

ENAE 667: Advanced Space Propulsion and Power

Course Syllabus

Instructor: Prof. Raymond Sedwick
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Credits: 3
Prereqs: PHYS 411
ENAE 663
Permission of Instructor

Meeting times: T (or R) 5-7:30

Location: PLS 1164

Office Hours: By appointment

Textbooks

There are no texts assigned for the course. Lecture material will be primarily drawn from conference and journal literature addressing each technology. References will be cited as we go.

Course Objectives

The purpose of this course is to introduce an array of advanced space power and propulsion technologies, motivation for their development, methods for their analysis and design, and their relation to the overall system performance.

Topics Covered

Technology topics will vary each year as time permits, but may include the following: Cold gas, Chemical, Resistojets, Arcjets, MPD, Hall effect (SPT), Ion, Colloid, FEED, PPT, Helicon, VaSIMR, Nuclear propulsion/power, Solar Power and various Power conversion systems.

Grading

Grades will be based on homework assignments (50%), exams (40%), and attendance/class participation (10%). Collaboration on problem sets is encouraged, however the final work turned in must be your own. Solutions are due at the beginning of class for full credit. The number and format of the assignments and exams will be determined as we go.