

ENGINEERING SYSTEMS

Learning Outcomes

1. Students will demonstrate broad knowledge of the several varieties of engineering systems, including their inter-relationships, in their course work, qualifying examination, comprehensive examination, and dissertation.
2. Students will demonstrate specialized knowledge within the engineering fields (civil, environmental, electrical, mechanical, and computer engineering) in their course work, qualifying examination, comprehensive examination, and dissertation.
3. Students will exhibit mastery of the interdisciplinary mindset by applying the knowledge, theories, skills, and methods of two or more disciplines acquired during course work in their independent research.
4. Students will identify areas in their field of study in which they can contribute original research, create new knowledge, and develop solutions to real-world problems.
5. Having studied ethics in a required course, students will choose ethical courses of action in their research projects.
6. Students will develop oral and written communication skills by sharing their research findings in their dissertations, conference presentations, and papers published in academic journals and proceedings.
7. Students will demonstrate the ability to assist faculty in classroom instruction and laboratory exercises.
8. Graduates will exhibit their acquisition of critical thinking skills by independently analyzing and critiquing published scholarship and by assessing its implications in the world.
9. Graduates will become prepared to be leaders in society who are capable of overseeing projects and addressing problems in an effective and ethical way.