San José State University
Charles W. Davidson College of Engineering

AE 298 – Special Projects in Aerospace Engineering
Fall, Spring, Summer

Course and Contact Information

Instructor-of-Record:	Dr. Nikos J. Mourtos
Office Location:	Engineering Building, Room 272A
Telephone:	408-924-3867
Email:	nikos.mourtos@sjsu.edu
Office Hours:	As posted on AE website
Credit:	1 (one), 2 (two) or 3 (three) units. 3 sections offered every term; register for the section with the desirable number of units.
Class Days / Time	TBA
Prerequisites:	Written proposal approved by Project Advisor and AE Chair.

Course Description

This is a graduate level course in aerospace engineering research and / or aerospace design. Students perform graduate level research and/or design and/or development, involving aerospace systems or components in consultation with an aerospace engineering faculty member. The work may be performed on campus or in industry through an internship. The course may be used for ***Curricular Practical Training (CPT).*** Upon AE Department Chair approval, the course may be used as a graduate elective.

Students may work on a new project, agreed upon with a faculty member. Alternatively, qualified students may use AE298 to extend their research / design work for the purpose of producing a peer-reviewed publication in conference proceedings or a journal. For example, students may work with a faculty member to (a) initiate a project, which may be continued later in AE295A and AE295B or in AE299 or (b) perform additional, in-depth work on a project already completed in AE295A and AE295B or in AE299.

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

Required Text: None

Course Requirements and Assignments

Fall Semester	*Spring Semester*	*Summer Term*	*Assignments (must be uploaded on CANVAS)*
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 project advisor based on the criteria shown on the evaluation form 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 posted.

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)	20			
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	20			
	Total Score	***100***			

Grade Distribution/Overall Score

Total Score	Grade
90 - 100	CR
80 - 89	CR
0 - 79	NC

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>