



UNIVERSITY of WASHINGTON

Michael K. Young
President

January 14, 2015

Dean Michael B. Bragg
College of Engineering
Box 352180

Dean Paul G. Ramsey
School of Medicine
Box 356350

Dear Michael 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 program requirements for both the Bachelor of Science in Bioengineering degree and the option in Nanoscience and Molecular Engineering within the Bachelor of Science in Bioengineering degree. 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 spring quarter 2015.

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 that reads "Michael K. Young".

Michael K. Young
President

Enclosure

cc: Ms. Lucy Pick (with enclosure)
Mr. Robert Corbett (with enclosure)
Ms. Virjean Edwards (with enclosure)



UNIVERSITY OF WASHINGTON
**CREATING AND CHANGING UNDERGRADUATE
 ACADEMIC PROGRAMS**

OFFICE USE ONLY
 Control # Bioen - 2014 09 29

After college/school/campus review, send a signed original and 1 copy to the Curriculum Office/FCAS, Box 355850.
 For information about when and how to use this form: <http://depts.washington.edu/uwcr/1503instructions.pdf>

College/Campus College of Engineering, School of Medicine/Seattle	Department/Unit Bioengineering	Date 9/29/2014
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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 ____.
- Revised Admission Requirements for the Major in ____ within the Bachelor of ____.
- Revised Program Requirements for the Major in Bioengineering within the Bachelor of Science.
- Revised Requirements for the Option in Nano and Molecular Engineering within the major in Bioengineering.
- Revised Requirements for the Minor in ____.

Other Changes

- Change name of program from ____ to ____.
- Change delivery method or location of program.
- New or Revised Continuation Policy for ____.
- New Honors Requirements for ____.
- Eliminate program in ____.

Proposed Effective Date: **Quarter:** Autumn Winter Spring Summer **Year: 20 15**

Contact Person: Lucy Pick	Phone: 1-5448	Email: pickl@uw.edu	Box: 355061
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EXPLANATION OF AND RATIONALE FOR PROPOSED CHANGE

For new program, please include any relevant supporting documentation such as student learning outcomes, projected enrollments, letters of support and departmental handouts. *(Use additional pages if necessary).*

The Department of Bioengineering is requesting to change BIOEN 316, BIOEN 325, and BIOEN 326 from 3 to 4 credits in order to standardize the review sessions that are necessary to teach the material properly. This change will increase the credits required for the major from 72 to 75 and the number of credits required for the option in Nano and Molecular Engineering from 74 to 77. BS BIOE students will be required to take 8 credits of general electives. BS BIOE: Option in NME students will be required to take 6 general elective credits.

The number of credits for general electives will decrease from 11 to 8. A previous 1503 incorrectly listed the number of general electives required as 8.

OTHER DEPARTMENTS AFFECTED

List all departments/units/ or co-accredited programs affected by your new program or changes to your existing program and acquire the signature of the chair/director of each department/unit listed. Attach additional page(s) if necessary. *See online instructions.

Department/Unit:	Chair/Program Director:	Date:
Department/Unit:	Chair/Program Director	Date:

CATALOG COPY

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.

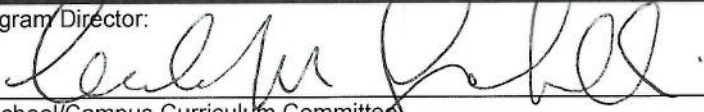
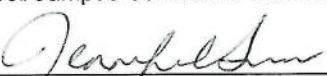




See attached

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). Please note: all copy will be edited to reflect uniform style in the General Catalog.

See attached

APPROVALS

Chair/Program Director:		Date:
College/School/Campus Curriculum Committee:		Date:
Engineering:  Dec '14	Medicine: 	10/28/14
Dean/Vice Chancellor:		Date:
Engineering: 	Medicine: 	10/28/14
Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair:		Date: 1/9/2015

POST TRI-CAMPUS APPROVAL (when needed)

Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair:	Date:
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Current Copy

Graduation Requirements

Students follow requirements in effect at time of entry into the department. 180 credits as follows:

General Education Requirements (105 credits):

1. *Areas of Knowledge:* 24 total credits in Visual, Literary, & Performing Arts (VLPA) and Individuals & Societies (I&S), with at least 10 credits in each area.
2. *Written and Oral Communication (5 credits):* 5 credits of English composition, from the approved University list. Additional writing credits are built into the major core courses.
3. *Mathematics (24 credits):* MATH 124, MATH 125, MATH 126; either MATH 307 or AMATH 351; either MATH 308 or AMATH 352; STAT 390 or INDE 315
4. *Natural Science (44 credits):* CHEM 142, CHEM 152, CHEM 162 (or CHEM 144, CHEM 154, CHEM 164) and CHEM 223 (or CHEM 237); PHYS 121, PHYS 122; BIOL 180, BIOL 200, BIOL 220
5. *General Electives (8 credits)*

Major Requirements (72 75 credits):

