Course Description:
Students in teams perform a space system design involving all aspects, including technical, cost, and schedule. Class is linked to national design competitions and/or current USU spacecraft design projects.

Prerequisites:
ECE 5230 or MAE 5520

Textbook:
No textbook required

Course Outcomes:
1. Learn about the engineering systems concept.
2. Experience project teamwork.
3. Learn about the life cycle of a systems project.
4. Learn to scope a project.
5. Learn about systems architecture.
6. Experience a case study of a space systems design.

Topics Covered:
- Study of the AIM spacecraft
- System design of a LED Earth Observing Spacecraft
- Systems design for the USUSat Program
- Systems design of a Satellite Constellation

Outcome Assessments (Grades):
Homework 40%
Systems Design Project 45%
Exams 15%

Class Schedule:
Class Three times a week for fifty minutes.

Contribution of course to meeting the requirements of Criterion 5:
3 credit hours of Engineering Topics and contains significant engineering design content

Relationship of course to student outcomes:
c. An ability to design a system, component, or process to meet desired needs.
d. An ability to function on multidisciplinary teams.
e. An ability to identify, formulate, and solve engineering problems.
g. An ability to communicate effectively.