

GATEWAY TO SPACE

ASEN 1400

M&W 3:30 to 4:45 PM – AERO N100 (Co-pilot)

Spring 2020

Office Hours 2:30 – 3:30 M (before class) or by appointment TA:

Class #	Date	Day	DTL	Topics	Assignments	Speakers
1	01-13-20	M	96	Class Introduction and Pictures (So starts the rollercoaster)	HW 01 & 08, Community Service Assigned G1 Spa Vis W@5PM (ITL 1B10)	Matt Rhode
2	01-15-20	W	94	Spacecraft Overview Pilot tour 1 st half of students	HW 02 Assigned G2 Spa Vis R@5PM (ITL 1B10)	Matt Rhode
3	01-22-20	W	87	BalloonSat Overview + Request for Proposals: <i>Functional Block Diagrams, Design Documents</i> Pilot tour 2 nd half of students	HW 01 DUE HW 03 Assigned (Q?s 1 - 2)	Matt Rhode
4	01-27-20	M	82	HANDS-ON: Team Forming + Team Activity ----> PROPOSAL Assigned <----	HW 02 DUE HW 03 Assigned (Q?s 3 - 11) RFP Assigned	Matt Rhode
5	01-29-20	W	80	HANDS-ON: Soldering 101 (Build and Blink)/switch <i><Arduino's distributed to teams today for HW 04></i>	HW 03 DUE HW 04 & HW 05 Assigned	Teams 1-5 & switch
6	02-03-20 <small>(web)</small>	M	76	HANDS-ON: Introduction to CAD/switch	PILOT Tour	Teams 6-9 & switch
7	02-05-20	W	74	HANDS-ON: Arduino – Part I (Type and Blink): <i>All team members report for beginning of class</i>	HW 04 DUE HW 05 DUE HW 06 Assigned	All Teams
X1	02-05-20 6 – 9 PM	W	74	HANDS-ON: Arduino Deep Dive (Sensors/SD Card):		Team Representatives AERO 141
8	02-10-20	M	69	REVIEWS: Conceptual Design Review (CoDR) <i><5 minute presentations & 3 minutes of Q/A></i>	Presentations DUE 7:00 AM	All Teams
X2	02-11-20	T	68	PROPOSALS DUE 11:59 AM	RFP DUE	All Teams
9	02-12-20	W	67	HANDS-ON: In-Class Team Time >>> Authority To Proceed (ATP) with Mr. Rhode <<<	HW 06 DUE N200/Gateway Store Tour	All Teams
10	02-17-20	M	62	Guest Lecture – “Solar System Exploration Missions”		Jim Paradise (Lockheed Martin)
11	02-19-20	W	60	Requirements Flow Down Process + Past Space Grant Student Teams	DD Rev A/B Assigned HW 07 Assigned	Matt Rhode
12	02-24-20	M	55	HANDS-ON: In-Class Team Time – Bring hardware Mr. Rhode will be inspecting payloads	Balloon Shield Graphs DUE	All Teams
13	02-26-20	W	53	HANDS-ON: In-Class Team Time – Bring hardware Mr. Rhode will be inspecting payloads	Service Approvals DUE	All Teams
14	03-02-20	M	47	Guest Lecture – “Systems Engineering”	HW 07 DUE Balloon Shield Graphs Assigned	Jessica Brown (Lockheed Martin)
15	03-04-20	W	45	REVIEWS: Preliminary Design Review (PDR) <i><6 minute presentations & 3 minute of Q/A></i>	PDR Pres. DUE 7:00 AM	All Teams
16	03-09-20	M	40	Rocket History	DD Rev A/B DUE DD Rev C Assigned	Matt Rhode
17	03-11-20	W	38	HANDS-ON: In-Class Team Time – Bring hardware Mr. Rhode will be inspecting payloads	MID-Semester Team Evaluations Assigned	All Teams
18	03-16-20	M	33	Launch Vehicles	Mid Semester Team Evals DUE	Matt Rhode
19	03-18-20	W	31	HANDS-ON: In-Class Team Time – Bring hardware Mr. Rhode will be inspecting payloads	RFF Cards Assigned Community Service Approval DUE	All Teams
	03-23-20 03-25-20	M-W	26 24	Spring Break – NO CLASSES – Spring Break		
20	03-30-20	M	19	HANDS-ON - In-Class Mission Simulation Test (ON for the whole class) If Time = Spider		All Teams
21	04-01-20	W	17	REVIEWS: Launch Readiness Review (LRR) <i><4 minute presentations & 4 minutes of Q/A></i>	LRR Presentations DUE 7:00 AM	All Teams
22	04-06-20	M	12	Guest Lecture – “The Next Big Thing in Space Part 1”		Dr. James Stuart
23	04-08-20	W	10	Guest Lecture – “TBD”		Jared Leidich Urban Sky
24	04-13-20 <small>(web)</small>	M	5	HANDS-ON: In-Class Team Time	Final Team Evals Assigned	All Teams
25	04-15-20	W	3	Launch Logistics	DD Rev C DUE 4:00 PM	Matt Rhode
X3	04-17-20	F	1	Final BalloonSat Weigh-in and TURN IN By appointment 9:30 AM to 2:00 PM @ Mr. Rhode's Office AERO 155a	RFF Cards DUE	All Teams
X4	04-18-20 5 AM – 4 PM	SAT	00	Launch Day @ 6:50 AM @ Eaton, Colorado (Leave Boulder at 4:45 AM!)	Bad Weather Dates (04/19/20)	All Teams
26	04-20-20	M	+03	Launch Recap and Report and Data Analysis Guidance	DD Rev D Assigned	Matt Rhode
27	04-22-20	W	+05	REVIEWS: Quick Look Post Launch Presentation	Presentations DUE 7:00 AM Upload Raw Flight Data	All Teams
X5	04-25-20 10:30 AM – 4:45 PM	SAT	+28	REVIEWS: Engineering Projects Expo (10:30 AM – 4:45 PM) <i>Open to the general public from 2:00 PM to 4:45 PM</i>	1 st Draft of DD Rev D & FINAL Team Videos DUE @ Judging	All Teams
28	04-27-20	M	+12	Orbits and Mission Design	HW 09 Assigned	Matt Rhode
X6	04-27-20 6 – 9 PM	M	+31	REVIEWS: Final Presentations <i><8 minute presentations & 7 minutes of Q/A></i>	FINAL Presentations DUE @ 5:00 PM	All Teams AERO TBD
29	04-29-20	W	+33	Final Class – Review and Discussion + Final Team Evaluations, Class Survey, and Team Videos Bring all hardware	HW 08 DUE HW09 DUE Final Team Evals DUE	Matt Rhode
X7	05-04-20 7:30 – 10 PM	M	+35	REVIEWS: Community Service Activity Presentations	FINAL DD Rev D Due @ 7 AM	All Teams

