EXECUTIVE COMMITTEE
BOURNS COLLEGE OF ENGINEERING

REPORT TO THE RIVERSIDE DIVISION
MAY 19, 2015

To be adopted:

Proposed Changes to the Materials Science and Engineering Major Requirements

**PRESENT:**

**College Requirements**
See The Marlan and Rosemary Bourns College of Engineering, Colleges and Programs section.

The Materials Science and Engineering major uses the following major requirements to satisfy the college’s Natural Sciences and Mathematics breadth requirement.

1. One course in the biological sciences chosen from an approved list
2. CHEM 001A, CHEM 001LA
3. MATH 008B or MATH 009A
4. PHYS 040A, PHYS 040B

**Major Requirements**
1. Lower-division requirements (68 units)
   a) CHEM 001A, CHEM 01LA, CHEM 001B, CHEM 01LB, CHEM 001C, CHEM 01LC
   b) CS 030
   c) EE 001A, EE 01LA
   d) MATH 009A, MATH 009B, MATH 009C, MATH 010A, MATH 010B, MATH 046
   e) ME 010
   f) MSE 001
   g) PHYS 040A, PHYS 040B, PHYS 040C

2. Upper-division requirements (76 units)
   a) BIEN 140A/CEE 140A
   b) CHEM 112A
   c) CEE 135
   d) CHE 100

**PROPOSED:**

**College Requirements**
(No change)

(No change)

(No change)

1. One course in the biological sciences chosen from an approved list
2. CHEM 001A, CHEM 001LA
3. MATH 008B or MATH 009A
4. PHYS 040A, PHYS 040B

**Major Requirements**
(No change)

(No change)

2. Upper-division requirements (76 units)
   a) BIEN 140A/CEE 140A
   b) CHEM 112A
   c) CEE 135
   d) CHE 100
(No change)

JUSTIFICATION:
We wish to add MSE 197 to the list of technical electives for a maximum of four units. The addition of this course is to improve the student learning experience by exposing them to hands on research in a setting that is not a standard course lab. It will enable them to (i) understand hypothesis-driven research, (ii) write research reports, (iii) present their findings in a peer-reviewed atmosphere. Upper division standing students may enroll in research units to receive exposure to hands on research conducted by MSE faculty. The MSE student to faculty ratio is nearly 2:1 so finding an advisor whom a student can do research with should not be an issue.

This course has already been approved through CRAMS.

APPROVALS:
Approved by the Materials Science and Engineering faculty: February 17, 2015
Approved by the Executive Committee of the College of Engineering: February 18, 2015
Approved by the Committee on Educational Policy: April 27, 2015