

AE 100 Syllabus

Fall 2023

Introduction

Welcome to AE 100! We are excited to have you join us in the Department of Aerospace Engineering and are eager to learn and create with you this semester. In this document, you will find logistical information about how the course will be run this year.

Course Website

Most of the course content will be disseminated through the course website on Canvas, so make sure to gain access and bookmark it. <https://canvas.illinois.edu/courses>

Contact Information

There are three faculty members associated with this class, two teaching assistants (graduate students), and many course assistants (undergraduate students).

Instructor	Role	Email
Dr. Wayne Chang	Faculty	wlchang@illinois.edu
Dr. Brian Woodard	Faculty	bswoodrd@illinois.edu
Dr. Elle Wroblewski	Faculty	wroblew3@illinois.edu
Corey Parrott	Teaching Assistant	coreymp2 @illinois.edu
Hongrui Zhao	Teaching Assistant	hongrui5@illinois.edu

Office Hours

Each of the faculty and graduate students will have weekly office hours. Details will be posted on the course website. For technical help on the course, please attend one of our office hours (or ask during class). You are also welcome to reach out to any of the instructors during their office hours if you are not sure where or how to go about getting guidance or assistance with all topics related to your transition to college. This is an unusual and stressful time – reaching out for help is important and encouraged.

Learning Objectives

1. For you to apply physics to problems in aerospace engineering
2. Learn the principles of aerospace engineering
3. Predict and analyze the performance of team design projects
4. Generate a unique design for aerospace vehicles based on provided constraints
5. Develop practical experience in structural design and assembly of vehicle projects
6. Develop the general engineering skills critical for successful problem-solving: teamwork, scientific communication, resourcefulness, ingenuity, and iterative design.
7. Acclimate to college and adjust to increased independence and new challenges in self-management.

Textbook

No textbooks are required as part of this course.

Laboratory Safety

All students in the class must comply with laboratory safety policies when working on the project in the workshop space. Safety requirements include wearing safety glasses in the laboratory and wearing gloves when working with epoxy. Detailed specific guidance will be provided as needed.

Course Format

Approximate weekly schedule

- 1 hour of lecture per week
- 2 hours of “hands-on” project work per week
- Homework, writing assignments, project report writing – on your own time as needed

Details on components of the course:

- Lectures
 - Goal: Learn core topics and develop a sense of classroom community
 - Format: In-person lectures delivered by one of the two faculty members.
- Homework, writing assignments:
 - Goal: Practice critical skills and reflect on your assessments
 - Format: assigned and handed-in through Canvas, returned through Canvas
- Projects
 - Goal: Strengthen critical skills while creating something new
 - Team-based with assigned teams
 - Format: Attend lab session once per week to build a rocket and a glider throughout the semester
 - **Projects will be launched/flown on weekends. Attendance at these events is expected as part of the course. The tentative dates are Saturday, Sept. 30 and Saturday, Nov. 4.**
- Office hours:
 - Goal: provide help with course content and get to know each other
 - Format: In-Person Meetings/Synchronous Zoom meetings

Late Assignment Policy

Assignments may be submitted late with a penalty of 10% per day up to a maximum of a 50% penalty. Late assignments will not be accepted more than 5 days late.

Extraordinary circumstances do sometimes arise during the course of a semester and exceptions may be made to this policy with prompt consultation with the faculty member leading the section.

Grading

Participation (lectures and lab sections)	15%
Writing assignments	20%
Homework assignments	10%
Team project outcomes (reports)	40%
Evaluation from teammates	15%

We will use standard letter grade definitions with +/- . Grades will be viewable on Canvas.

Absence Policy

Your attendance at all scheduled classes is mandatory and essential for your success in the course. However, circumstances occasionally occur where you need to miss a class.

Planned Absences: If you need to miss class for a religious observance or another legitimate reason, you must make arrangements to make up the missed work at least one week before the absence occurs. Otherwise, the absence will be considered unexcused.

Illness / Family Emergency: Do not attend class if you are sick. We must all work together to avoid spreading COVID-19 (or any other illness) in our community.

If you are ill or experiencing a family emergency and are unable to attend class or complete an assignment by the deadline, e-mail the instructor as soon as possible. Arrangements will be made to make up the in-class exercise or extend the homework deadline.

Academic Integrity

Violations of academic integrity are unacceptable.

In this course you are expected to produce your own work in all assignments.

Written assignments will be submitted through SafeAssign, a software tool that compares your writing against a large database as well as to the work of your current classmates and previously submitted assignments. Assignments with close matches to other work will be flagged and investigated.

The University of Illinois at Urbana-Champaign Student Code should also be considered as a part of this syllabus. Students should pay particular attention to Article 1, Part 4: Academic Integrity. Read the Code at the following URL: <http://studentcode.illinois.edu/>.

