UNIVERSITY FACULTY SENATE FORMS

Academic Program Approval

This form is a routing document for the approval of new and revised academic programs. Proposing department should complete this form. For more information, call the Faculty Senate Office at 831-2921.

Submitted by: Dr. Darrin Pochan, Dept. Chair phone number 831-3569

Department: Materials Science and Engineering email address pochan@udel.edu

Action: Reduction of required courses for our Master’s Thesis degree
Example: add major/minor/concentration, delete major/minor/concentration, revise major/minor/concentration, academic unit name change, request for permanent status, policy change, etc.

Effective term 15F
(use format 04F, 05W)

Current degree MMSE – Thesis
(Example: BA, BACH, BACJ, HBA, EDD, MA, MBA, etc.)

Proposed change leads to the degree of: MMSE - Thesis
(Example: BA, BACH, BACJ, HBA, EDD, MA, MBA, etc.)

Proposed name: N/A
Proposed new name for revised or new major / minor / concentration / academic unit (if applicable)

Revising or Deleting:

Undergraduate major / Concentration: N/A
(Example: Applied Music – Instrumental degree BMAS)

Undergraduate minor: N/A
(Example: African Studies, Business Administration, English, Leadership, etc.)

Graduate Program Policy statement change: Attached with changes marked in red
(Must attach your Graduate Program Policy Statement)

Graduate Program of Study: Materials Science and Engineering MMSE
(Example: Animal Science: MS Animal Science: PHD Economics: MA Economics: PHD)

Graduate minor / concentration: N/A

Note: all graduate studies proposals must include an electronic copy of the Graduate Program Policy Document, highlighting the changes made to the original policy document.
List new courses required for the new or revised curriculum. How do they support the
overall program objectives of the major/minor/concentrations?
(Be aware that approval of the curriculum is dependent upon these courses successfully passing through
the Course Challenge list. If there are no new courses enter “None”)

None

Explain, when appropriate, how this new/revised curriculum supports the 10 goals of
undergraduate education: http://www.ugs.udel.edu/gened/

N/A

Identify other units affected by the proposed changes:
(Attach permission from the affected units. If no other unit is affected, enter “None”)

None

Describe the rationale for the proposed program change(s):
(Explain your reasons for creating, revising, or deleting the curriculum or program.)

The reduction of the number of required courses for the MSEG Master’s Thesis degree succeeds in several
goals. First, courses are no longer required that have become superfluous to the average, modern MS
student. Second, the new, lower number of required course credits brings us in line with other COE
departments relative to their respective number of required courses. Third, MSEG Master’s Thesis
students will now have more flexibility to take additional elective courses more pertinent to their individual
research endeavors.

Program Requirements:
(Show the new or revised curriculum as it should appear in the Course Catalog. If this is a revision, be
sure to indicate the changes being made to the current curriculum and include a side-by-side comparison
of the credit distribution before and after the proposed change.)

The Master’s Thesis degree requires a total of 30 credits (24 credit hours of course work and 6 credit hours
of Master’s Thesis. A detail of the required courses are listed in the attached Department’s Policy
Statement). The student will conduct research on a topic with an advisor of his/her own choosing. The
thesis must be of publishable quality as judged by the senior materials faculty.

ROUTING AND AUTHORIZATION:  (Please do not remove supporting documentation.)
Department Chairperson ___________________________ Date 11/24/2014
Dean of College ___________________________ Date 12/4/2014
Chairperson, College Curriculum Committee ___________________________ Date 12/4/2014
Chairperson, Senate Com. on UG or GR Studies ___________________________ Date
Chairperson, Senate Coordinating Com. ___________________________ Date
Secretary, Faculty Senate ___________________________ Date
Date of Senate Resolution ___________________________ Date to be Effective
Registrar ___________________________ Program Code ___________________________ Date
New MSEG with thesis credit/course requirements

**Current**

- **Required for All**
  - MSEG 608 – Structure and Properties I
  - MSEG 609 – Structure and Properties II
  - MSEG 803 – Equilibria in Materials Systems
  - MSEG 804 – Kinetics in Materials Systems

- **Required for Hard Materials**
  - MSEG 640 – Applied Quantum Mechanics I
  - MSEG 841 – Solid State Materials I
  - MSEG 842 – Solid State Materials II

- **Required for Soft Materials**
  - MSEG 832 – Principle of Polymer Synthesis
  - MSEG 833 – Polymer Synthesis Lab
  - MSEG 835 – Polymer Physics

- **Required for Composites**
  - MSEG 832 – Principle of Polymer Synthesis
  - MSEG 817 – Composite Materials

- **Technical Electives**
  - 3-4 elective courses required

- **Total: 30 units of coursework (plus 6 MSEG 869-Master’s Thesis)**

**New**

- **Required for All**
  - MSEG 608 – Structure and Properties I
  - MSEG 609 – Structure and Properties II
  - MSEG 803 – Equilibria in Materials Systems
  - MSEG 804 – Kinetics in Materials Systems

- **Choose 2 from the following 5 (with advisor)**
  Note: Any beyond 2 count as technical electives
  - MSEG 640 – Applied Quantum Mechanics I
  - MSEG 841 – Solid State Materials I
  - MSEG 832 – Principle of Polymer Synthesis
  - MSEG 835 – Polymer Physics
  - MSEG 817 – Composite Materials

- **Technical electives**
  - Choose 2
  - At least one must be 800 level

- **Total: 24 units of coursework (plus 6 MSEG 869-Master’s Thesis)**
Master's Thesis Requirements Comparison With Other Engineering Departments

The current total number of credits required for a MSEG Master’s is 32 (26 course credits + 6 thesis credits). Our proposed change to 30 credits (24 course credits + 6 thesis) would bring the department in line with other CoE departments.

Required number of courses in each department without research credits (the total number of credits, including research credits, indicated in parenthesis)

- 8 required courses: ELEG (30), MEEG (30), CIEG (30), CHEG (30), CISC (30), Modified MSEG (30)
- Currently BMEG does not offer a Master's degree