1. *Engineering Fundamentals (4 credits):* AMATH 301
2. *Bioengineering Core (44 47 credits):* BIOEN 215, BIOEN 315, BIOEN 316, BIOEN 317, BIOEN 325, BIOEN 326, BIOEN 327, BIOEN 335, BIOEN 336, BIOEN 337, BIOEN 345, BIOEN 401; either 10 credits of BIOEN 402, or 4 credits of BIOEN 403 plus BIOEN 404 and BIOEN 405.
3. *Bioengineering Senior Electives (15 credits):* Fifteen (15) credits from an approved departmental list, including completion of one of three concentration areas: *Molecular and Materials Bioengineering:* four courses from approved departmental concentration list. *Cells, Tissue, and Systems Bioengineering:* four courses from approved departmental concentration list. *Diagnostics and Therapeutic Instruments:* PHYS 123; four courses from approved departmental concentration list. See department for approved list.
4. *Approved Engineering Electives (9 credits):* Chosen from a departmentally approved list or from additional bioengineering senior elective credit. See department for approved list.
5. *Grade Requirements:* Minimum 2.0 grade in each bioengineering course applied to the major

Nanoscience and Molecular Engineering Option Requirements (74 77 credits):

1. *Engineering Fundamentals (4 credits):* AMATH 301
2. *Bioengineering Core (44 47 credits):* BIOEN 215, BIOEN 315, BIOEN 316, BIOEN 317, BIOEN 325, BIOEN 326, BIOEN 327, BIOEN 335, BIOEN 336, BIOEN 337, BIOEN 345, BIOEN 401; either 10 credits of BIOEN 402 or 4 credits of BIOEN 403 plus BIOEN 404 and BIOEN 405
3. *Nanoscience and Molecular Engineering Courses (21 credits):* NME 220, NME 321, NME 421; minimum four additional approved nanoscience and molecular engineering electives, to be chosen from an approved departmental list; additional senior elective credits as needed to total 15. The senior capstone (4-10 credits from BIOEN 402 or BIOEN 403) must be in an NME area.
4. *Approved Engineering Electives:* 5 credits
5. Minimum 2.0 grade in each bioengineering course applied to the major

Proposed Copy

Graduation Requirements

Students follow requirements in effect at time of entry into the department. 180 credits as follows:

General Education Requirements (105 credits):

1. *Areas of Knowledge:* 24 total credits in Visual, Literary, & Performing Arts (VLPA) and Individuals & Societies (I&S), with at least 10 credits in each area.
2. *Written and Oral Communication (5 credits):* 5 credits of English composition, from the approved University list. Additional writing credits are built into the major core courses.
3. *Mathematics (24 credits):* MATH 124, MATH 125, MATH 126; either MATH 307 or AMATH 351; either MATH 308 or AMATH 352; STAT 390 or IND E 315
4. *Natural Science (44 credits):* CHEM 142, CHEM 152, CHEM 162 (or CHEM 144, CHEM 154, CHEM 164) and CHEM 223 (or CHEM 237); PHYS 121, PHYS 122; BIOL 180, BIOL 200, BIOL 220
5. *General Electives: 8 credits; (6 credits for NME option)*

Major Requirements (75 credits):

1. *Engineering Fundamentals (4 credits):* AMATH 301
2. *Bioengineering Core (47 credits):* BIOEN 215, BIOEN 315, BIOEN 316, BIOEN 317, BIOEN 325, BIOEN 326, BIOEN 327, BIOEN 335, BIOEN 336, BIOEN 337, BIOEN 345, BIOEN 401; either 10 credits of BIOEN 402, or 4 credits of BIOEN 403 plus BIOEN 404 and BIOEN 405.
3. *Bioengineering Senior Electives (15 credits):* Fifteen (15) credits from an approved departmental list, including completion of one of three concentration areas: *Molecular and Materials Bioengineering:* four courses from approved departmental concentration list. *Cells, Tissue, and Systems Bioengineering:* four courses from approved departmental concentration list. *Diagnostics and Therapeutic Instruments:* PHYS 123; four courses from approved departmental concentration list. See department for approved list.
4. *Approved Engineering Electives (9 credits):* Chosen from a departmentally approved list or from additional bioengineering senior elective credit. See department for approved list.
5. *Grade Requirements:* Minimum 2.0 grade in each bioengineering course applied to the major

Nanoscience and Molecular Engineering Option Requirements (77 credits):

1. *Engineering Fundamentals (4 credits):* AMATH 301
2. *Bioengineering Core (47 credits):* BIOEN 215, BIOEN 315, BIOEN 316, BIOEN 317, BIOEN 325, BIOEN 326, BIOEN 327, BIOEN 335, BIOEN 336, BIOEN 337, BIOEN 345, BIOEN 401; either 10 credits of BIOEN 402 or 4 credits of BIOEN 403 plus BIOEN 404 and BIOEN 405
3. *Nanoscience and Molecular Engineering Courses (21 credits):* NME 220, NME 321, NME 421; minimum four additional approved nanoscience and molecular engineering electives, to be chosen from an approved departmental list; additional senior elective credits as needed to total 15. The senior capstone (4-10 credits from BIOEN 402 or BIOEN 403) must be in an NME area.
4. *Approved Engineering Electives:* 5 credits
5. Minimum 2.0 grade in each bioengineering course applied to the major