

- Prerequisites:** Admission to Candidacy for the Master's Degree and an approved Project/Thesis proposal.
- Class Codes:** AE 295A section 01 – 42711
AE 295B section 01 – 42712
AE 299 section 01 – 42713
ME 295A section 01 – 42761
ME295B section 01 – 42763
ME 299 section 01 – 42762
- Class Hours:** F 16:00 – 17:15, Room E 339
- Instructor:** [Dr. Buff Furman](#) Office: E310G Phone: 408-924-3817
Email: bjfurman@sjsu.edu FAX: 408-924-3995
- Office Hours:** M 11:30 – noon, Tu 13:30 – 15:00, W 9:00 – 10:30, Th 14:30 – 15:00,
Fri 17:30 – 18:00, or by appointment.
- Course Description:** Advanced individual work in Aerospace Engineering or Mechanical Engineering including, but not limited to, research, design, development, and simulation studies.
- Grading:** Letter grades will be issued for students enrolled in AE-ME 295AB and Credit/No Credit grades will be issued for students enrolled in AE-ME 299, subject to completion of all course requirements including an approved proposal, documented records of visits with Study Committee Chair, and members; timely submission of written draft and final semester report and presentations.
- Timeline:** – New Project Proposals are to be submitted no later than 8/25/06.
– Each student is expected to make three presentations, plus the final semester presentation per attached instructions.

Academic Integrity

Students in this course are expected to maintain high ethical standards in all matters pertaining to the course, including, but not limited to, course assignments, presentations, writing, laboratory work, treatment of class members, and behavior in class. Cheating and plagiarism are violations of the SJSU Policy on Academic Integrity (S04-12) and will not be tolerated in the class. Students are expected to have read the Policy, which is available at:

<http://www2.sjsu.edu/senate/S04-12.pdf>

Plagiarism is defined as, *the use of another person's original (not common-knowledge) work without acknowledging its source.*¹ Thus plagiarism includes, but is not limited to²:

- copying in whole or in part, a picture, diagram, graph, figure, etc. and using it in your work without citing its source
- using exact words or unique phrases from somewhere without acknowledgement
- putting your name on a report, homework, or other assignment that was done by someone else

¹ Definition adapted from “Defining and Avoiding Plagiarism: The WPA Statement on Best Practices,” <http://www.ilstu.edu/~ddhesse/wpa/positions/WPAplagiarism.pdf>; and “What is Plagiarism?,” <http://www.stanford.edu/dept/vpsa/judicialaffairs/students/plagiarism.sources.htm>.

² Adapted from, “Avoiding Plagiarism,” http://owl.english.purdue.edu/handouts/research/r_plagiar.html.

In this class, particularly in writing your project report/thesis, you must be especially vigilant to avoid plagiarizing the work of others. You must properly and completely cite any and all information that you include in your report/thesis that is not common knowledge or does not originate from you. Many students are unaware that copying an image or a block of text from the Internet or other electronic resources, for example, and inserting it into their work without citation constitutes plagiarism.

Students are expected to familiarize themselves with how to avoid plagiarism. Several helpful resources can be found at:

<http://www.stanford.edu/dept/vpsa/judicialaffairs/students/plagiarism.sources.htm>

AE-ME 295AB/299 Course Goals

In AE-ME 295/299 the student will learn how to:

1. Conduct engineering research
2. Apply mathematics appropriate for graduate level engineering research
3. Apply scientific principles and practices appropriate for graduate level engineering research
4. Apply engineering fundamentals appropriate for graduate level engineering research
5. Apply modern design, analysis, and experimental tools to the chosen research problem
6. Communicate the results of engineering research effectively in written form and in oral presentations

Student Learning Objectives

At the end of the course, the student who has mastered the course material will be able to:

1. Conduct a literature review on a topic of engineering research using a full range of information sources
2. Summarize findings and draw valid conclusions from engineering research
3. Present the results of research work in front of peers following accepted presentation methods
4. Document the results of research work in a detailed engineering report following accepted format and style guidelines

Resources

Make it a point to visit the AE-ME 295/299 website at: (http://www.engr.sjsu.edu/bjfurman/courses/AE-ME295AB_299/) for course materials and additional resources relating to conducting research.

References

1. Leedy, P. D., Ormrod, J. E., Practical Research: Planning and Design, 8th ed., Prentice Hall, New Jersey, 2004. ISBN: 0131108956
2. Literature Reviews, University of Southern Australia, [available online at: <http://www.library.unisa.edu.au/infoskills/litreviews.asp>], visited 09AUG2006.
3. Conducting a Literature Review, University of Melbourne, [available online at: <http://www.lib.unimelb.edu.au/postgrad/litreview/gettingstarted.html>], visited 09AUG2006.

Approximate Course Schedule

Wk	Date	Session Focus	Assignments and Deliverables
1	8/25	Enrollment and administrative, course introduction and expectations, overview of the literature review and how to conduct one	<u>Assigned:</u> Take SJ Library online tutorials: InfoPower and 5 Ways to Find Articles and Books; develop search terms for 9/1 session <u>Due:</u> Project Proposal
2	9/1	Information resources in the MLK Library (class will meet in the Library, room 213)	<u>Assigned:</u> Draft of literature review <u>Due:</u> Search terms
3	9/8	Panel discussion with MAE profs on how to conduct research	<u>Assigned:</u> Summary of key points from Panel Discussion <u>Due:</u> Semester Plan and Schedule Resubmission of Project Proposal
4	9/15	2 nd semester student presentations – Group A	<u>Due:</u> Summary of key points from Panel Discussion
5	9/22	2 nd semester student presentations – Group B	
6	9/29	1 st semester student proposal presentations – Group A	<u>Due:</u> Literature review draft
7	10/6	1 st semester student proposal presentations – Group B	
8	10/13	2 nd semester student progress presentations – Group A	
9	10/20	2 nd semester student progress presentations – Group B	
10	10/27	1 st semester student progress presentations – Group A	
11	11/3	1 st semester student progress presentations – Group B	
12	11/10	Veteran's Day Holiday – No class!	
13	11/17	Writing the final report, make-up presentations	<u>Due:</u> Outline of project report
14	11/24	Thanksgiving Holiday – No class!	
15	12/1	TBD	TBD
16	12/8	End of Semester Presentations (see schedule)	
17			
18	12/18		<u>Due:</u> Project Report/Thesis to Committee Chair and Course Instructor

Important Notes:

- Campus policy in compliance with the Americans with Disabilities Act: If you need course adaptations or accommodations because of a disability, or if you need special arrangements in case the building must be evacuated, please communicate this to the instructor as soon as possible. Presidential Directive 97-03 requires that students with disabilities register with the Disability Resource Center (DRC) to establish a record of their disability.”
- If you must be absent from class, please give me a call, or send me an email prior to the class meeting to let me know that you will not be coming. Don't just not show up!

Last day to drop without penalty: **September 5th, 2006**

Last day to add or register late: **September 12th, 2006**