11 - Lecture
04 - Guest
13 - Teams
08 - Reviews
06 - Extra
18 - Attention

NOTES: All “DUE” items are due electronically via CANVAS by class time unless otherwise stated above. Items submitted after class begins or past the specified time, will be late and subject to grade penalty.

All Subject lines of each email submitted for this class must follow the naming convention below:
 Homework = “HWXX Lastname_Firstinitial” Example = HW01_ArmstrongN (Attachments shall be in MS Word)
 Team Documents = “DDrev_TeamNumber” Example = DDC_Team04 (Attachments shall be in MS Word)
 Team Presentations = “Review_Team_Number” Example = CDR_Team_04 (Attachments shall be in MS PowerPoint)
 Failure to use this naming convention may result in no credit or late penalties.

1 Minute Reports are DUE each day at the end of that day (midnight). Attendance will be taken during each lecture. It is your responsibility to find and sign the attendance sheet before the end of class.

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Gateway to Space grades are based on a 100-point scale (1 point = 1% of total grade) and there is no curve. 50% of the points are based on individual contributions and 50% are based on team contributions. Grades are available on CANVAS. Your grade is earned not deserved. Points are divided as follows:

Individual Points/Grade Percentage		Team Points/Grade Percentage	
10%	Attendance (29) & 1 Minute Reports (29)	10%	Team Proposal
15%	Homework 1-9	13%	Team Presentations (4)
05%	Spatial Visualization Test (Must pass to get 5%)	10%	Team Design Document (2 Revs)
05%	Community Service and Presentation	02%	Design Expo
15%	Individual Contributions & Participation on Team	15%	Final Presentation and Final Report
50%	Subtotal (You)	50%	Subtotal (Team)
50% + 50% = 100%			

University of Colorado at Boulder Recommended Syllabus Statements (08-01-2018)

Accommodation for Disabilities - If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the [Disability Services website](#). Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance. If you have a temporary medical condition or injury, see [Temporary Medical Conditions](#) under the Students tab on the Disability Services website.

Religious Holidays - Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, **if you have a religious obligation, please notify me via email of your schedule conflict at least two weeks before the obligation.** See the [campus policy regarding religious observances](#) for full details.

Classroom Behavior - Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. For more information, see the policies on [classroom behavior](#) and the [Student Code of Conduct](#).

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation - The University of Colorado Boulder (CU Boulder) is committed to fostering a positive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct (including sexual assault, exploitation, harassment, dating or domestic violence, and stalking), discrimination, and harassment by members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or cureport@colorado.edu. Information about the OIEC, university policies, [anonymous reporting](#), and the campus resources can be found on the [OIEC website](#). Please know that faculty and instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about options for reporting and support resources.

Honor Code - All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, 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 who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code as well as academic sanctions from the faculty member. Additional information regarding the Honor Code academic integrity policy can be found at the [Honor Code Office website](#).