What’s Exciting About this Course? This course provides the opportunity for students to synthesize and apply the complex and various aspects of systems engineering acquired throughout their program of study to a real-life project or problem of their choosing. Ultimately, a capstone project can represent new work and ideas, and give students the opportunity to demonstrate the knowledge and skills gained during the program.

Course Description. This project course is designed to provide students with a thorough understanding of cyberphysical systems modeling and design through a comprehensive capstone project. These projects will be practical and relevant to industry needs. Students are required to prepare a project proposal, provide deliverables as required by the capstone project faculty advisor, and to prepare a final report summarizing the problem, solution, accomplishments and results.

Course Outcomes

- Apply systems engineering practices and methods to a relevant example in a student’s field.
- Develop requirements, architectures, specifications, verifications, and tests for a product or system.
- Analyze systems using systems engineering approaches to increase performance.
- Represent and describe systems engineering methods and results clearly in a written document.

Course Objectives and Links to Overall Program Goals

Engineers synthesize systems engineering concepts and methods gained throughout the program and apply them to an interesting and relevant system in their field. The capstone project provides the student’s employer a glimpse of potential future projects that can be undertaken due to the fact that the student has obtained knowledge through the program. The course serves as a practical approach to validating the student’s skills, knowledge, and abilities gained during the program.