APPENDIX L

Request for Authorization to Establish a
Bachelor of Science Degree in Comprehensive Science Education
At North Carolina A&T State University

Introduction

North Carolina A&T State University notified General Administration of its intent to plan a Bachelor of Science Degree in Comprehensive Science Education (13.1316) in October 6, 2005. The university now requests approval to establish the program in June 2006.

Program Description

The proposed major in Comprehensive Science Education is an interdisciplinary science program with concentrations in Biology, Chemistry, and Physics. The proposed program will be housed in the College of Arts and Sciences, and it will be a teacher education program in the School of Education. A college liaison, who reports to the dean of Arts and Sciences, will coordinate the Comprehensive Education Program. The proposed degree program responds to North Carolina Department of Public Instruction's recommendation that university teacher education programs in Biology, Chemistry, and Physics develop a comprehensive science program to increase the production of science teachers.

The proposed Comprehensive Science Education program will have a set of core requirements that all majors satisfy, but leave considerable flexibility for concentration at the upper level. There are numerous educational objectives for the program which include preparing students to: 1) understand the math concepts, processes, and the technologies that are used in science, 2) use appropriate instructional strategies to design and deliver instruction in science, 3) plan and implement appropriate scientific investigations to develop problem solving and critical thinking skills in science, and 4) improve science instruction for all students and to encourage underrepresented groups to engage in science. It is expected that graduates of the proposed interdisciplinary science program will seek employment as secondary school teachers with abilities to teach Biology, Chemistry, and Physics. To receive comprehensive licensure in science at the secondary level, teachers must have a concentration in one of the four areas of science (biology, chemistry, physics, or earth science).

Program Need

The proposed degree in Comprehensive Science Education is consistent with the overall mission of university to be an interdisciplinary university and responses to both a state and national need for high school teachers of science. According to a 2002 NCES report on qualification of public school teachers, 57% of middle school and high school science teachers lack a major certification in their field. Additionally, according to a recent study of the largest urban school districts by Recruiting New Teachers, Inc., nearly 98 percent of all responding districts indicated an immediate demand for science teachers. These shortages are occurring when the demand for science competencies continues to expand. After four years, it is projected that there will be 55 students pursuing majors in the comprehensive science program.

Resources
There will not be a need for the employment of new faculty. The interdisciplinary program is based on course work from existing courses in the various cooperating departments. Library resources are adequate for the proposed degree program.

Recommendation
It is recommended that the Board of Governors approve North Carolina A&T State University's request to establish the Bachelor of Science in Comprehensive Science Education in June 2006.