



## Syllabus for ME190-03: Special Topics in ME

Fall 2017

Instructor: Ashlie Martini

**Designation:**

Design Thinking

**Catalog Description:**

Design thinking is a creative process used to develop engineering solutions in the presence of sometimes ambiguous specifications. The design thinking process involves understanding client needs, defining design criteria based on those needs, identifying multiple design options, and then prototyping and testing those options. This course will introduce design thinking and provide students with an opportunity to practice the process by applying it to case studies related to mechanical components. The objective of the course is to prepare students for the open-ended nature of the engineering challenges they will face in Capstone Design and as practicing engineers.

**Text Books and Other Required Materials:**

No required textbook

**Course Objectives/  
Student Learning Outcomes:**

Upon completion of the course, students will be able to:

- Apply knowledge regarding the topic
- Identify, formulate, and solve problems as relevant to the topic
- Use techniques, skills, and tools as relevant to the topic
- Design a system, component, or process
- Understand contemporary issues associated with the topic

**Program Learning Outcomes:**

**Prerequisites by Topic:**

**Course Policies:**

**Academic Dishonesty Statement:**

- a. Each student in this course is expected to abide by the University of California, Merced's Academic Honesty Policy. Any work submitted by a student in this course for academic credit will be the student's own work.
- b. You are encouraged to study together and to discuss information and concepts covered in lecture and the sections with other students. You can give "consulting" help to or receive "consulting" help from such students. However, this permissible cooperation should never involve one student having possession of a copy of all or part of work done by someone else, in the form of an e mail, an e mail attachment file, a diskette, or a hard copy. Should copying occur, both the student who copied work from another student and the student who gave material to be copied will both automatically receive a zero for the assignment. Penalty for violation of this Policy can also be extended to include failure of the course and University disciplinary action.
- c. During examinations, you must do your own work. Talking or

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discussion is not permitted during the examinations, nor may you compare papers, copy from others, or collaborate in any way. Any collaborative behavior during the examinations will result in failure of the exam, and may lead to failure of the course and University disciplinary action.

**Disability Statement:**

Accommodations for Students with Disabilities: The University of California Merced is committed to ensuring equal academic opportunities and inclusion for students with disabilities based on the principles of independent living, accessible universal design and diversity. I am available to discuss appropriate academic accommodations that may be required for student with disabilities. Requests for academic accommodations are to be made during the first three weeks of the semester, except for unusual circumstances. Students are encouraged to register with Disability Services Center to verify their eligibility for appropriate accommodations.

**Topics:****Class/laboratory Schedule:**

W 3:30 - 4:20 pm

**Midterm/Final Exam Schedule:**

None

**Course Calendar:****Professional Component:****Assessment/Grading Policy:**

60% Attendance and Participation

- o 36% for attendance; 3% for each of the twelve lectures (half off if late for class)
- o 12% based on qualitative assessment during class in the first half of the semester
- o 12% based on qualitative assessment during class in the second half of the semester

40% Group Case Study Deliverables (Slides and Oral presentation)

- o 5% for the first case
- o 8% for the second case
- o 12% for the third case
- o 15% for the fourth case

**Coordinator:**

Ashlie Martini

**Contact Information:**

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**Office Hours:**

By appointment