Tu & Th 16:30-17:30 via Zoom: https://sjsu.zoom.us/my/armani

Engineering 213/215 for in-person sessions

BSME or Instructor Consent

Dr. Amir Armani

Tu & Th 15:30-16:30 via Zoom: https://sjsu.zoom.us/my/armani

Mr. Kaushik Katti

kaushiklaxminarayan.katti@sjsu.edu

This is a hybrid class, with mostly asynchronous online sessions and a few optional in-person sessions. It requires use of the Canvas learning management system, accessed via https://sjsu.instructure.com. Course materials, including syllabus, lecture videos, slides, assignments, and projects will be gradually uploaded on Canvas. 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 at 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 up-to-date contact information in both systems.

Course Description http://info.sjsu.edu/web-dbgen/catalog/courses/ME273.html

Introduction into various finite element methods for developing stiffness equation. Truss, beam, 2-D and 3-D axisymmetric elements. Applications and case studies.

Course Learning Outcomes

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

Program Learning Outcomes

The following program learning outcomes (PLOs) are designated for ME 273:

1. A strong foundation beyond the undergraduate level in their chosen focus area as well as in mathematics, basic science and engineering fundamentals, to successfully compete for technical engineering positions in the local, national and global engineering market, advance in their current position or pursue doctoral studies.
2. Professional and lifelong learning skills to be able to apply and extend theory

10% for Homework

Academic integrity

Your commitment, as a student, to learning is evidenced by your enrollment at San Jose State University. The University Academic Integrity Policy S07-2 at http://www.sjsu.edu/senate/docs/S07-2.pdf requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The Student Conduct and Ethical Development website is available at http://www.sjsu.edu/studentconduct/

Campus Policy in Compliance with the American Disabilities Act

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please inform me in writing as soon as possible (email acceptable). Presidential Directive 97-03 at http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf requires that students with disabilities requesting accommodations must register with the Accessible Education Center (AEC) at http://www.sjsu.edu/aec to establish a record of their disability.

Student Technology Resources

Computer labs for student use are available in the Academic Success Center

Tentative Course Schedule

Week	Topics
1	Course organization, Introduction
2	Linear Algebra, FEA Procedure (Chapter 1)
3	Stiffness Method (Chapter 2), Spring Element (Chapter 2)
4	Spring Element (Chapter 2), Trusses (Chapter 3)
5	Trusses (Chapter 3)
6	Beams (Chapter 4)
7	Introduction to 2D Elasticity, Plane Solids (Chapter 6)
8	Plane Solids (Chapter 6)
9	Review and Midterm Exam
10	Practical Considerations (Chapter 7), Sensitivity Analysis and Optimization
11	ANSYS
12	ANSYS
13	ANSYS
14	ANSYS
15	Project Presentation

The Final Exam will be held on Thursday, December 17, 15:30-19:30.