MEMORANDUM

TO: Darryl Pines  
   Dean, A. James Clark School of Engineering

FROM: Elizabeth Beise  
       Associate Provost for Academic Planning and Programs

SUBJECT: Proposal to Modify the Master of Science in Bioengineering (PCC log no. 15013)

   The proposal to modify the Master of Science in Bioengineering has been administratively approved. A copy of the proposal is attached.

   The change is effective Spring 2016. Please ensure that the change is fully described in the Graduate Catalog and in all relevant descriptive materials.

MDC/
Enclosure

cc: Andrew Harris, Chair, Senate PCC Committee  
    Barbara Gill, Office of Enrollment Management  
    Reka Montfort, University Senate  
    Erin Taylor, Division of Information Technology  
    Pam Phillips, Institutional Research, Planning & Assessment  
    Anne Turkos, University Archives  
    Linda Yokoi, Office of the Registrar  
    Alex Chen, Graduate School  
    William Fourney, A. James Clark School of Engineering  
    William Bentley, Department of Bioengineering
**THE UNIVERSITY OF MARYLAND, COLLEGE PARK**
**PROGRAM/CURRICULUM/UNIT PROPOSAL**

- Please email the rest of the proposal as an MSWord attachment to pcc-submissions@umd.edu.
- Please submit the signed form to the Office of the Associate Provost for Academic Planning and Programs, 1119 Main Administration Building, Campus.

**College/School:**
Please also add College/School Unit Code-First 8 digits: 012032001320101

**Unit Codes can be found at:** [https://hpprod.umd.edu/html_reports/units.htm](https://hpprod.umd.edu/html_reports/units.htm)

**Department/Program:**
Please also add Department/Program Unit Code-Last 7 digits: 012032001322501

**Type of Action (choose one):**
- Curriculum change (including informal specializations)
- Curriculum change for an LEP Program
- Renaming of program or formal Area of Concentration
- Addition/deletion of formal Area of Concentration
- Suspend/delete program

**Summary of Proposed Action:** BIOE MS program modification

Remove BIOE 608 (1 credit). Modify elective requirements from 2 restricted and 3 unrestricted to 1 restricted and 4 unrestricted to add flexibility. Remove additional requirement for 20 credits and 3.0 GPA at end of second semester.

**Departmental/Unit Contact Person for Proposal:** Tracy Chung

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**APPROVAL SIGNATURES - Please print name, sign, and date. Use additional lines for multi-unit programs.**

1. Department Committee Chair JOHN P. FISHER
2. Department Chair WILLIAM B. BENTLEY
3. College/School PCC Chair
4. Dean
5. Dean of the Graduate School (if required)
6. Chair, Senate PCC
7. University Senate Chair (if required)
8. Senior Vice President and Provost

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<thead>
<tr>
<th>Signature</th>
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<tbody>
<tr>
<td>JOHN P. FISHER</td>
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<td>WILLIAM B. BENTLEY</td>
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1. Current (old) requirements

2. Proposed (new) requirements

<table>
<thead>
<tr>
<th>Current Course Requirements</th>
<th>Current credits</th>
<th>Proposed Course Requirements</th>
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<tbody>
<tr>
<td>Core courses</td>
<td>9 credits</td>
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<tr>
<td>BIOE 601</td>
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<td>BIOE 601</td>
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<td>BIOE 604</td>
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<td>BIOE 604</td>
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<tr>
<td>BIOE 612</td>
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<td>BIOE 612</td>
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<tr>
<td>Elective courses</td>
<td>15 credits (5 courses)</td>
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<tr>
<td>2 restricted electives</td>
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<td>1 restricted elective</td>
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<tr>
<td>3 unrestricted electives</td>
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<td>4 unrestricted electives</td>
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<tr>
<td>BIOE 799</td>
<td>6 credits</td>
<td>BIOE 799</td>
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<tr>
<td>BIOE 608</td>
<td>1 credit</td>
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3. Identification of and rational for the changes

The proposed curriculum changes are to course requirements only. The elective course requirement is being changed to allow for more flexibility in elective choices, since bioengineering is a highly disciplinary field. A restricted elective is defined as a short list of specialized courses with "BIOE" prefix, taught by a primary BIOE faculty member. The Graduate Studies Committee reviews and approves courses for inclusion on this list. An unrestricted elective is any graduate-level technical course that the advisor approves the student to take.

The removal of BIOE 608, the one-credit Bioengineering Seminar, is in line with the increased flexibility in elective courses. The seminar is intended to provide students with exposure to the field, yet the exposure to various bioengineering topics via elective coursework is sufficient for an MS student. With the growth of the department's research and faculty, ample bioengineering electives are available, so the required attendance at seminar is no longer needed. MS students will continue to be encouraged to attend weekly seminar throughout their graduate career.

We would also like to remove the following redundant statement from the previous PCC: "Students must have completed 20 credits and have at least a 3.0 GPA at the end of the second semester to remain in good standing in the MS program." This statement does not need to be listed as an additional program requirement since Graduate School policy requires 3.0 GPA in order for any graduate student to remain in good standing. The 20 credits are also no longer required at the end of the second semester since BIOE 608 is being removed.

4. Sample program under the proposed requirements

Semester 1

- BIOE 601 (3 credits)
- BIOE 604 (3 credits)
- BIOE 612 (3 credits)

Semester 2

- Restricted Elective (3 credits)
- Unrestricted Elective 1 (3 credits)
- Unrestricted Elective 2 (3 credits)

Semesters 3 and 4

- BIOE 799 (6 credits)
- Unrestricted Elective (3 credits) (x2)
5. No prerequisite structure is defined for the new requirements. If an elective requires a prerequisite, then it is upon the student to ensure/demonstrate that he/she has met the prerequisite to the instructor or offering department.
6. No new courses are being approved for this proposal.
7. No courses are being deleted from the program requirements.
8. No other departments will be impacted.
9. Students enrolled in the program prior to the effective date may complete their program under the old requirements if they wish.