MEMORANDUM

TO: Nariman Farvardin
   Dean, A. James Clark School of Engineering

FROM: Phyllis Peres
       Associate Provost for Academic Planning and Programs

SUBJECT: Proposals to create a Fischell Department of Bioengineering; transfer the M.S. and Ph.D. programs in Bioengineering; and transfer, modify, and rename the B.S. in Biological Resources Engineering as the B.S. in Bioengineering (PCC log nos. 05052, 05053, and 05054)

I am pleased to inform you that final approval has been given for the establishment of the Fischell Department of Bioengineering and the transfer and modification of the related academic programs. Copies of the approved proposals are attached.

On June 23, 2006, the Board of Regents approved the creation and naming of the Fischell Department of Bioengineering, effective July 1, 2006. The proposal to transfer in the M.S. and Ph.D. programs in Bioengineering was approved by President Mote on April 27. Finally, the proposal to transfer, modify and rename the B.S. in Biological Resources Engineering as the B.S. in Bioengineering was given final approval by the Chancellor on June 30, and the Maryland Higher Education acknowledged the change that same day.

The College should ensure that the new requirements are fully described in the undergraduate and graduate academic catalogs and in all relevant descriptive materials.

CWR/

Enclosure

cc: William Destler, Provost
    Ellin Scholnick, Associate Provost for Faculty Affairs
    Sarah Bauder, Office of Student Financial Aid
    Mary Giles, University Senate
    Barbara Hope, Data Administration
    Anne Turkos, Archives
    William Bentley, Fischell Department of Bioengineering
    Sandra Huskamp, Fischell Department of Bioengineering
THE UNIVERSITY OF MARYLAND, COLLEGE PARK
PROGRAM/CURRICULUM PROPOSAL

DIRECTIONS:
• Provide one form with original approval signatures in lines 1 - 4 for each proposed action. Keep this form to one page in length.
• Early consultation with the Office of the Associate Provost for Academic Planning & Programs is strongly recommended if there are questions or concerns, particularly with new programs.
• Please submit the signed form to Claudia Rector, Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus.
• Please email the rest of the proposal as an MSWord attachment to pcc-submissions@umd.edu.

DATE SUBMITTED February 9, 2006

COLLEGE/SCHOOL Engineering

DEPARTMENT/PROGRAM Bioengineering Graduate Program

PROPOSED ACTION (A separate form for each) Move/Relocate Graduate Program

DESCRIPTION (Provide a succinct account of the proposed action. Details should be provided in an attachment. Provide old and new sample programs for curriculum changes.)

The purpose of this proposal is to move the Bioengineering Graduate Program currently housed under the Clark School of Engineering into the newly created Fischell Department of Bioengineering in the Clark School of Engineering, University of Maryland, College Park, pending approval of the Department. The Program will not change in operations, scope, or faculty participation as a result of this action. It is simply an administrative move.

JUSTIFICATION/REASONS/RESOURCES (Briefly explain the reason for the proposed action. Identify the source of new resources that may be required. Details should be provided in an attachment.)

The reason for this action is to provide a world-class resource for the University of Maryland System to educate students to excel in the field of bioengineering and carry out the reach and development of biomedical systems that will improve healthcare for human subjects throughout the world. Funding will continue at the current levels provided to the program.

APPROVAL SIGNATURES

1. Department Committee Chair

2. Department Chair

3. College/School PCC Chair

4. Dean

5. Dean of the Graduate School (if required)

6. Chair, Senate PCC

7. Chair of Senate

8. Vice President for Academic Affairs & Provost

DATE

3/1/06

3/1/06

1 March 06

3/1/06

4/24/06

4-14-06

7-17-06
The proposal to move the Bioengineering M.S. and Ph.D. programs from the A. James Clark School of Engineering into the proposed Fischell Department of Bioengineering is part of a larger “proposal package” that would establish the Fischell Department and move, modify, and rename the current B.S. in Biological Resources Engineering. The related academic program changes, therefore, are contingent on the full Senate approval of the new Fischell Department of Bioengineering. Additionally, once the Department is approved, faculty lines will also be moved from Biological Resources Engineering (AGNR) and from several units in the Clark School of Engineering. Faculty with lines in the new Department will have oversight of the graduate degree programs. There will also be affiliate faculty currently with the program who will also continue that affiliation with the Department. The Department would be chaired by Dr. William (Bill) Bentley. The graduate proposal involves moving the M.S. and Ph.D. program with no modification to the approved curriculum.

