



UNIVERSITY OF WASHINGTON

OFFICE OF THE PRESIDENT

July 21, 2005

Mark A. Emmert, President

Acting Dean Mani Soma
College of Engineering
Box 352180

Dean Paul G. Ramsey
School of Medicine
Box 356350

Dear Mani and Paul:

Based on the recommendation of its Subcommittee on Admissions and Programs, the Faculty Council on Academic Standards has recommended approval of the revised requirements for a Bachelor of Science degree in Bioengineering. A copy of the changes is attached.

I am writing to inform you that the Department of Bioengineering is authorized to specify these requirements beginning autumn quarter 2005.

The new requirements should be incorporated in printed statements and in individual department websites as soon as possible. The *General Catalog* website will be updated accordingly by the Registrar's Office.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Mark".

Mark A. Emmert
President

Enclosure

cc: Professor Yongmin Kim (with enclosure)
Enrollment Services c/o Diane Hanks (with enclosure)
Mr. Robert Corbett (with enclosure)
Dr. Deborah H. Wiegand (with enclosure) *BIVEN-012105*



Creating & Changing Undergraduate Academic Programs*
 After college/school review, send signed original and 8 copies to: FCAS, Box 351271

BIOEN-012105

College: ENGINEERING/MEDICINE Department or Unit: BIOENGINEERING
 Date: January 21, 2005

New Programs

- Leading to a Bachelor of _____ in _____ degree
- Leading to a Bachelor of _____ degree with a major in _____
- Leading to a _____ Option within the existing major in _____
- Leading to a Minor in _____

Changes to existing programs

- New Admission Requirements for the Major in _____ within the Bachelor of _____ in _____
- XX Revised Admission Requirements for the Major in Bioengineering within the Bachelor of Science in Bioengineering
- XX Revised Program Requirements for the Major in Bioengineering within the Bachelor of Science in Bioengineering
- Revised Requirements for the Option in _____ within the major in _____
- Revised Requirements for the Minor in _____

Other Changes

- Change name of program from _____ to _____
- New or Revised Continuation Policy for _____
- Eliminate program in _____

Proposed Effective Date: (quarter/year) SPRING 2005

Contact Person	Phone Number	Email
Kelli Jayn Nichols	685-2022	knichols@u.washington.edu

1. **Explanation of and Rationale for Proposed Change:** (Please use additional pages if necessary. For new programs, please include any relevant supporting documentation such as student learning outcomes, projected enrollments, letters of support, and departmental handouts.)

Changes to admission requirements (Upper admission only):
 Remove PHYS 123 and EE 215 as admission requirements.

Rationale:

Since our program was first approved in May 2001, we have continuously revised our core courses to strengthen the educational experience for our students. We are now in the fourth iteration of our junior core and would like to formalize some changes.

- 1) PHYS 123 is not needed to begin our junior core sequence and may be more easily taken later in the program.
- 2) BIOEN 301 has been redeveloped and now places less emphasis on electrical engineering and more emphasis on statics and dynamics. This change of emphasis removes the need for students to complete EE 215 prior to BIOEN 301. (EE 215 is still a prerequisite to BIOEN 302, so students will still be taking the course prior to the junior year.

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3) The requirement to take EE 215 no later than winter of the sophomore year caused a number of scheduling problems for students preparing for our major. Students needed to take PHYS 121 in the freshman year so they could take PHYS 122 in Autumn of the sophomore year and EE 215 in the winter. This was difficult for UW students and even more so for transfers. Honors students were often unable to take honors physics, which starts in the fall. Removing EE 215 as an admission requirement makes it possible to students to take the Physics series in the sophomore year and generally introduces some ease of scheduling that was missing before.

Changes to graduation requirements:

Add BIOEN 201 as a graduation requirement; also add 3 credits of Bioengineering senior electives, bringing the total required for graduation to 15 (from 12); reduce approved electives from 10 to 5.

