San José State University
AE 295A – Aerospace Engineering Project I
Fall, Spring, Summer

Course and Contact Information

Instructor-of-Record:	Dr. Nikos J. Mourtos
Office Location:	Engr. 272A – ***Zoom during Covid***
Telephone:	
Email:	nikos.mourtos@sjsu.edu
Office Hours:	As posted on AE website – ***Zoom during Covid;*** email me for time and link
Credit:	3 units
Class Days/Time:	F 4:30 – 7:20 pm
Classroom:	As posted in the SJSU Schedule of Classes – ***Zoom during Covid***
Writing Assistance:	Dr. Radha Aravamudhan radha.aravamudhan@sjsu.edu
Prerequisites:	Admission to Candidacy for the MSAE degree. Written proposal approved by MSAE Thesis/Project Advisor and AE Chair.

Course Description

This is a first-semester Master's Project course. Students perform graduate level research and/or design and/or development, involving aerospace systems or components in consultation with an aerospace engineering faculty member. Students are encouraged to submit and present their work at student and professional conferences.

Course Goals

1. Apply contemporary professional and lifelong learning skills to access and process project related information effectively and efficiently from a variety of sources.
2. Acquire the expertise necessary to work in the analysis and design of aerospace systems with possible specialization in one of the following 2 areas: (a) aircraft design, (b) space transportation and exploration.
3. Improve verbal and written communication skills, including the ability to write aerospace engineering technical reports and conference papers.
4. Improve ability to perform research and work independently to solve open-ended aerospace engineering problems.

Course Learning Outcomes (CLO)

Upon completion of this course students will be able to:

1. Conduct a literature review on an aerospace engineering topic using appropriate sources from the worldwide web, the library, professional journals, conference papers, and technical reports.
2. Use the results of the literature review to define appropriate project objectives.

3. Apply graduate level mathematics, science, and engineering principles to carry out the project using analytical and/or experimental, and/or computational methods.
4. Document the project results in a detailed engineering report following the given formatting guidelines and the AIAA (American Institute for Aeronautics and Astronautics) convention for references.

Required Text: None

Course Requirements and Assignments

Fall Semester	*Spring Semester*	*Summer Term*	*Assignments (must be uploaded on CANVAS)*
2nd Day of Class			Writing Workshop – attendance is mandatory
September 30	February 28	June 19	1st written report due (Chapter 1)
October 30	March 30	July 10	2nd written report due (Chapter 2)
November 30	April 30	July 31	End-of-semester written report due to advisor for review (minimum: 3 chapters)
December 15	May 15	August 10	End-of-semester written report with corrections, due to Project Advisor and Instructor-of-Record.

Grading Policy

Grades are determined by the thesis / project advisor and committee members based on the criteria shown on the evaluation form included below. However, a formal written report following the posted AE guidelines or a published paper, must be submitted to the Instructor-of-Record before a grade can be assigned.

MSAE Thesis / Project Evaluation Form

Title					
Name					Semester –
Advisor					
Max Possible Score = 100		Max Possible	***Average score***	Project Advisor	Other Evaluator
1	Application of AE science (aerodynamics, propulsion, flight mechanics, stability & control, aerospace structures & materials, etc.) and/or aerospace vehicle design, appropriate for graduate level	20			
2	Use of modern tools (computational or experimental)	10			
3	Appropriate literature search (# and appropriateness of references cited)	10			
4	Understanding of the cited literature (summary of previous work)	10			
5	In-depth analysis and / or design of an AE system	20			
6	Correct language and terminology	20			
7	Appropriate use of graphs and tables	10			
	Total Score	***100***			

Grade Distribution / Overall Score:

Total Score	Letter Grade
90 - 100	A (Excellent)
80 - 89	B (Good)
0 - 79	F (Not Acceptable)

Reports To receive a passing grade in the course, reports must follow ***all the guidelines***, as explained in the attached document. MSAE project reports from past years can be found on the MSAE website. Reports are graded for English (grammar, spelling, punctuation, etc.) as well as technical content. Please ***work with Dr. Aravamudhan*** to improve your writing as needed. Email her to make an appointment anytime during the semester. Written reports not meeting minimum writing proficiency standards will be returned without a grade. ***If your report is returned ungraded because of writing issues, you must meet with Dr. Aravamudhan*** to revise your report.

AE Department Policies

Can be found at <http://www.sjsu.edu/ae/programs/policies/>

University Policies

Can be found at <http://info.sjsu.edu/static/catalog/policies.html>