

Proposal for a “BS/MEng” concurrent enrollment option for MSE

OCT 05 2017

COLLEGE

Background and Summary

The Materials Science and Engineering Department offers three graduate programs and awards thesis-based M.S. and Ph.D. degrees as well as a non-thesis M.Eng. degree. Current department policy provides only one concurrent enrollment option, which allows for concurrent BS/MS enrollment. Presently, the MSE Department proposes to extend concurrent enrollment provisions to include a BS/MEng option. Under the provisions of concurrent enrollment, the proposed change would allow a student to apply up to six credits to both B.S. and M.Eng. degrees. The proposal does not involve any new graduate degree programs.

Proposal

With this document, the Graduate Program Committee of the Department of Materials Science and Engineering (MSE) proposes to establish and administer, in compliance with all requirements of the stated programs and the Graduate College, an option for concurrent enrollment in the Bachelor of Science (B.S. Mat E) and Master of Engineering (M.Eng. MSE) programs. All regular degree requirements will apply to concurrently enrolled students. The required program details are provided below (as requested by Graduate College instructions).

1. *Name of the programs or majors*

Materials Science and Engineering

2. *Name of the degrees*

Bachelor of Science, Materials Engineering

Master of Engineering, Materials Science and Engineering

3. *Name of the department(s) which administer(s) the program*

Department of Materials Science and Engineering

4. *Rationale for the concurrent degree program*

The MSE Graduate Program Committee views the M.Eng. degree as one with growing demand and value, particularly in conjunction with laboratory and/or industry experiences (e.g. internships). The concurrent enrollment aspect of this option will provide additional flexibility in arranging coursework and experiential learning opportunities, allowing students to better design their educational experience according to career goals while avoiding unnecessary delays in graduation/employment.

5. *Admission procedures and requirements*

Students apply for BS/MEng concurrent enrollment by:

- a) Submitting the “Concurrent enrollment for undergraduate student wishing to pursue a graduate certificate or degree” form to the MSE Department Graduate Program Coordinator.
- b) Submitting a complete (paper) application package for the M.Eng. Program in Materials Science and Engineering. (Applications must be submitted directly to the MSE Graduate Program Office, 2220 Hoover Hall.)

Applications will be reviewed by the MSE Graduate Program Committee, and admission will be considered in accordance with standard policies for regular M.Eng. applicants. (Application packages will be reviewed with pending GRE scores.)

6. *Requirements of the program*

M.Eng. Program Requirements: 30 total credits of graded coursework, including: 21 credits of MSE graduate coursework (9 of which must be from MSE 510, 520, 530, 540), 9 credits of non-MSE technical courses that are approved for graduate credit by the DOGE. Notes: MSE 699 (Research) may not be substituted for any M.Eng. degree requirements. MSE 599 (Creative Component with oral exam) may be substituted for a maximum of 3 credits of the 21 credits of MSE coursework.

No thesis or final oral examination is required.

A minimum GPA of 3.0 must be maintained throughout the program.

7. *Expected enrollment*

It is expected that enrollment will grow to ~15 within three years.

8. *If not already addressed, answer the following:*

a. *How will the undergraduate degree plan and graduate program of study be developed?*

The POSC form will be completed during the first semester, in consultation with the academic advisor and major professor (DOGE in most cases).

b. *When will the student have a major professor?*

The Major Professor will be assigned by the DOGE upon acceptance into the program. In some cases, this will be the DOGE.

c. *Will graduate assistantships be provided?* No

d. *Will a thesis be required?* No

e. *Who will be responsible for the administration of the program?*

The Director of Graduate Education

f. *How much time is required to complete the program? Show a sample semester-by-semester plan.*

It is expected that the program will usually be completed within two years of concurrent enrollment, typically beginning at the start of the 4th year of the undergraduate program. No additional time limits, beyond those of the Graduate College, will be imposed. An example program schedule with courses applied to undergraduate (U) and graduate (G) degree programs is shown below.

Sem.	U/G	Course #	Cr.	Course Title
F 1	U	Mat E 413	3	Mat. Design and Professional Practice I
	U	Mat E 418	3	Mechanical Behavior of Materials
	U	Mat E 443	3	Physical Metallurgy of Ferrous Alloys
	U		3	Gen. Ed. Elective
	U/G	EM 514	3	Advanced Mechanics of Materials
Sp 1	U	Mat E 414	3	Mat. Design and Professional Practice II
	U	Mat E 444	3	Corrosion and Failure Analysis
	U		3	Mat E Elective
	G	MSE 550	3	Nondestructive Evaluation
Su	G	MSE 599	3	Creative Component
F 2	G	MSE 510	3	Structure and Chemistry of Materials
	G	MSE 540	3	Mechanical Behavior of Materials
	G	MSE 564	3	Fatigue and Fracture
	G	STAT 500	3	Statistical Methods I

Sp 2	U		3	Undergraduate Technical Elective
	U/GG	IE 446	3	Geometric Variability in Manufacturing
	G	MSE 520	3	Thermodynamics and Kinetics of Materials.
	G	MSE 551	3	Characterization Methods in Materials Sci.

g. Will students be allowed to double count credits? If so, how many?

Up to six credits may be applied to both undergraduate and graduate degrees. All stipulations and restrictions stated in the Graduate College Handbook will apply.

9. Approval by appropriate department and college committees, faculty, and administrators.

Department approval signatures and dates are included as a part of this document.

10. Proposal Contact:

R. E. Napolitano, Director of Graduate Education, MSE Dept.

Department Reviews and Approvals

Reviewed by Undergraduate Advisor:  9/20/17
Andrea Klocke, Academic Advisor Date

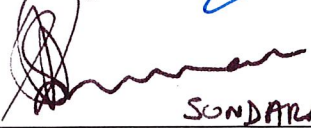
Reviewed by MSE Graduate Advisor:  9/27/17
Pat Morton, Academic Advisor Date

MSE Graduate Program Certification of Approval by vote:  9/20/17
Ralph E. Napolitano, DOGE, MSE Date

Department Chair Approval:  9/20/17
Kristen P. Constant, Chair, MSE Date

Academic College Approvals

Engineering Curriculum Committee Approval: Doug Jacobson  9-28-17
Printed name and signature Date

College Dean Approval: 
SONDARARASAN 10/2/17
Sarah Rajala, Dean, College of Engineering Date

Graduate College Approvals

Graduate Catalog
Committee Approval:

Printed Name and Signature

Date

Graduate Curriculum
Committee Approval:

Printed Name and Signature

Date

Graduate Council
Approval

Printed Name and Signature

Date

Graduate College
Dean Approval:

William Graves, Dean, Graduate College

Date

University Approvals

Provost Approval:

Jonathan A. Wickert, Senior Vice President & Provost

Date

President Approval:

Benjamin J. Allen, President

Date