Rationale:

1) We reviewed the BS BIOE curriculum with an eye towards ABET accreditation and decided to add more engineering credit at the introductory level and at the senior level. This brings the total number of engineering credits in the program to 72 (the ABET minimum is 68, but UW CoE programs typically present more than the minimum number). The new BIOEN 201 course introduces basic bioengineering and electrical engineering concepts that students will use throughout their junior core sequence.

2) The total number of credits required for the degree remains at 180. Pre-medical students will need to take 185 credits to cover their pre-medical requirements.

NOTE: BIOEN 480 was renumbered 481 and 482, effective Spring 2005. These changes have already been approved and are reflected in the text below.

* For information about when and how to use this form please go to <http://www.washington.edu/faculty/facsenate/councils/fcas/1503/>.

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2. Catalog Copy

A. Catalog Copy as Currently Written (*Include only sections/paragraphs that would be changed if your request is approved. Please cross out or otherwise highlight any deletions.*)

Changes are underlined.

3. Upper Admission. Upper admission requires 64 credits of course work with at least a 2.50 GPA: MATH 124, 125, 126; CHEM 142, 152, 162; PHYS 122, 122, 123; BIOL 180, 200; CSE 142; EE 215; and 5 credits of English composition. A 2.5 GPA guarantees consideration but does not guarantee admission. Application deadlines for upper admission are February 1 for spring quarter and July 1 for autumn quarter. Upper admission applicants should note that the Bioengineering major course sequence begins in spring quarter; thus, whether applying in February or July, students should enroll in BIOEN 301 for spring. EE 215 is a prerequisite for BIOEN 301. Consult the department's web page or academic counselor for more details.

Bioengineering Core (36 credits): BIOEN 301, 302, 303, 304, 305, 357; 12 credits of BIOEN 480.

Bioengineering Senior electives (12 credits): 12 credits chosen from BIOEN 420, 436, 440, 455, 457, 467, 470, 485, 490, 491, 492.

Approved Electives (10 credits): 10 additional credits chosen from an approved list of math, science, and engineering courses (see the department's web page for further information), or from the Bioengineering senior elective list.

B. Proposed Catalog Copy, Reflecting Requested Changes (*Include exact wording as you wish it to be shown in the printed catalog. Please underline or otherwise highlight any additions. If needed, attach a separate, expanded version of the changes that might appear in department publications.*)

Changes are underlined.

3. Upper Admission: Upper admission requires 60 credits of course work with at least a 2.5 GPA: MATH 124, 125, 126; CHEM 142, 152, 162; PHYS 121, 122; BIOL 180, 200; CSE 142; and 5 credits of English Composition. A 2.5 GPA guarantees consideration but does not guarantee admission. Application deadlines for upper admission are February 1 for spring quarter and July 1 for autumn quarter. Consult the department's web page or academic counselor for more details.

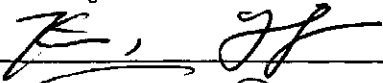



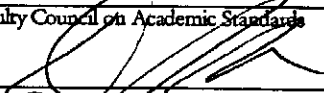
Bioengineering Core (38 credits): BIOEN 201, 301, 302, 303, 304, 305, 357, 481; 8 credits of BIOEN 482.

Bioengineering Senior Electives (15 credits): 15 credits chosen from BIOEN 420, 436, 440, 455, 457, 467, 470, 485, 490, 491, 492.

Approved Electives (5 credits): 5 additional credits chosen from an approved list of math, science, and engineering courses (see the department's web page for further information), or from the Bioengineering senior elective list.

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3. Signatures (required)

Chair/Program Director 	Date 5/21/05	Dean Engineering 	Date 27 May 05
	6/7/05	Dean Medicine Turner N. Gray MD	Date 6/7/05
College Committee 	Date 17 May 05	Faculty Council on Academic Standards 	Date 7-19-05