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 491 Individual Research

+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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