**CIVIL ENGINEERING, PH.D.**

All programs of study must be approved by the student’s academic advisor and the Department of Civil and Environmental Engineering graduate director.

**Learning Outcomes**

1. Graduates will be able to demonstrate expertise in a core subject area of civil and environmental engineering.
2. Graduates will be able to demonstrate a working knowledge of various areas of CEE and related fields.
3. Students will be able to describe and discuss sound research approaches and knowledge of advances in Civil and Environmental Engineering.
4. Students will be able to demonstrate the ability to apply knowledge of mathematics, science and engineering.
5. Graduates will be able to identify pertinent research problems, to formulate and execute a research plan.
6. Graduates will be able to describe and discuss advances of knowledge in civil and environmental engineering.
7. Graduates will be able to generate and analyze original research results, and to communicate these results through oral presentations and written publications submitted to refereed archival journals.
8. Graduates will demonstrate the basic skills needed for life-long learning and professional development.