

ASEN 5018/6028: Graduate Projects
Department of Aerospace Engineering Sciences
Syllabus, Spring 2020

Course Coordinator: Dr. Nicholas Rainville / AERO 211 / 303 492-7814
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Course Teaching Assistant: Harrison Wight
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Lecture Section: ASEN 5018-010 / 6028-020
Monday 17:30 – 18:20, AERO 111

Lab Section: ASEN 5018-11 / 6028-011, Human Spacecraft Design Section
Section Adviser: Col. Jim Voss / AERO 317 / jim.voss@colorado.edu
Tuesday, Thursday 2:00 – 3:50, AERO 224L

Lab Section: ASEN 5018-012 / 6028-012, Satellite Timing System
Section Adviser: Prof. Penina Axelrad / AERO 417 / penina.axelrad@colorado.edu
Tuesday, Thursday 11:00 – 12:50, AERO N230

Lab Section: ASEN 5018-013 / 6028-013, Cubesats for Space Science
Section Adviser: Prof. Bob Marshall / AERO 419 / robert.marshall@colorado.edu
Monday, Wednesday 13:00 – 14:50, AERO 234B

Lab Section: ASEN 5018-015 / 6028-015, CU-E3 and Maxwell Cubesats
Section Adviser: Dr. Marcin Pilinski / SPSC-N275 / marcin.pilinski@colorado.edu
Wednesday, Friday 13:30 – 15:20, AERO N250

Lab Section: ASEN 5018-017 / 6028-017, MLI
Section Adviser: Prof. James Nabity / AERO N305 / james.nabity@colorado.edu
Monday, Wednesday 9:00 – 10:50, AERO 234A

Lab Section: ASEN 5018-019 / 6028-019, SoftBots
Section Adviser: Dr. Kathryn Wingate / AERO 234B / kathryn.wingate@colorado.edu
Monday, Wednesday 9 – 10:50, AERO 234B

Lab Section: ASEN 5018-022 / 6028-022, Space Based Debris Tracking
Section Adviser: Dr. Dan Kubitschek / ARL-175C / daniel.kubitschek@lasp.colorado.edu
Monday, Wednesday 15:00 – 16:50, AERO 234A

Course Text: Curtis R. Cook, Just Enough Project Management, McGraw-Hill. 2005

Course Prerequisite: Permission of lab section instructor. Completion of, or current enrollment in, one of the following courses as related to the specific lab project of interest is highly recommended: ASEN 5158 Space Habitat Design, ASEN 5148 Spacecraft Design,

ASEN 4138 Aircraft Design. Completion of, or current enrollment in, ASEN 5188 Space Systems Engineering is also recommended. Non-AES student enrollment is encouraged. Concurrent enrollment in ASEN 4018/28, Senior Design, is discouraged, but may be allowed with consent of the section instructor.

Course Purpose: The Graduate Projects two-semester course sequence is designed to expose graduate students to engineering project work through project management, systems engineering, and subsystem-level design and testing. Students will work on complex, hands-on projects related to the focus areas in the aerospace engineering sciences department: Aerospace Engineering Systems, Astrodynamics and Satellite Navigation Systems, Bioastronautics, and Remote Sensing, Earth and Space Sciences. Students completing this course series will be better prepared for the type of project work and team dynamics they will encounter in government and industry. Should the project team produce a viable commercial product, students will have the knowledge and opportunity to transition into an aerospace business incubator to commercialize those products.

1-2 missed lectures: 3/4
2-3 missed lectures: 2/4
3-4 missed lectures: 1/4
4+ missed lectures: 0/4

3) Quizzes* (5%)

4) Peer evaluation submissions (2 throughout the semester) (2%)

0 late/missed peer evaluations (25.94-0d TJ4 (P8-2 (TJ4l(e)6 a(e)4 tioe)6 n)22/4

submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code (honor@colorado.edu); 303-492-5550). Students found responsible for violating the academic integrity policy will be subject to nonacademic sanctions