UNIVERSITY of FLORIDA
The Foundation for The Gator Nation

EAS 4710: Aerospace Design 2
Spring 2023 Syllabus – Course Section 2195

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

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Lecture times: T: 9th, 10th period, R: 9th period

Office hours: M, W, F 8th period

Course Description: This course will focus on designing and building an unmanned, electric powered, radio controlled aircraft. Students are expected to design aircraft wing, fuselage, propulsion system, tail, landing gear, etc. With the designed CAD model, majority of the structure components will be 3D printed (with carbon fiber composite as optional). Students also need to learn what electronics are needed and how to install them on the RC airplane. There will be a test fly towards the end of the semester.

Textbook: Daniel P. Raymer, "Aircraft Design : A Conceptual Approach,"

John D. Anderson Jr., "Aircraft Performance and Design,"

Course Topics:

Chap 2 Overview of Design Process	Chap 13 Propulsion
Chap 3 Sizing from a Conceptual Sketch	Chap 14 structures and Loads
Chap 4 Airfoil and Wing/Tail Geometry Selection	Chap 16 Stability, control and handling Qualities
Chap 5 Thrust-to-Weight Ratio and Wing Loading	Chap 17 Performance and Flight Mechanics
Chap 12 Aerodynamics	

Assignments:

- 3d printing sample of aircraft components in the first week 1%
- Peer evaluation 15% (Peer evaluation is submitted weekly starting from the first week of group work towards the end of the semester.)
- Weekly reports 16% (From week 2 to week 6, these reports focus on theory design.)
- Weekly goal and reflection reports 8% (From week 6 until the end of the semester)
- Test flight 30%
- 90-second pitch video 5%
- Final presentation 10%
- Final report 15%

Same as all other capstone design classes in our department, you need to submit your resume at the beginning and end of the semester (with and without quantitative score) No points for resume. But fail to submit will lose 2 points in your final grade for each submission. (4 in total)

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 EML4710 regardless of points accumulated in the class.

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

Re-grading Policy: Any re-grade requests must be submitted in an e-mail or in writing within two weeks after return of the graded paper. The written request must explain in detail what you want the grader to do and where you believe he/she has made a mistake in grading.

Attendance and Excused Absences: Even though attendance is not required, it is extremely important that students attend the class regularly. If you miss a lecture you are responsible for finding out from a classmate what we did in class. If you have a documented and excusable absence for a sustained period (> 1 week) please contact the professor to make any special arrangements**.**

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.

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/. 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/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

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.

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

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:

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, 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/.

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

E-learning technical suppor*t*, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. https://www.crc.ufl.edu/.

Library Support, http://cms.uflib.ufl.edu/ask. 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/.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. https://writing.ufl.edu/writing-studio/.

Student Complaints Campus*: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.

On-Line Students Complaints*: http://www.distance.ufl.edu/student-complaint-process.