



The budget for your main design projects will come from the College of Engineering. Students are expected to purchase a hard copy or e-reader version of one of four course companion books. In addition, hardware kits are to be purchased for hands-on activities, students keep their kits. Each kit is \$50 and sold through the ITLL payment system and distributed in class. Team project budgets for flight hardware are covered by the department. There may be incidental costs for materials to complete your projects, students are expected to contribute up to \$75 each total (book, hardware kit, dry ice) for the course in accordance with GEEN 1400 courses.

**Grading:**

The course grade will be based on a combination of group work and individual accomplishment:

ASEN 1400/ASTR 2500 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	
05%	1 Minute Reports (29) & Class Survey	2.5%	Design Document Draft
25%	Homework 1-3, 6-7, 9-10, 12, 14, 19-20	10%	Design Document Final
05%	Spatial Visualization Test (Must pass to get 5%)	2.5%	Team Presentation PDR
05%	Final Exam	10%	Team Presentation Final
10%	Individual Contributions & Participation on Team	25%	Homework 4-5, 8, 11, 13, 15-18
50%	Subtotal (You)	50%	Subtotal (Team)
50% + 50% = 100%			

**Letter Grading Scheme:**

The final letter grade for the course will be calculated at the end of the semester using the following scheme: (Final grades shown in canvas will be rounded to the next whole number using traditional rounding, ex: 89.52 = A-, 89.47 = B+)

Letter	Percent Grade
A	93.00-100.00
A-	90.00-92.99
B+	87.00-89.99
B	83.00-86.99
B-	80.00-82.99
C+	77.00-79.99
C	73.00-76.99
C-	70.00-72.99
D+	67.00-69.00
D	63.00-66.99
F	Below 63.00

**Late Work:** Late homework will be accepted for a deduction of ONE letter grade PER DAY. This does not apply to timed assignments such as 1-minute reports, which will not be accepted late.

**Spatial Visualization:** Successful completion of a standardized spatial visualization test (PSVR) is required. Students who do not pass the pretest will be encouraged to



A **Design Expo** will be held on **TBD**, 2022, allowing you an opportunity to showcase your functioning prototype to the public. External judges will evaluate each project and provide written feedback. **Your attendance at this event is mandatory.**

Several other **workshops** throughout the semester will introduce you to some of the hands-on skills you will need to work on your projects, such as CAD, basic electrical circuits and safety and use of tools. Out of class skill-building workshops will also be required.

Some resources that may be helpful in your projects:

What	Who	Where
<b>PILOT</b> First stop for finding things 3D printers/ laser cutters, test equipment, lockers, hand tools	KatieRae Williamson, & Engineering Students	AERO 141E <a href="mailto:Katierae.williamson@colorado.edu">Katierae.williamson@colorado.edu</a>
<b>Machine Shop &amp; Wood &amp; Composites Shop</b> General machine tools Metal, plastic and wood. Saws, drills, mills, lathes. Hand tools.	Matt Rhode and Nate Coyle	AERO 155 303.492.7556 <a href="mailto:rhodem@colorado.edu">rhodem@colorado.edu</a> <a href="mailto:nathan.coyle@colorado.edu">nathan.coyle@colorado.edu</a>
<b>Electronics Center</b> Simulate, build and test electronic circuits and printed circuit boards	Trudy Schwartz & Robert Hodgkinson	AERO 150 <a href="mailto:trudy.schwartz@colorado.edu">trudy.schwartz@colorado.edu</a> <a href="mailto:robert.hodgkinson@colorado.edu">robert.hodgkinson@colorado.edu</a>
<b>Arduino, Microcontrollers and Data Acquisition</b> Programming and collecting measurement data	Joshua Mellin	AERO 141E <a href="mailto:Joshua.Mellin@colorado.edu">Joshua.Mellin@colorado.edu</a>

**Writing Resources**

Written communication is an important skill for all engineers, and will be emphasized in this course in various ways, including individual writing assignments and a team report. There are resources available to help you with your writing skills:

- The Writing Center, located in Norlin Library, offers free assistance:  
<https://www.colorado.edu/libraries/services/writing-center>

**Classroom Behavior**

Both students and faculty are responsible for maintaining an appropriate learning environment in all instructional settings, whether in person, remote or online. 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. For more information, see the policies on [classroom behavior](#) and the [Student Code of Conduct](#).

### Requirements for COVID-19

As a matter of public health and safety due to the pandemic, all members of the CU Boulder community and all visitors to campus must follow university, department and building requirements, and public health orders in place to reduce the risk of spreading infectious disease. Required safety measures at CU Boulder relevant to the classroom setting include:

- maintain 6-foot distancing when possible,
- wear a face covering in public indoor spaces and outdoors while on campus consistent with state and county health orders,
- clean local work area,
- practice hand hygiene,
- follow public health orders, and
- if sick and you live off campus, do not come onto campus (unless instructed by a CU Healthcare professional), or if you live on-campus, please alert [CU Boulder Medical Services](#).

Students who fail to adhere to these requirements will be asked to leave class, and students who do not leave class when asked or who refuse to comply with these requirements will be referred to [Student Conduct and Conflict Resolution](#). For more information, see the policies on [COVID-19 Health and Safety](#) and [classroom behavior](#) and the [Student Code of Conduct](#). If you require accommodation because a disability prevents you from fulfilling these safety measures, please see the “Accommodation for Disabilities” statement on this syllabus.

Before returning to campus, all students must complete the [COVID-19 Student Health and Expectations Course](#). Before coming on to campus each day, all students are required to complete a [Daily Health Form](#).

Students who have tested positive for COVID-19, have symptoms of COVID-19, or have had close contact with someone who has tested positive for or had symptoms of COVID-19 must stay home and complete the [Health Questionnaire and Illness Reporting Form](#) remotely. In this class, if you are sick or quarantined, *please continue the course online only, through zoom. You will not be penalized.*

### 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](mailto:dsinfo@colorado.edu) for further assistance. If you have a temporary medical condition, see [Temporary Medical Conditions](#) on the Disability Services website.

### Preferred Student Names and Pronouns

CU Boulder recognizes that students' legal information doesn't always align with how they identify. Students may update their preferred names and pronouns via the student portal; those preferred names and pronouns are listed on instructors' class rosters. In the absence of such updates, the name that appears on the class roster is the student's legal name.

### 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](mailto:honor@colorado.edu)); 303-492-5550). Students 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](#).

### **Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation**

The University of Colorado Boulder (CU Boulder) is committed to fostering an inclusive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct (harassment, exploitation, and assault), intimate partner violence (dating or domestic violence), stalking, or protected-class discrimination or 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](mailto: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, dating and domestic violence, stalking, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about options for reporting and support resources.

### **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 religious obligations, please notify me by email during the first week of class. We will work on a plan to accommodate those obligations together.**

See the [campus policy regarding religious observances](#) for full details.