Objectives

The engineering mechanics graduate program is involved in teaching and research in analytical, computational, and experimental methods in mechanics of solids, structures, and materials and fluid mechanics. The objectives of the program are to enable the student to attain a deeper understanding of engineering mechanics fundamentals, a knowledge of recent developments, and the ability as a master's degree student to participate in research and as a doctoral degree student to conduct individual research. The goals are accomplished through coursework, seminars, and active research programs.

Areas of Study and Facilities

Graduate study and facilities for research are offered in the areas of theoretical mechanics and applied mathematics, dynamics, computational mechanics, experimental fluid mechanics, computational fluid dynamics, finite element methods, boundary element methods, experimental mechanics, solid and structural mechanics, and structural dynamics. The extensive facilities of Information Technology Services and related hardware for interactive computer graphics and real-time control of experiments are available to graduate students for research use. For experimental research, the Department of Aerospace Engineering and Engineering Mechanics maintains laboratory facilities on the main campus and at the J. J. Pickle Research Campus. These facilities include equipment for studies in high-velocity impact, structural dynamics, and materials science. A well-equipped machine shop is partially supported by the department, and technical assistance is available when required.

Graduate Studies Committee

The following faculty members served on the Graduate Studies Committee (GSC) in the spring 2023 semester.

- Tan Thanh Bui
- Clinton N Dawson
- Leszek F Demkowicz
- Berkin Dortdivanlioglu
- John Timothy Foster
- Rui Huang
- Thomas J Hughes
- Loukas F Kallivokas
- Stelios Kyriakides
- Chad Matthew Landis
- Kenneth M Liechti
- Nanshu Lu
- Mark E Mear
- J T Oden
- Manuel Karl Rausch
- Krishnaswa Ravi-Chandar
- Gregory J Rodin
- Michael S Sacks
- Jayant Sirohi
- Mary F Wheeler
- Karen E Willcox
- Jin Yang