SYSE 530

OVERVIEW OF SYSTEMS ENGINEERING PROCESSES

Offered every Fall and Spring   *Prereqs: STAT301 or equivalent*

DESCRIPTION

Helps students develop a conceptual understanding of the systems engineering life-cycle process and familiarity with analysis techniques used in that process. Introduces concepts of reliability and robustness, and rigorous tools for analysis and design with them in mind. Utilizes real-world experience and case studies of working with a system through all phases of the system design process.

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

Explore real-world problems to develop an understanding of systems engineering life cycle processes and analytical techniques. Each student will complete a project based on a system or enterprise of their choice. Successful students will learn to:

- Develop analytical skills and optimization methods
- Broaden perspectives working with a system through all phases
- Anaylze architecture issues associated with real-time systems, information assurance, networked enterprises, and virtual and physical architecture prototypes
- Learn models and tools for alternatives analysis and decision making
- Explore queuing theory and analysis
- Use detail design for reliability, maintainability, logistics, affordability

SYSTEMS ENGINEERING
COLORADO STATE UNIVERSITY