



Graduate Academic Learning Compact

Civil Engineering

Program Mission Statement

The mission of the School of Engineering Master of Science Programs is to prepare students to function in a demanding technical environment where their advanced engineering education will allow them to solve substantial problems in their field of expertise. Through our commitment to engineering application and research and encouraging students to participate in such activities we will provide opportunities for expanded content knowledge and development of critical thinking skills inside and outside of classroom settings. Students graduating with an M.S. in Civil, Electrical, or Mechanical Engineering will receive the education that allows them to pursue a doctoral degree.

Student Learning Outcomes

Graduates will be able

Knowledge of Literature of Discipline (req)

- be able to conduct literature review on a topic relevant to the area of study and to condense such review into a cohesive essay.
- be able to form conclusions and recommendations of results obtained through advanced engineering analyses, modeling, and/or experimentation.

Independent Research/ Professional Practice (req)

- be able to apply advanced engineering techniques to identify and solve technical problems.
- be able to communicate technical data, analyses, and conclusions to a technical audience.

Assessment Approaches

The learning outcomes listed above involve depth of knowledge within a specific area of the students chosen engineering discipline, critical thinking ability, and communications skills. These outcomes are achieved by the successful completion of a cohesive program. Students choose to either complete a thesis (thesis option) or take additional courses approved by the program (non-thesis option). The master's thesis is an original work that adds to the understanding of an engineering problem. It requires the deep knowledge and critical thinking skills developed in the program of study to advance engineering knowledge or solve an engineering problem. The successful completion of a thesis requires well-developed writing and oral communications skills. This capstone experience in conjunction with successfully completed course work measures the outcomes enumerated above for the students choosing the thesis option. Students choosing the non-thesis option will complete additional course work in place of the thesis to further deepen their understanding of the engineering discipline. Successfully completed course work measures the outcomes enumerated above.