

# SYSE 569

## CYBERSECURITY AWARENESS FOR SYSTEMS ENGINEERS

Offered Spring of odd years,  
Summer of even years

*Prereqs: SYSE501 or concurrent*

### DESCRIPTION

Cybersecurity principles, practices, technologies, design approaches, and terminology. Incorporation of cybersecurity principles into effective systems designs. This course is directed to System Engineers and other technical personnel with a need to understand cybersecurity in order to integrate it into a balanced system design.

### BENEFITS

Systems engineering is an interdisciplinary approach and means to enable successful systems. By focusing on what the customer needs, how it should function, defining the requirements, and then design synthesis, validation, and verification, real solutions to complex problems can impact every type of system.

### COURSE OBJECTIVES

Topics include requirements analysis, cyber risk analysis, secure system architecture and design, secure software development, secure networking, and the basics of cryptography. The course employs team-teaching to ensure students benefit from outstanding expertise in all areas of content. Students will practice the principles taught in the course by developing a project of the individual student's choice.

Successful students will learn to:

- Effectively integrate cybersecurity into the systems engineering process
- Interact with cybersecurity specialists to employ robust and resilient secure systems solutions

