requests authorization to establish an MS in Mathematics with concentrations in Mathematics Teaching and Applied Mathematics. The program will provide a broad base of formal course work and research in mathematics and will require students to complete a thesis. The Teaching concentration will provide the pedagogical content knowledge required for middle or secondary school teaching or for teaching at the community college level. The Applied Mathematics concentration will provide the depth required for preparation for further graduate study or careers in industry. For the thesis requirement, students may select expository or original research topics in mathematics education or applied mathematics. The program is designed for completion in four to six semesters, depending on whether students enroll full-time. Courses will be taught in the evening so that in-service teachers and other working adults can complete the program by taking two or three courses each semester. With federal grant funding, ECSU has created several new laboratories that will be used in the program: the Calculus Teaching Laboratory, the Computational Science Scientific Visualization Center, the ONR/NSA Research Laboratory, and a Department of Defense funded UNIX laboratory.

#### **Program Need**

The proposed program has been designed based on the expressed needs of teachers and other professionals in the region. Graduates will have the preparation to pursue careers in areas of critical shortage in northeastern NC and to contribute to regional economic growth and development. Of the nine counties that send the most students to ECSU, the teacher turnover rate is higher than the state average in six of these counties and above fifteen percent in three with more than thirty percent of the children living in poverty. The proposed program will offer accessible professional development opportunities that will support teacher retention. Approximately ten departmental graduates enroll in graduate programs each year, and they currently must travel two hours to access a post-baccalaureate program in mathematics.

#### **Resources**

New funding will come from enrollment increase and focused-growth funds, external grants, and internal reallocations; no other state funds are requested.

#### **Recommendation**

It is recommended that the Board of Governors approve the request to establish a Master of Science degree in Mathematics at Elizabeth City State University effective March 2004.