Academic dishonesty may result in a failing grade. Every student is expected to review and abide by the Academic Integrity Policy: <https://studentcode.illinois.edu/article1/part4/1-401/>.

Ignorance is not an excuse for any academic dishonesty. It is your responsibility to read this policy to avoid any misunderstanding. Do not hesitate to ask the instructor(s) if you are ever in doubt about what constitutes plagiarism, cheating, or any other breach of academic integrity.

Mental Health

Significant stress, mood changes, excessive worry, substance/alcohol misuse or interferences in eating or sleep can have an impact on academic performance, social development, and emotional wellbeing. The University of Illinois offers a variety of confidential services including individual and group counseling, crisis intervention, psychiatric services, and specialized screenings which are covered through the Student Health Fee. If you or someone you know experiences any of the above mental health concerns, it is strongly encouraged to contact or visit any of the University's resources provided below. Getting help is a smart and courageous thing to do for yourself and for those who care about you.

- Counseling Center (217) 333-3704
- McKinley Health Center (217) 333-2700
- National Suicide Prevention Lifeline (800) 273-8255
- Rosecrance Crisis Line (217) 359-4141 (available 24/7, 365 days a year)

If you are in immediate danger, call 911.

Anti-Racism and Inclusivity Statement

This course is committed to the creation of an anti-racist, inclusive community that welcomes diversity along a number of dimensions, including, but not limited to, race, ethnicity and national origins, gender and gender identity, sexuality, disability status, class, age, or religious beliefs. This course recognizes that Black, Hispanic, and Indigenous voices and contributions have largely either been excluded from, or not recognized in, science and engineering, and that both overt racism and micro-aggressions threaten the well-being of our students and our university community.

The effectiveness of this course is dependent upon each of us to create a safe and encouraging learning environment that allows for the open exchange of ideas while also ensuring equitable opportunities and respect for all of us. Everyone is expected to help establish and maintain an environment where students, staff, and faculty can contribute without fear of personal ridicule, or intolerant or offensive language. If you witness or experience racism, discrimination, micro-aggressions, or other offensive behavior, you are encouraged to bring this to the attention of the course director if you feel comfortable. You can also report these behaviors to Campus Belonging Resources (<https://diversity.illinois.edu/diversity-campus-culture/belonging-resources/>). Based on your report, Members of the Office of the Vice Chancellor for Diversity, Equity & Inclusion staff will follow up and reach out to students to make sure they have the support they need to be healthy and safe. If the reported behavior also violates university policy, staff in the Office for Student Conflict Resolution may respond as well and will take appropriate action.

Land Acknowledgement Statement suggested by the Native American House

“I/We would like to begin today by recognizing and acknowledging that we are on the lands of the Peoria, Kaskaskia, Piankashaw, Wea, Miami, Mascoutin, Odawa, Sauk, Mesquaki, Kickapoo, Potawatomi, Ojibwe, and Chickasaw Nations. These lands were the traditional territory of these Native Nations prior to their forced removal; these lands continue to carry the stories of these Nations and their struggles for survival and identity.

As a land-grant institution, the University of Illinois has a particular responsibility to acknowledge the peoples of these lands, as well as the histories of dispossession that have allowed for the growth of this institution for the past 150 years. We are also obligated to reflect on and actively address these histories and the role that this university has played in shaping them. This acknowledgement and the centering of Native peoples is a start as we move forward for the next 150 years.”

Accommodations

To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the as soon as possible. To ensure that disability-related concerns are properly addressed from the beginning, students with disabilities who require assistance to participate in this class should contact Disability Resources and Educational Services (DRES) and see the instructor as soon as possible. If you need accommodations for any sort of disability, please speak to me after class, or make an appointment to see me or see me during my office hours. DRES provides students with academic accommodations, access, and support services. To contact DRES you may visit 1207 S. Oak St., Champaign, call 333-4603 (V/TDD), or e-mail disability@illinois.edu. <http://www.disability.illinois.edu/>.

Sexual Misconduct Reporting Obligation

The University of Illinois is committed to combating sexual misconduct. Faculty and staff members are required to report any instances of sexual misconduct to the University’s Title IX and Disability Office. In turn, an individual with the Title IX and Disability Office will provide information about rights and options, including accommodations, support services, the campus disciplinary process, and law enforcement options.

A list of the designated University employees who, as counselors, confidential advisors, and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: <https://wecare.illinois.edu/resources/students/#confidential>

Emergency Response Recommendations

Emergency response recommendations can be found at the following website: <http://police.illinois.edu/emergency-preparedness/>.

For more information, review this website and the campus building floor plans. <http://police.illinois.edu/emergency-preparedness/building-emergency-action-plans/>.