

BACKGROUND AND REQUEST

OHIO STATE UNIVERSITY

Bachelor of Science in Biomedical Engineering

EXECUTIVE SUMMARY/REQUEST

This program clearly meets Regents' standards for baccalaureate degrees. No concerns were identified in the review.

Request: Ohio State University requests approval for a Bachelor of Science in Biomedical Engineering. The proposed program will be housed in the Department of Biomedical Engineering in the College of Engineering.

Program Purpose/Mission: Biomedical engineering is a relatively new, rapidly growing discipline that requires in-depth and systematically organized instruction in both engineering and the life sciences. Biomedical engineers pursue professional careers in research and development of new medical products and systems, design of prosthetics, medical devices and diagnostic instrumentation, technical sales and customer service, market research and analysis, or management functions in these areas. Biomedical engineers are employed in health services, pharmaceutical industries, rehabilitation engineering, biomedical product industries, consulting companies, government laboratories and agencies, and many relatively new companies with emerging technologies such as tissue engineering, micro-fluidics, and bio-microelectromechanical systems (bioMEMS). Employment in the interdisciplinary field of biomedical engineering is an anticipated area of tremendous growth. OSU has offered a graduate degree since 1971 in biomedical engineering. The proposed undergraduate degree will provide appropriate academic and professional preparation for additional study at the advanced level or for employment in the field, including Battelle Memorial Institute or Ohio-based employers such as Procter and Gamble, and Johnson and Johnson.

Enrollments: Ohio State University anticipates an enrollment of 25 students per year. There are no other programs within a 50 mile radius of the University.

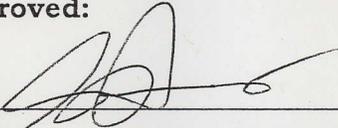
Curriculum: The curriculum follows a standard first-year engineering sequence of mathematics, sciences (including chemistry, physics), English, and introductory engineering courses. The second year of the program includes life science courses (biology, organic chemistry) as well as engineering sciences and initial biomedical engineering courses. The biomedical engineering focus expands in the third year to biomedical measurement and techniques labs. The fourth year of the program includes two advanced level biomedical engineering courses, and sequence of professional engineering electives (independent research, honors theses, minors, and other technical courses) as well as a two-quarter team design project. In addition to the standard curriculum, students choose three areas of study from six domain (specialty) areas: bioimaging;

biotransport; biomaterials; biomechanics; molecular, cellular and tissue engineering; biomedical micro/nano tech. Ohio State University will seek accreditation for the program from the American Board for Engineering and Technology (ABET) following the graduation of the first class.

Resource/Faculty Needs: Ohio State University has sufficient budget, faculty, lab, classroom and library facilities to support the proposed undergraduate program as a result of the existing graduate programs in engineering as well as the resources of the Colleges of Medicine and Veterinary Medicine. Additional faculty resources will be added to support the proposed program to support increasing enrollments.

End of Comment Period: September 25, 2008
No Comments Received, Recommend Approval

Approved:



Erie D. Fingerhut, Chancellor

10/6/08

Date