

Engineering Mechanics (PhD)

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.

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 Handbook

Graduate handbook information is updated and maintained by each program. Graduate handbooks are available within each program's office and [online](#). Please contact the program with concerns or questions.

Total Hours Required: 90

Requirements

Students are expected to complete 90 credit hours after their BS degree (including coursework and research credit) to earn a PhD. This expectation, however, may be waived simply by the agreement of the student's research advisor(s) and/or dissertation committee.

Doctoral candidates must fulfill the basic course requirements prescribed for the Master's degree. Beyond that, the course program is tailored to each student's needs.

Before being admitted to candidacy for the degree, the student must pass both a written and an oral qualifying examination on graduate-level material.

After being admitted to candidacy, the student completes coursework, carries out an acceptable program of original research, and writes a dissertation covering this research. The committee appointed to approve the Program of Work and the dissertation examines the student for both breadth and depth of knowledge. Examinations may be oral or written or both and must include a public defense of the dissertation.

Further information about policy, procedure, and requirements is available from the Department of Aerospace Engineering and Engineering Mechanics.

Code	Title	Hours
All students must also follow the following requirements and policies:		
Graduate Engineering Requirements		
Graduate University Requirements		

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