

## Contact Information

You can play an important part in preparing tomorrow's leaders. To partner with East Carolina University's engineering program for a senior capstone project, contact

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East Carolina University  
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*Engineering Solutions*

**ECU ENGINEERING  
Senior Capstone Projects**

# Your success is our success.

## Senior Capstone Projects

East Carolina's engineering senior capstone projects are open-ended design projects that expose students to the hands-on practice of engineering design and problem solving. The projects are the culminating experience of the BS in engineering program at ECU. We seek projects that involve a diversity of skills related to design methods, conceptualization, synthesis, creativity, open-ended design, economics, safety, team building, and component and system development.

The ECU engineering program's senior capstone project challenges the ability of an individual or group of seniors to complete a project with significant performance expectations. The project emphasizes real problems and working with real clients.

As the students begin the projects, they take leadership roles in a variety of responsibilities:

- Visiting client facilities
- Interacting with client employees
- Identifying problems
- Determining on-site data acquisition strategies
- Performing any necessary literature search

They then design, develop, and implement engineering solutions based on technical, financial, and ethical considerations.

## Reasons to Participate

When you partner with the engineering program at East Carolina University, you are investing in our students—who also are potential employees. You get finished products suitable to your business situation. The engineering program at ECU, in return, is provided an opportunity to "finish" our engineering students using real problems with real constraints.

Your success is our success. Students demonstrate real-world skills by defining, designing, building, and testing engineered solutions that enhance your operations. During the project's life cycle, they develop additional workforce skills that will serve them well in their careers—teamwork, communication, project management, and customer service.

Our best work is providing the workforce in eastern North Carolina with our students—students who know the region's people and places and who have the right credentials to make a positive impact on your business and your bottom line. To make this work, we need an investment from you. Give us your project, and let us give you the talent of our students.

## Program Details

Typically, these projects begin in the fall and take two semesters to complete. While a faculty coordinator facilitates and monitors student

progress, students in senior capstone projects deal with you, the client, directly. As a result, you provide feedback to the faculty coordinator for grading and program improvement.

The project includes two phases based on East Carolina semesters.

In phase one, the project proceeds from the conceptual level into preliminary design. Students review pertinent literature, complete problem analysis, compile needed and relevant data, and identify, compare, and select alternative(s) using sound engineering theory. The project team shares its progress with you and the faculty coordinator in written, graphic, and oral communications covering all aspects of the preconceptual, conceptual, and preliminary project stages.

In phase two, the student team takes your project through final design, (prototype) construction, testing, and demonstration. In this phase, your student team members assemble all of their design experience and synthesize all of their theoretical and practical knowledge into a fully documented engineering artifact, and you are issued formal oral and written reports.

Senior capstone projects cost \$3,000, and clients are asked to defray any exceptional expenses of the student team. The engineering program will work with nonprofit organizations to secure funding as necessary. Design teams average 30–40 hours per week during the fourteen-week semester, devoting 450–600 full-time equivalent hours of dedicated time per project.