

## PH.D. in MECHANICAL ENGINEERING

### Learning Outcomes and Assessment

The student will demonstrate the ability to apply graduate-level mathematics to the solution of engineering problems in at least one of the general areas of solid mechanics, fluid mechanics, dynamics and heat transfer.

- Direct assessment: Student learning relative to this outcome is assessed by the student's performance on the written Ph.D. Qualifying exam.
- Indirect assessment: A current and updated employment listing will serve as indirect evidence of student attainment of the learning goal.

The student will demonstrate the ability to conduct, present and defend graduate-level research including literature review, motivation, methodology utilized, results, unique contributions, and conclusions generated.

- Direct assessment: Student learning relative to this outcome is assessed by the quality of the written dissertation and performance in the dissertation defense.
- Indirect assessment: A current and updated employment listing will serve as indirect evidence of student attainment of the learning goal.

The student will demonstrate the ability to propose and present relevant graduate-level research including the description of importance of a problem, a literature review of potential topics where unique contributions can be made and anticipated methodology.

- Direct assessment: Student learning related to this outcome is assessed by performance on the Candidacy Examination.
- Indirect assessment: A current and updated employment listing will serve as indirect evidence of student attainment of the learning goal.