The following, excerpted from the proposal to create the Fischell Department of Bioengineering, is background information on the current Bioengineering graduate programs and the plans for programmatic integration into the proposed Department:

During the 2001-02 academic year a Bioengineering Program Committee was created Dean Farvardin and charged with the task of developing a Graduate Degree Program in Bioengineering. The committee was chaired by Dr. Tim Barbari, then Chair of the Department of Chemical Engineering and consisted of the following faculty members: Dr. Art Johnson of Biological Resources Engineering, Dr. Bill Bentley of Chemical Engineering, Dr. Shihab Shamma of Electrical and Computer Engineering, Dr. Don DeVoe of Mechanical Engineering, Dr. Peter Kofinas of Materials and Nuclear Engineering, Dr. Avis Cohen of Biology, Dr. Jason Kahn of Chemistry and Biochemistry, and Dr. Dennis Healy of Mathematics. Building on current research efforts and focusing on strengthening activities at the interface between engineering and the life sciences, a strong and independent Graduate Program in Bioengineering emerged to fulfill the vision of the School’s Strategic Plan. In just three years, the Bioengineering Program has recruited 25 outstanding graduate students from among the most highly ranked undergraduate programs in the United States. The current bioengineering graduate student population is 44% female and 68% domestic. The more than 50 faculty formally affiliated with the graduate program come from over 12 academic departments on the College Park campus, the Schools of Medicine and Pharmacy in Baltimore, and the University of Maryland.

Biotechnology Institute. Research collaborations with the Schools of Medicine and Pharmacy have been enhanced and collaborations with the School of Dentistry have been initiated. The Bioengineering graduate students benefit greatly from this unique interdisciplinary environment; not only do they have a wide array of research projects available to them, but they also have the opportunity to explore laboratories across the campus(es) in the new lab rotation program. In biology and medicine, laboratory rotations are standard; they are rare in engineering. Many of the concepts needed in experimental design and data analysis, as well as research methods, are best served by this type of hands-on instruction. This rotation is a first in engineering at Maryland. At steady state, the graduate program is expected to have 125 graduate students, with all but a few pursuing a Ph.D. in Bioengineering. With average time to degree in doctoral engineering programs of between 4 and 5 years, ~25 new students would be admitted per year.
PROPOSAL TO

MOVE THE BIOENGINEERING GRADUATE PROGRAM

into the

FISCHELL DEPARTMENT OF BIOENGINEERING

A. JAMES CLARK SCHOOL OF ENGINEERING

UNIVERSITY OF MARYLAND

COLLEGE PARK

DEAN NARIMAN FARVARDIN

KIND OF DEGREE: M.S., Ph.D.

Effective Fall 2006
Purpose of Proposal

The purpose of this proposal is to move the existing Bioengineering Graduate Program, offering Master of Science and Doctor of Philosophy degrees, into the newly created Fischell Department of Bioengineering in the A. James Clark School of Engineering (Clark School), University of Maryland College Park (UMCP). This Program resides in the Clark School and consists of faculty across the UMCP campus, within UMBI and UMB. This document does not modify or otherwise change the scope, operation, or organization of the Bioengineering Graduate Program. Concurrently, separate proposals have been prepared to establish the Fischell Department of Bioengineering and to develop an undergraduate program in Bioengineering. These three actions: 1) creating the Fischell Department of Bioengineering; 2) developing the undergraduate program in Bioengineering; and 3) moving the Graduate Programs into the Department will result in the creation of a comprehensive Bioengineering unit. This proposal is contingent upon approval of the establishment of the Department.

The Fischell Department of Bioengineering

In December 2005, Dr. Robert Fischell and his sons presented the University, specifically, Bioengineering with a truly transformational gift. The University and the A. James Clark School of Engineering have a significant opportunity and charge….to create a world class bioengineering department with stellar undergraduate and graduate programs. Through this gift and the support of the University and the State, we propose to establish the Fischell Department of Bioengineering effective July 1, 2006. The mission of the Fischell Department of Bioengineering will be to:

\[\textit{educate students to excel in the field of bioengineering and to carry out research and development of biomedical systems that will improve healthcare for human subjects throughout the world.}\]

The Fischell Department of Bioengineering will (i) elevate the quality of undergraduate education experience within the School and on campus, (ii) enrich the culture of excellence in education, research and scholarship, (iii) enhance the level of diversity, (iv) engage the greater community in entrepreneurial and commercial activities, and (v) enhance the infrastructure consistent with that of a world-class university.