

## CIVIL ENGINEERING

### Mission Statement

Academic programs in the UNF Division of Engineering provide our students the maximum opportunity for leadership, innovation, and success in their careers and lives. We do this by:

- Providing a solid engineering education rooted in the fundamentals of the basic sciences, mathematics, and engineering sciences; mathematics, and engineering sciences;
- Developing critical thinking abilities through real, hands-on challenges in industry and/or research;
- Giving context to the technical curriculum through a rigorous liberal arts education and a commitment to service learning;
- Conducting research programs that enhance the education of our students, the professional development of our faculty and staff, the technical needs of our industrial partners, and the well being of society; and
- Ensuring that all of our programs contribute significantly and measurably to the quality of life in Northeast Florida and beyond.

### Student Learning Outcomes:

Within the UNF Division of Engineering **all students** completing an engineering degree will have

#### Content/Discipline Knowledge & Skills

- the broad education necessary to understand the impact of engineering solutions in a global and societal context;
- an understanding of professional and ethical responsibilities;
- an ability to function on multi-disciplinary teams;
- a recognition of the need for, and ability to engage in, lifelong learning;
- a knowledge of contemporary issues;
- an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

#### Critical Thinking Skills

- an ability to apply knowledge of mathematics, science and engineering;
- an ability to design and conduct experiments, as well as analyze and interpret data;
- an ability to design a system, component, or process to meet desired needs;
- an ability to identify, formulate, and solve engineering problems.

#### Communication Skills

- an ability to communicate effectively (both orally and in written form)

In addition, all students majoring in **Civil Engineering** will have

#### Content/Discipline Knowledge & Skills

- proficiency in mathematics through differential equations, probability and statistics, calculus-based physics, and general chemistry;

