Space Mission Analysis and Design

Spring 2022 | SYSE 580A4
5:15 - 8:00 p.m. Monday
Instructor: TBD

Course prerequisites: MATH 340 or MATH 345 (differential equations)

Develop successful space missions with a limited set of resources.

Appropriate for engineers, scientists, and technical managers striving to develop the best mission possible with a limited set of resources, including limited time. Designed for both students and professionals in space systems-related fields, including defense, commercial, civil, and exploration.

Students completing this course will be able to:
• Define top-level mission requirements
• Evaluate mission operational concepts
• Evaluate mission operations analysis and designs
• Synthesize space system costs from component and systems models
• Perform spacecraft design development, verification and validation, and review processes

Topics covered in this course:
• Conceptual mission analysis
• Orbits and constellation design
• Space environments
• Survivability and resiliency
• Space propulsion and launch systems
• Space mission geometry

Questions?

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We recommend registering for Spring 2022 classes by January 11.