

# GATEWAY TO SPACE

ASEN/ASTR 2500

TR 9:30 to 10:45 AM – ITLL 1B50

Fall 2007

*Office Hours 10:45 – 11:45 after class or by appointment*

Class #	Date	Day	DTL	Topics	Assignments	Speakers
1	08-28-07	T	74	Class Introduction and Pictures	HW 01 Assigned HW 05 Assigned	Chris Koehler
2	08-30-07	R	72	Spacecraft Overview		Chris Koehler
3	09-04-07	T	67	BalloonSat Overview and the Atmosphere	HW 01 DUE HW 02 Assigned	Chris Koehler
4	09-06-07	R	65	Team Forming and RFP <i>High Altitude Balloon Telescopes (Better Than Hubble)</i> <i>Robert Fesen (Dartmouth) Eliot Young (Southwest Research)</i>	HW 02 DUE HW 03 & PROPOSAL Assigned	Chris Koehler
	09-06-07 6-8 PM	R	65	Movie Night with Free Food RSVP by 3:00 PM	DLC 1B-70	
5	09-11-07	T	60	HANDS-ON: Team Activity, HOBO Demonstration, and Foam Core	HW 03 DUE	Teams
6	09-13-07	R	58	HANDS-ON: Soldering 101	HW 04 Assigned	Chris Koehler
7	09-18-07	T	53	HANDS-ON: Timing Circuit, Heaters, and Camera Integration	HW 04 DUE	Chris Koehler
8	09-20-07	R	51	Conceptual Design Review (CoDR)	Presentations DUE 8:00 AM Proposals DUE 8:00 AM	Chris Koehler
9	09-25-07	T	46	<i>Guest Lecture "Systems Engineering"</i> Proposal & Presentation Feedback, Authority To Proceed (ATP) & Hardware check-out by separate team meetings with Chris (after class)	DD Rev A Assigned	Lad Curtis (MicroSat Systems) Chris Koehler
10	09-27-07	R	44	<i>Guest Lecture "Space Exploration"</i>		Jim Paradise (Lockheed Martin)
11	10-02-07	T	39	In-Class Team Time and Q/A with Chris		Teams
12	10-04-07	R	37	<i>Guest Lecture "Payload Integration"</i>	DD Rev A DUE Monday, 10-04-07 at 8:00 AM	Wendi Otto (Orbital Sciences)
13	10-09-07	T	32	Rocket History	DD Rev B Assigned	Teams
14	10-11-07	R	30	Hardware Orders in Class and Q/A with Chris		Chris Koehler
15	10-16-07	T	25	Q/A with Chris and Eliot Young	DD Rev B DUE 10-17-07 @ 8:00 AM	Teams
16	10-18-07	R	23	Critical Design Review (CDR)	CDR Presentations DUE @ 8:00 AM	Teams
17	10-23-07	T	18	In-Class Team Time and Q/A with Chris and Eliot Young		Chris Koehler
18	10-25-07	R	16	Launch Vehicles		Chris Koehler
19	10-30-07	T	11	<i>Special Lecture "Spacecraft Propulsion"</i>		Steve Hevert (Lockheed Martin)
20	11-01-07	R	9	<i>Guest Lecture "Spacecraft Structures"</i>	LRR Cards Assigned	Poti Doukas (Instar Engineering)
21	11-06-07	T	4	Launch Logistics and Q/A with Chris and Eliot	Bring all hardware	Chris Koehler
22	11-08-07	R	2	Pre-Launch Inspection & Launch Readiness Review (LRR) Bring all hardware	LRR Cards DUE In-Class DD Rev C DUE 8:00 AM LLR Presentations due 8:00 AM	Teams
--	11-09-07	FRI	1	Final BalloonSat Weigh-in and TURN IN	Chris' Office by 2:00 PM DLC 270A	Teams
23	11-10-07	SAT	0	Launch Day @ 7:30 AM @ Windsor, Colorado (Leave Boulder at 5:00 AM!)	Bad Weather Dates (11/11, 11/17, or 11/18)	Teams
24	11-13-07	T	+3	Launch Recap and Report and Data Analysis Guidance	Bring Your Flight Data	Chris Koehler
	11-13-07	R	23	Movie Night with Free Food RSVP by 3:00 PM	DLC 1B-70	
25	11-15-07	R	+5	<i>Guest Lecture "Attitude Determination and Control Systems"</i> Possibly Orbits and Mission Design...		Bruce Schulz (Lockheed Martin)
	11-19-07 11-23-07	T-R		Fall Break – NO CLASSES – Fall Break		
26	11-27-07	T	+17	<i>Guest Lecture "Spacecraft Communication"</i>	HW 05 DUE	Jim Mowat (Ball Aerospace)
27	11-29-07	R	+19	<i>Guest Lecture "Spacecraft Power"</i>	DD Rev D DUE	Paul Anderson (Lockheed Martin)
28	12-04-07	T	+24	Final Team Presentations and Reports	All Presentations DUE @8:00 AM	Chris Koehler & Teams
29	12-06-07	R	+26	Final Team Presentations and Reports	HW 06 Assigned	Chris Koehler & Teams
30	12-08-07	SAT	+28	ITLL Design Expo (11:00 – 4:00) Open to the general public from 1:00 to 3:00 PM		Teams
31	12-11-07	T		Career Advice, Hardware Turn in, Reimbursements and FCQ's		Chris Koehler & Industry
32	12-13-07	R		Final Exam Review, Space Grant Opportunities, and Class Survey	HW 06 DUE	Chris Koehler
33	12-17-07	M		Final Exam 4:30 PM to 7:00 PM , DLC 1B70		All

