

AA 470 COURSE DETAILS

TITLE:	Systems Engineering
CREDITS:	4
FORMAT & SCHEDULE:	Lecture, 4 hours / week
FACULTY CONTACT:	Susan Murphy

COURSE DESCRIPTION (Catalog Short Form, 50 words Max):

Concepts of system approach, system hierarchies, functional analysis, requirements, trade studies, and other concepts used to define and integrate complex engineering systems. Introduction to risk analysis and reliability, failure modes and effects analysis, writing specifications, and lean manufacturing. Jointly offered with IND E 470.

COURSE OVERVIEW & LEARNING OBJECTIVES:

Course Objectives:

- 1) Students will be able to quantitatively evaluate system interfaces.
- 2) Students will be able to quantify risk and reliability.
- 3) Students will be able to write a simple component specification.
- 4) Students will be able to develop elements of a project plan.

COURSE REQUIREMENTS

PREREQUISITES: None

REQUIRED TEXTBOOK: None

COURSE SCHEDULE

Topics

System Engineering Definition
Project Management Overview
Program Documentation
Integrating Program Management and Systems Engineering
Scheduling and Communication
System Architecture & Requirements
Specifications and Specialties
Execution and Controlling
Managing Risk
Production System Design
Supply Chain Management
Life Cycle Engineering
Verification/Validation
Lean and Improving Existing Systems
Failure Resolution