

**New Program Proposal
Bachelor of Science in Biology
USC-Beaufort
North and South Campuses**

Summary

USC-Beaufort requests approval to offer a program leading to the Bachelor of Science degree in Biology, to be implemented in Fall 2005 at both the North and South Campuses.

The proposal was submitted for Commission review on February 17, 2004. The proposal was reviewed without substantive comment and voted upon favorably by the Advisory Committee on Academic Programs at its meeting on March 31, 2004. Members of the Advisory Committee indicated that while it was a solid undergraduate biology degree, USC-Beaufort has underestimated the costs involved in laboratory equipment. The members also noted that there will be a need for many more faculty if the institution plans on the inclusion of undergraduate research as a component of the degree program. The Board of Trustees approved the proposal on April 21, 2004.

The purpose of the program is to provide students in the USC-Beaufort area with a degree program in Biology. The program is designed to provide students with a basic biology degree program which will draw upon courses in chemistry and physics and will provide the foundation for further study at the graduate level in biology and health sciences. As USC-Beaufort continues the development of four-year degree programs, the addition of an undergraduate biology degree program is a logical step in establishing a typical array of undergraduate degree programs. Biology degrees are often used as the foundational program in developing other science and health-related degree programs. The need for the program is also based upon the growing population of the USC-Beaufort area, and as the proposal indicates, "a growing population translates into growing workforce needs."

The proposal also provides S.C. Department of Employment Security labor market projections for the Lowcountry Workforce Investment Area (USC-Beaufort's geographic area) which indicate an increased need in job categories in life sciences. For example, there is an annualized projection (1996 to 2006) that there will be an 8.26 percent increase for careers in animal caretakers, 3.3% for biologists, 3.57% for ocean scientists, and 3.04% science teachers, among other fields.

The curriculum consists of 120 credit hours. Of these, 38-48 are in general education, 26 in general education specific to biology, 36 in major core requirements, and

5-23 in electives. The curriculum will expose students to a typical undergraduate degree program in biology. Fourteen new courses will be required. Undergraduate degree programs in biology are available at all the public and nineteen of the private institutions. However, there is no such offering in USC-Beaufort's region where students are typically drawn from Beaufort, Colleton, Hampton, and Jasper counties. The closest programs are a minimum two-hour commute (Savannah and Charleston) and the commute is not feasible for students resident in USC-Beaufort's geographic area.

USC-Beaufort indicates that there will be two new faculty hired to support the program in 2005-06 and 2007-08, respectively. In addition, a laboratory coordinator will be hired in 2005-06. Faculty serving the program will begin at eight headcount (5 FTE) in FY 2005-06 and will increase to ten headcount (7 FTE) in FY 2009-10. The headcount/FTE numbers include adjunct faculty who teach courses and laboratory sections of courses. Adjuncts teach from .25 FTE to .75 FTE per academic year. Full-time faculty and adjuncts have the requisite terminal degrees to teach in the program.

Enrollment in the proposed program is estimated to begin at 20 headcount students (20.8 FTE) in FY 2005-06 and increase to 24 headcount students (25.2 FTE) by 2009-10. Estimates are based on the number of students currently enrolled in USC-Columbia's B.A.I.S. program at USC-Beaufort who concentrate in biology. Currently, the yearly fall enrollment is 55 students and USC-Beaufort has estimated that 20 percent of these students will enroll in the proposed program. USC-Beaufort also conducted surveys in 2002 and 2003 to determine interest in the program and assist the institution in developing enrollment estimates. If met, projected enrollments will meet the Commission's Program Productivity Standards.

The program will not be required to seek any accreditation or specialized certification.

The proposed program will use the current classrooms, laboratories, and library facilities of the Beaufort campus. When the South Campus is completed, classroom and laboratory space there will be used to teach more advanced classes in biology. The South Campus will have a new science building and there has been more than \$400,000 allocated to renovate and outfit the science facilities at the North and South campuses. The proposal provided an extensive list of equipment and materials to be purchased for the proposed degree program. While the list is extensive, the institution should develop a purchasing and equipment maintenance plan for the program. Such a plan will ensure that equipment needs are met as the program expands and diversifies. The institution should also begin planning for additional biotechnological equipment, software, and autoclaves, among other items. While \$400,000 is a large investment in equipment and

space for a new degree program, there will be continued demand for additional equipment and supplies as the program continues to grow.

The proposal provides both a quantitative and qualitative analysis of the library holdings to support the program. Comparisons were made against the holdings at USC-Aiken and USC- Spartanburg as well as against national library standards. The results were mixed with the library holding only 25 percent of recommended titles in *Books for College Libraries* but holding 90 percent of recommended biology journals for academic institutions by *Magazines for Libraries*. In 2002-03, the biology department doubled its library allocation amount to \$6,000 which will be maintained until 2004-05 when the program will receive an annual increase of \$500 to continue expansion of the holdings. There is a plan in place to put resources into the areas that have been identified as weak in the analysis of holdings.

Shown below are the estimated Mission Resource Requirement (MRR) costs to the state and new costs not funded by the MRR associated with implementation of the proposed program for its first five years. Also shown are the estimated revenues projected under the MRR and the Resource Allocation Plan as well as student tuition.

Year	Estimated MRR Cost for Proposed Program	Extraordinary (Non-MRR) Costs for Proposed Program	Total Costs	State Appropriation	Tuition	Total Revenue
2005-06	\$269,526		\$269,526	\$0	\$118,227	\$118,227
2006-07	285,076		285,076	59,296	125,638	184,934
2007-08	298,034		298,034	62,530	131,027	193,557
2008-09	313,584		313,584	65,474	137,848	203,322
2009-10	326,542		326,542	68,895	143,827	212,722

These data demonstrate that if USC-Beaufort can meet the projected student enrollments and contain costs as they are shown in the proposal, the program will not be able to cover new costs with revenues it generates by the fifth year of its implementation.

In summary, USC Beaufort is proposing to offer a bachelor's degree in Biology that will provide students in the region with the opportunity to attain an undergraduate degree in a basic science. Graduates of the program will be able to find employment in the expanding job market of the area which will be in need of college graduates trained in life sciences. In addition, graduates of the program will be able to continue into post-graduate study in biological or health-science related fields. The proposed program continues the institution's development of a basic undergraduate curriculum that typically includes a program in biology.

Recommendation

The Committee on Academic Affairs and Licensing recommends that the Commission approve USC-Beaufort's proposed program leading to the Bachelor of Science degree in Biology for implementation in Fall 2005 at the North and South campuses, provided that no "unique cost" or other special state funding be required or requested.