NOTES: DTL = Days To Launch  
Homework shall be in MS Word (2003) format with the following naming convention "HW\_XX\_Lastname\_Firstinitial.doc" Example = HW\_01\_Armstrong\_N.doc  
Team Documents shall be in MS Word (2003) format with the following naming convention "DD\_rev\_TeamName.doc" Example = DD\_B\_RickyBobby.doc  
Team Presentations shall be in MS PowerPoint (2003) with the following naming convention "Review\_TeamName.ppt" Example = CDR\_RickyBobby.ppt

All "DUE" items are due electronically via email at [koehler@colorado.edu](mailto:koehler@colorado.edu) by class time unless otherwise stated above. Items submitted after class begins or past the specified time, the item is late and subject to grade penalty. Files larger than 5 MB and smaller than 20 MB should be submitted to the following email address [cjkoehler@gmail.com](mailto:cjkoehler@gmail.com). Files larger than 20 MB must be turned in to Chris before the deadline on a USB drive or CD-ROM.

1 Minute Reports are DUE each day at the end of class. Attendance is required and will be taken during each lecture. It is your responsibility to find and sign the attendance sheet.  
See the special University recommended statements on back page.

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## University of Colorado at Boulder Recommended Syllabus Statements

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If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Willard 322, and [www.Colorado.EDU/disabilityservices](http://www.Colorado.EDU/disabilityservices)

Campus policy regarding religious observances requires that faculty make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, please notify me two full weeks in advance in writing (not email) of your conflict. I will sign your letter and make a copy of the original. See full details at [http://www.colorado.edu/policies/fac\\_relig.html](http://www.colorado.edu/policies/fac_relig.html)

Students and faculty each have responsibility for maintaining an appropriate learning environment. Students who fail to adhere to such behavioral standards may be subject to discipline. Faculty have the professional responsibility to treat all students with understanding, dignity and respect, to guide classroom discussion and to set reasonable limits on the manner in which they and their students express opinions. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender variance, and nationalities. 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. See policies at <http://www.colorado.edu/policies/classbehavior.html> and at [http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student\\_code](http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code)

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All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council ([honor@colorado.edu](mailto:honor@colorado.edu); 303-725-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at <http://www.colorado.edu/policies/honor.html> and at <http://www.colorado.edu/academics/honorcode/>