

## APPENDIX J

### **Request for Authorization to Establish a Bachelor of Science Degree in Biotechnology at the University of North Carolina at Pembroke**

#### **Introduction**

The University of North Carolina at Pembroke notified the Office of the President of its intent to plan a new degree program in Biotechnology Research (26.1201) on February 5, 2004. UNCP seeks authorization to establish the degree program in August 2005.

#### **Program Description**

The Bachelor of Science in Biotechnology is a new interdepartmental degree that will draw from the strengths of the Biology Department and Department of Chemistry and Physics. Presently both departments offer a concentration in biotechnology, and they possess resources needed for the proposed degree program. New courses will be incorporated that have been designed as part of an existing five year plan for the two departments. The proposed degree will offer a balanced curriculum that has a sound foundation in mathematics and chemistry to students interested in pursuing careers in the biotechnology industry. Moreover, the interdepartmental program will strengthen UNCP's College of Arts and Sciences by providing a point of focus in two of the College's departments.

The "theory-into-practice" curriculum has been designed to be relevant to contemporary challenges and issues in biotechnology. Students will learn the important technologies currently used in the biotechnology industry for research, bio-manufacturing, biological and chemical analysis and the business of biotechnology. Graduates will also be prepared for direct entry into a profession in biotechnology or transition into graduate studies in biology, chemistry, and biotechnology. The proposed biotechnology degree program also has an internship component that will 1) provide real-world opportunities for applications, 2) facilitate the development of partnerships with the biotechnology sector (and hopefully lead to increased research and professional opportunities for UNCP faculty), 3) create a mechanism and encourage technology transfer between the university and the biotechnology industry, and 4) expand possibilities for UNCP to compete for funding to expand and sustain existing programs.

#### **Program Need**

The University of North Carolina Pembroke has been designated a focused growth campus. The proposed Biotechnology degree correlates with the statewide biotechnology initiatives and major institutional goals to prepare graduates to contribute to the knowledge economy of the 21<sup>st</sup> century. The proposed Bachelor of Science in Biotechnology Research results from significant resources employed by the state to support the development of the biotechnology manufacturing and business sector in North Carolina. Economic indicators predict that the biotechnology business sector is an important growth area in the state's economy for the next twenty years.

The proposed degree is intended to be a vehicle to 1) enhance regional economic development by attracting companies and business to Southeast North Carolina, 2) support the expansion of the biotechnology sector into rural parts of the state, and 3)

develop partnership relationships with regional community colleges to provide seamless biotechnology articulations. Moreover, the proposed degree program will prepare graduates who are more competitive in the biotechnology sector. Further, the Biotechnology degree program is in accordance with UNCP's plans to strengthen its faculty, curriculum, and quality of instruction. It is projected that by the fourth year of the degree program, the proposed biotechnology degree program will have enrolled 28 majors.

**Resources**

The proposed interdisciplinary degree program will require the establishment of only two more courses. Library resources are adequate for the near future. The computing needs are more than adequate to serve the proposed program. Collaboration between the two departments will cover the immediate required needs. Additional grant funds will be sought to fund any new equipment needs.

**Recommendation**

It is recommended that the Board of Governors approve UNCP's request to establish a bachelors of science in Bachelor of Science in Biotechnology effective August 2005.