

EAS4700 Aerospace Design 1

Modifications to this syllabus may be required during the semester. Any changes to the syllabus will be posted on announced in class and on CANVAS.

Instructor: Ting Dong dting0603@ufl.edu

Project: <https://hulc.nianet.org/wp-content/uploads/2023-HLS-Competition-Guidelines-FINAL.pdf> Links to an external site.

Topics:

Astrodynamics

Propulsion System

Structures

Thermal control

Power system

Guidance, Navigation and Control

Telecommunication

Cost estimation

Suggested textbooks:

1. Element of Spacecraft Design, by Charles D. Brown
2. Space Mission Analysis and Design, by James R. Wertz and Wiley J. Larson
3. Human Spaceflight Mission Analysis and Design, By Wiley J. Larson, Peter D. McQuade, and Linda K. Pranke

Assignments:

Peer evaluation 20%

Weekly reports 35%

90-second pitch video 5%

Final presentation 10%

Final report 30%

Proposed grading scale

93-100 = A, 90-92.9 = A-, 87-89.9 = B+, 83-86.9 = B, 80-82.9 = B-, 77-79.9=C+, 73-76.9=C, 70-72.9 = C-, 67-69.9=D+, 63-66.9 = D, 60-62.9 = D-, <60 = E

N.B. A grade of C- will not be a qualifying grade for critical tracking courses. Furthermore, in order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). For more information on grades and grading policies, please visit: <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> (Links to an external site.)

Individuals who fail to support their group or 'ghost' the course, as demonstrated by peer evaluation scores two standard deviations below the class average, earn a failing grade in EML4700 regardless of points accumulated in the class.

Course objectives:

By the end of this course, you should be able to do the following:

1. Prepare technical documents in aerospace industry.
2. Give technical presentations, develop communication skills.
3. Work in team and lead a team.
4. Seek, find, and assimilate the knowledge you need to solve new problems.

Aerospace Engineering UF Student Learning Outcomes:

- (1) Apply knowledge of mathematics, science, and engineering principles to aerospace engineering problems (ABET Outcome (1))
- (2) Design and conduct aerospace engineering experiments and analyze and interpret the data (ABET Outcome (6))
- (3) Design an aerospace engineering system, component or process to meet desired needs within realistic economic, environmental, social, political, ethical, health and safety, manufacturability and sustainability constraints (ABET Outcome (2))
- (4) Communicate technical data and design information effectively in speech and in writing to other aerospace engineers (ABET Outcome (3))

Miscellaneous Policies: Students will be held responsible for knowledge of all scheduling and policy announcements made in class.

Academic Honesty: UF students are bound by The Honor Pledge which states

We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code.

On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “

On my honor, I have neither given nor received unauthorized aid in doing this assignment

The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

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Course Evaluations: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online *via* GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/> ([Links to an external site.](#)). Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/> ([Links to an external site.](#)). Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/> ([Links to an external site.](#)).

Software Use: All faculty, staff and student of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and peers to the highest standards of honesty and integrity.

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Student Privacy: There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information see: <http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html> ([Links to an external site.](#))

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Accommodations For Disabilities: Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, <https://www.dso.ufl.edu/drc>) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Commitment To A Safe And Inclusive Learning Environment: The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. If you feel like your performance in class is being impacted by discrimination or harassment of any kind please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator (Dr. Sarntinoranont)
- Robin Bielling, Director of Human Resources, 352-392-0903, rbielling@eng.ufl.edu
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@ufl.edu

Campus Resources:

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Health and Wellness

U Matter, We Care:

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc> (Links to an external site.), and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS) at Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/> (Links to an external site.).

Sexual Discrimination, Harassment, Assault, Or Violence: If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

Academic Resources

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E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml> (Links to an external site.).

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. <https://www.crc.ufl.edu/> (Links to an external site.).

Library Support, <http://cms.uflib.ufl.edu/ask> (Links to an external site.). Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <https://teachingcenter.ufl.edu/> (Links to an external site.).

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <https://writing.ufl.edu/writing-studio/> (Links to an external site.).

Student Complaints

Campus: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf (Links to an external site.).

On-Line Students Complaints: <http://www.distance.ufl.edu/student-complaint-process> (Links to an external site.).