

San José State University
Department of Mechanical Engineering
ME 154-Mechanical Engineering Design, Section 02, Fall 2018

Course and Contact Information

Class Days/Time:	Mondays and Wednesdays 10:00-16:40
Classroom:	Engineering Building room 301
Registration Code:	43588
Prerequisites:	ME101, ME20, CE112, Math 25; all with a C or better.
Corequisite:	TECH/ME41 (either completed previously or co-enrolled)
Instructor:	Amir Armani
Office Location:	Engineering 311
Telephone:	408-924-8354
Email:	amir.armani@sjsu.edu
Office Hours:	Mo/We 17:00-18:00 & Tu 15:00-17:00

Course Format

This is a mixed mode class, with both in person and online components. Online components require use of the Canvas learning management system, accessed <https://sjsu.instructure.com>. Successful completion of course requirements necessitates accessing the course website frequently, typically at least twice a week on a regular basis. Technical support for Canvas is available <http://www.sjsu.edu/at/ec/canvas>. Important communications regarding this class may be sent via Canvas or to email addresses listed in MySJSU, and thus each student is expected to maintain contact information in both systems.

Course Description <http://info.sjsu.edu/web/bgen/catalog/courses/ME154.html>

Outcomes

Upon successful completion of this course, students will be able to:

1. Apply the concept of kinematics pairs to a mechanism.
2. Identify the different types of four bar mechanisms.
3. Identify the toggle positions and to design a given mechanism.
4. Synthesize a four bar mechanism using a generation task.
5. Perform a kinematics analysis of a mechanism.
6. Perform a kinetic analysis of a mechanism.
7. Determine the magnitude and location of maximum (von Mises stress) on a component.

8. Design and analyze short and long columns.
9. Design and analyze thin and thick walled cylinders under pressure and to select proper interference fits for press or shrink fits.
10. Design and analyze ductile and brittle machine components under static loads using appropriate failure criterion
11. Estimate the value of stress concentration factor.
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30% for two Midterm Exams (15% each)
25% for Design Project
30% for Final Exam

The overall course grade is calculated from a weighted sum of all graded components. Graded percentage points correspond to letter grade as follows:

93.0-100.0 A | 90.0-92.9 A- | 87.0-89.9 B+ | 83.0-86.9 B | 80.0-82.9 B-
77.0-79.9 C+ | 73.0-76.9 C | 70.0-72.9 C- | 67.0-69.9 D+ | 63.0-66.9 D | 60.0-62.9 D- | 50-59.9 F

Team Assignments and Peer Grading Team assignments will be used for some portions of the course, and some assignments may involve peer grading. Alternative options will be considered for compelling reasons, but arrangements must be pre-approved in writing with ample time before corresponding deadlines (i.e. several days or even weeks in advance).

Exceptions Any grading appeals or late petitions must be petitioned promptly in writing (email). Exceptions will normally be evaluated at the very end of the semester in context with semester track record and all other exceptions class-wide. Special consideration for truly unavoidable and extenuating circumstances will depend on timing and strength of supporting documentation (e.g., doctor's note, jury summons, military orders).

University Policy F131 at <http://www.sjsu.edu/senate/docs/F131.pdf> states: "All students have the right, within a reasonable time, to know their academic scores, to review their grade-dependent work, and to be provided with explanations for the determination of their course grades."

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