

MEMORANDUM

TO: Dr. John Chikwem, Dean of Natural Sciences and Mathematics

FROM: The Departments of Chemistry and Biology

DATE: March 8, 2010

SUBJECT: Implementation of a Bachelor's Degree in Biochemistry and Molecular Biology

In order to address the changing needs of Lincoln University's students, the implementation of a Bachelor's Degree Program in Biochemistry and Molecular Biology is proposed. A growing number of students majoring in the sciences are interested in attending medical school and are aware of the benefits of having a strong background in both biology and chemistry. In recent years, a few students have double-majored in biology and chemistry in an attempt to secure said background. Creating a new degree program that is a hybrid of both sciences is a natural step towards fulfilling this demand. Additionally, equipping students with skills in both areas increases their marketability for life after Lincoln University; whether that may be graduate or professional school or employment. The proposed program will offer a choice of concentration through upper level elective courses in biology or chemistry, appealing to the interests and strengths of prospective students.

The Biochemistry and Molecular Biology program will improve the preparation of students for the MCAT examinations, a requirement for admission to medical school. Much of the MCAT exam involves chemistry and physics. The proposed curriculum requires more chemistry courses than the traditional biology degree, which most students interested in medicine tend to pursue. The result will be a better understanding of chemistry and physics concepts and improved performance on the MCAT exam.

An additional benefit of the implementation of this degree program will be to address the issue of low enrollment in many chemistry courses. New degree programs must be created to compete with programs at other institutions, generate more interest in the Department of Chemistry and Lincoln University, and attract larger incoming classes. A survey of currently enrolled Lincoln University science undergraduates was conducted to assess student interest in a Biochemistry and Molecular Biology degree. Of the 68 students surveyed, 46% (31/68) expressed an interest in the degree program and thought it would be beneficial to their chosen career goal, 41% (28/68) were not interested, 7% (5/68) said they may be interested, and 6% (4/68) did not know what biochemistry is. It is reasonable to conclude that there is a demand for such a major.

Regarding the assessment of student learning in the Biochemistry and Molecular Biology Program, a member of the program committee will be elected to oversee the writing of annual assessment reports. As the major courses are being taught between two departments, the

committee member will collect and analyze the data from the appropriate instructors and assemble a report representative of the program. The results of the assessment will be used for program improvement in subsequent years. Success of the program will be measured by the influx of students into the program, persistence in the program leading to graduation, and success after graduation. The program committee will track the progress of its students after graduation.

It is relevant to note that the creation of a Biochemistry and Molecular Biology degree program will not have a negative financial impact on the university as the program can be created from existing courses in the chemistry and biology departments. Therefore, the program does not require the development of new courses nor does it require additional faculty. Enclosed is the proposed curriculum for the Biochemistry and Molecular Biology Bachelor's Degree.