SYSE 501

FOUNDATIONS OF SYSTEMS ENGINEERING

Offered every Fall and Spring

DESCRIPTION

Introductory overview of the systems engineering perspective and is presented to set the conceptual and practical framework of the entire systems engineering graduate program. Covers the foundational components of systems engineering, the concept development stage every viable system must go through, and the process steps of the engineering development stage. Several issues related to post-development and special topics areas are presented.

ACADEMIC EQUIVALENCY

As of Fall 2020, INCOSE has presented our department with academic equivalency for SYSE501. Students who successfully complete SYSE501 with a B+ (87%) or higher will be able to bypass the knowledge exam for ASEP or CSEP certification.

Learn more here.

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 systems engineering management, needs analysis, concept development, concept exploration, concept definition, systems engineering decision tools, engineering design, integration and evaluation, production, software systems engineering, and operation support. Students will practice the principles taught in the course by following a project of the individual student's choice.

SYSTEMS ENGINEERING
COLORADO STATE UNIVERSITY