10. Change in Curriculum

Dwight Look College of Engineering
Department of Materials Science and Engineering
Minor in Materials Science and Engineering
CHANGE IN CURRICULA
CHANGE IN CURRICULUM

DWIGHT LOOK COLLEGE OF ENGINEERING
DEPARTMENT OF MATERIALS SCIENCE AND ENGINEERING
MINOR IN MATERIALS SCIENCE AND ENGINEERING
Texas A&M University
Request for a Change in Curriculum
Undergraduate + Graduate + Professional

1. Program request type:
   ☑ Undergraduate  □ Graduate  □ First Professional (e.g., DVM, JD, MD, etc.)
   □ Degree Program  ☑ Minor  □ Certificate

2. Request change for:

3. Request submitted by (Department or Program Name):
   Department of Materials Science and Engineering

4. Program Designation and Name
   Minor in Materials Science and Engineering

5. Brief description of change:
   Change technical elective MSEN 685 to MSEN 491.

6. Rationale for change:
   The MSEN minor curriculum initially included "optional" graduate-level research credits (MSEN 685) as one potential technical elective. For an undergraduate minor, graduate-level research credits are less appropriate than undergraduate-level course research credits (MSEN 491). Therefore, we are updating the curriculum to reflect a more suitable course while maintaining the original intent of the curriculum.

Use the checkboxes below to make sure that all information is included.

7. a. Proposed curriculum attached.  ☑ Yes  □ No
    b. Current catalog curriculum with handwritten edits attached.  □ Yes  ☑ No
    c. Current Howdy degree evaluation with handwritten edits attached.  □ Yes  ☑ No

   Please make sure the attached proposed curriculum, catalog and Howdy degree evaluation match.

8. a. Will degree program hours change (increase/decrease) due to the proposed curriculum changes?  □ Yes  ☑ No
    b. If yes, degree program hours will change from: ________ to: ________
    c. If yes, is the Texas Higher Education Coordinating Board form attached?
       http://www.thecb.state.tx.us/index.cfm?objectid=A0F9F7FA-9A92-4F11-2756AD3BBFF01D60
       □ Yes  □ No

9. If proposed changes affect other unit(s), are letters of support attached?  □ Yes  ☑ No

IMPORTANT NOTE: Curriculum changes submitted through the approval process and fully approved by February (December-UCC/GC, January-Faculty Senate, February-President) will be effective in the next academic year. Changes requiring approval beyond the University should complete the internal approval process early in the fall semester whenever possible in order to ensure timely implementation.

Approval recommended by:

Dr. Miladin Radovic  06/01/2015
Department Head or Program Chair (Type Name & Sign)  Date

Dean of College  Date

Chair, College Review Committee  Date

Chair, GC or UCC  Date

Questions regarding this form should be directed to Curricular Services at 845-8201 or sandra.williams@tamu.edu
Curricular Services – 04/14
Materials Science and Engineering Minor

The Materials Science and Engineering Minor is designed to provide a strong materials science educational program for undergraduate science and engineering majors and to integrate a materials focus into their undergraduate training. The minor is intended for students who are interested in broadening their undergraduate major program of study to incorporate a fundamental understanding of materials processing, and structure–property relationships to complement their major degree. Thus, the minor offers students the flexibility to select relevant coursework in order to customize this program of study to best suit the particular students intended area of focus (with consultation of the MSEN faculty advisor).

The Materials Science and Engineering Minor consists of a minimum of (5) three-hour courses for a total of 15 credit hours, with up to 6 credit hours in materials courses within their major. All students are required to have completed a pre-requisite prior to applying for the minor: MSEN 201 – Engineering Materials: From Structures to Properties (or equivalent course). Two three-hour courses (6 credit hours) are selected from a list of core MSEN undergraduate courses. The remaining (3) three-hour courses (9 credit hours) are selected from upper-level materials-focused technical electives. With the permission of the MSEN faculty advisor, students may substitute up to (2) technical electives with courses from their major department with a primary focus on materials science and engineering. Completion of the minor will be recorded on the student’s University transcript.

Guidelines

Students should complete the MSEN minor application form and consult with the MSEN faculty advisor, prior to formally registering for the minor. The academic advisor in a students’ major department is responsible for officially enrolling students in the minor program.

Requirements

- Consult with academic advisor in major department to formally register for the minor.
- Be in good academic standing within major department (GPR of 2.5 and higher).
- Obtain a "C" or better in each course taken towards minor.
- Achieve an overall GPR of 2.5 in approved minor coursework.
- Submit completed minor worksheet to the Department of Materials Science and Engineering undergraduate advisor upon registering for final course(s) to complete minor requirements.
Course Requirement Summary

To earn the Minor in Materials Science & Engineering, a student must first complete the pre-requisite introductory materials course. Subsequently, a total of five materials science courses (15 hours), at least two of which are selected from the list of core materials science courses, the balance composed of materials science technical electives.

Pre-requisites:

- MSEN 201* – Engineering Materials: From Structures to Properties

* Or equivalent introductory materials course with faculty advisor approval.

Select at least two of the following Core MSEN undergraduate courses:

- MSEN 310 Structure of Materials
- MSEN 420 Polymer Science
- MEEN 467/MSEN 625 Mechanical Behavior of Materials
- MSEN 460 Electronic, Optical, and Magnetic Properties of Materials

Technical Elective MSEN undergraduate courses*:

- MSEN 410 Materials Processing
- MSEN 489 Nanoscience & Nanomaterials
- MSEN 489 Fundamentals of Corrosion
- MEEN 458 Processing and Characterization of Polymers
- MSEN 458/MSEN 658 Fundamentals of Ceramics
- MEEN 471/MSEN 618 Elements of Composite Materials
- MSEN 685-MSEN 491 Individual Research (PROPOSED CHANGE)

* Upon consultation with the materials science faculty advisor, up to 2 upper-level technical electives in the student’s major department may be accepted in place of these courses.
For more information:

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