

Mechanical Behavior of Materials, Minor

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Location: Wean Hall 3317

Minor in Mechanical Behavior of Materials

Overview

An understanding of mechanical behavior is important to both the development of new materials and the selection of appropriate materials for many applications. The mechanical behavior of materials is best investigated and understood by integrating solid mechanics with the microstructural basis of flow and fracture. The purpose of this minor is to allow a formal basis for students to pursue an integrated approach to the mechanical behavior of materials.

Although this minor is open to all CIT students, only students in the departments of Civil Engineering, Materials Science and Engineering, and Mechanical Engineering can take advantage of the double counting permitted for some courses in their department majors. Students in other departments may have difficulty in fulfilling the requirements in four years.

Course Requirements

Minimum units required for minor **51-54 units**

The minor requires six courses: three core courses, two solid mechanics courses, and one materials science course. In satisfying these course requirements, each student must take three out-of-department courses. Each student is required to complete three core courses:

Core Courses:

	Units
27-201 Structure of Materials	9
27-591 Mechanics of Materials	9-12
or 27-791 Mechanical Behavior of Materials	
12-212 Statics	9
or 24-261 Mechanics I: 2D Design	

Group A: Materials Science Courses

Each student must take one course from this list of Materials Science courses:

27-202 Defects in Materials ¹	9
27-357 Introduction to Materials Selection ²	6
27-709 Biomaterials	12

¹ 27-202 cannot be used by MSE students to satisfy the requirements of the minor.

² 27-357 cannot be used by MSE students to satisfy the requirements of the minor.

Group B: Solid Mechanics Courses

Each student must take two of the following Solid Mechanics courses:

12-231 Solid Mechanics	9
or 24-262 Mechanics II: 3D Design	
12-635 Structural Analysis	12
or 24-351 Dynamics	

Students should check with the director of the program or their faculty advisor for an up-to-date list of relevant courses that will count towards this minor. For more information, please consult the Undergraduate Course Catalog and the current Schedule of Classes (<https://enr-apps.as.cmu.edu/open/SOC/SOCServlet>).