

**Mechanical Engineering 308:
Finite Element Analysis
Course Syllabus – Spring 2022**

INSTRUCTOR:	Matthew Mione Campus Office: O’Connell 423 Campus Phone: 530-898-4960 mmione@csuchico.edu Office Hours: TR 1:00 – 3:00 PM Additionally, by appointment in person or on Zoom. *Subject to change
CLASS	MWF 10:00 – 10:50 AM
PREREQUISITES:	CIVL 311 with a grade of C- or higher; MECH 306

Course Description:

Development of finite element formulation from fundamental governing engineering equations. Coverage includes areas ranging from elasticity, vibration, and heat transfer to acoustics and composites.

Course Usage of Blackboard Learn

This course will make use of the Blackboard Learn course management system. All PowerPoint lectures, handouts, homework solutions, grades, announcements, etc. will be available on the course Blackboard page.

Required course materials include textbook, engineer’s pad, scientific calculator, and laptop computer. Primary software utilized will be Excel, Matlab, and SolidWorks Simulation. Also recommend Google Drive, Dropbox or a similar means of cloud based storage of documents. Note that lost, stolen, or corrupted laptops, tablets, or flash drives is not an accepted excuse for missed work. You are responsible for regularly checking the online resources.

Textbook:

Required:	Logan, D.L., A First Course in the Finite Element Method, Sixth Edition, Cengage Learning, ISBN 13: 978-1-305-63511-1
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Communication

If you need to meet or contact me, please attend office hours or email. Please use my contact information listed on the first page to communicate, and do not go through the Blackboard channels. Email is by far the best way to get a hold of me.

In the event that I need to contact the class (schedule, assignment, etc.), it will be done via your university email account linked to the Portal. University policy requires students to monitor campus email accounts and it is suggested that you set up email forwarding if you have another preferred email account.

Dropping and Adding

You are responsible for understanding the policies and procedures about add/drops, academic renewal, etc. found <http://www.csuchico.edu/catalog/>. You should be aware of the deadlines and penalties for adding and dropping classes. I do not handle adding into the course, you need to see or email our MMEM Administrative Support Coordinator, Martha Layne (mlayne@csuchico.edu), to do so. You are the only one responsible for dropping the class.

Grading:

Homework 20%

Tests 60%

Project 20%

*Subject to change as COVID requirements change

Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	F
	93.33	89.50	86.67	83.33	79.50	76.67	73.33	69.50	65.00	59.50	0.00

Homework:

Homework will be assigned regularly throughout the semester and is an integral part of the learning experience for this class. Unless otherwise specified, homework is due the second-class meeting after it is assigned. For example, homework assigned on Monday is due on the following Friday; homework assigned on Wednesday is due the next Monday. This algorithm allows for questions on assigned homework during the intermediate class meeting. See the Homework Guidelines document for instructions on format, content, etc.

Tests:

There will be three fifty-minute tests, two during the semester and one during exam week. Tests will be closed book and closed note. A formula sheet will be posted to Blackboard in advance of each exam. Students are strongly encouraged to print the formula sheet and bring it to the exam. Students can add any additional information they wish to the formula sheet. Handheld scientific calculators will be allowed for the exams. Laptops, tablets, smart phones, or other connected devices will not be permitted.

Projects:

The course will conclude with a comprehensive project on a topic of the student's choosing. The project is intended to reinforce concepts from the course and illustrate their application to a real-world engineering application. Project submission will be in the form of a written report.

Submitting Work:

Homework is due at the **beginning** of the designated class period. Assignments will be accepted late the same day with a one letter grade deduction. Homework submitted after the first few minutes of class is considered late and will receive a letter grade deduction (be on time). Assignments will not be accepted after their due date. Homework cannot be submitted in stages (the initial submission is all that is accepted). **I do not accept assignments via email.** There is spell check in Excel.

Certain assignments will be designated for electronic submission which will be handled via Assignments in Blackboard Learn. Students are strongly encouraged to verify submissions made through Blackboard Learn. It is the student's responsibility to ensure the correct file has been submitted for the assignment. **No accommodations are made for incorrect submissions.**

COVID-19 Face Mask Requirement

Reminder: The CSU requires students to be fully vaccinated and boosted against COVID-19 by **February 28, 2022**, unless you have an approved exemption. Currently, Chico State is requiring everyone on campus to wear an approved face covering in all indoor campus spaces. Accordingly, all students are required to wear an appropriate face mask covering the nose and mouth in order to participate in this course. Policies and requirements regarding COVID-19 are subject to change pursuant to campus, local, state and/or federal guidelines.

Please note that dishonesty relating to the vaccination policy and/or your failure to comply with any other COVID-19 related safety policy or mandate, including the face covering requirement, may result in disciplinary action against you through the office of Student Conduct, Rights and Responsibilities, which can include suspension or expulsion from the California State University system.

Individuals unable to wear a face covering due to a medical condition should contact the Accessibility Resource Center by phone at (530) 898-5959 or by email at arcdept@csuchico.edu.

University Policies and Campus Resources

Academic integrity

Students are expected to be familiar with the University's Academic Integrity Policy. Your own commitment to learning, as evidenced by your enrollment at California State University, Chico, and the University's Academic Integrity Policy requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the Office of Student Judicial Affairs. The policy on academic integrity and other resources related to student conduct can be found at: <http://www.csuchico.edu/sid/integrity.shtml>.

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 make an appointment with me as soon as possible, or see me during office hours. Students with disabilities requesting accommodations must register with the DSS Office (Disability Support Services) to establish a record of their disability.

Special accommodations for exams require ample notice to the testing office and must be submitted to the instructor well in advance of the exam date.

IT Support Services (<http://www.csuchico.edu/itss>)

The CAD lab with SolidWorks installed is located in OCNL 438. Other (non-CAD) computer labs for student use are located on the first and fourth floor of the Meriam Library, Room 116 and 450, Tehama Hall Room 131, and the Bell Memorial Union (BMU) basement.

Student Services (<http://www.csuchico.edu/current-students>)

Student services are designed to assist students in the development of their full academic potential and to motivate them to become self-directed learners. Students can find support for services such as skills assessment, individual or group tutorials, subject advising, learning assistance, summer academic preparation and basic skills development.

Americans with Disabilities Act (<http://www.csuchico.edu/arc>)

If you need course adaptations or accommodations because of a disability or chronic illness, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as

soon as possible, or see me during office hours. Please also contact Accessibility Resource Center (ARC) as they are the designated department responsible for approving and coordinating reasonable accommodations and services for students with disabilities. ARC will help you understand your rights and responsibilities under the Americans with Disabilities Act and provide you further assistance with requesting and arranging accommodations.

Accessibility Resource Center

530-898-5959

Student Services Center 170

arcdept@csuchico.edu

Student Learning Center (<http://www.csuchico.edu/slc>)

The mission of the Student Learning Center (SLC) is to provide services that will assist CSU, Chico students to become independent learners. The SLC prepares and supports students in their college course work by offering a variety of programs and resources to meet student needs. The SLC facilitates the academic transition and retention of students from high schools and community colleges by providing study strategy information, content subject tutoring, and supplemental instruction. The University Writing Center has been combined with the Student Learning Center.