

The University of Texas at El Paso

MECH 5301/6301 – Mathematical Methods for Mechanical Engineers

Course Syllabus
Spring 2024

Meeting Time:	MW 9:00 – 10:20
Final Exam Time:	TBD
Course Designation:	MECH 5301/6301
CRN	21589
Credit Hours:	3
Lecture Hours:	3
Course Description:	The primary objective of this class is to give a grounding in some basic mathematical analysis methods that are most relevant to mechanical engineers. Topics include linear algebra and vector spaces, tensorial calculus, and ordinary and partial differential equations.
Prerequisite(s):	None.
Co-requisite(s):	None.
Course Website:	https://cocalc.com/app

INSTRUCTOR INFORMATION

Jack Chessa, Ph.D.

Office:	Engineering Building, Room A-126
Office Hours:	TBD
Email:	jfchessa@utep.edu

Joel Quintana, Ph.D.

Office:	Engineering Building, Room A-110
Office Hours:	MW 11:00 – 12:00pm
Email:	jquintana@utep.edu

TA INFORMATION

Dominic Austen

Office:	TBD
Office Hours:	TBD
Email:	TBD

TEXTBOOK

Div, Grad, Curl, and All That, An Informal Text on Vector Calculus. - H. M. Schey

Publisher: <https://wnorton.com/books/9780393925166>

Amazon: <https://www.amazon.com/Div-Grad-Curl-All-That/dp/0393925161>

SOFTWARE

CoCALC/Python, [MathWorks MATLAB](#)

GRADE DISTRIBUTION

Homework + Quizzes	50%	≥ 90.00	A
Exams (up to 3)	30%	89.99 - 80	B
Final Exam/Project	20%	79.99 - 70	C
		69.99 - 60	D
		≤ 60	F

ACADEMIC HONESTY

During exams, you are not allowed to use any wifi-enabled electronic device, including cell phones or other electronic communication devices or methods (wristwatches, earbuds, etc.). No wristwatch or other electronic device may be worn. Calculators and watches may be subject to inspection. You may be asked to remove glasses to allow for their inspection temporarily. You may not bring backpacks, hats, bulky coats, or hoodies into the exam room. Lockers are not available at the exam site so plan and leave your belongings in a secure location. You may NOT sit them in the corner of the exam room. You must show your work for all problems. You must use the paper provided by the instructor. If no work is shown, you may not receive credit. After the exam, the instructor may require you to explain how you solved a problem on the exam. You may be subject to disciplinary action if you refuse to or cannot explain your work. No electronic version of the book, loose paper printouts, or extra sheets of paper is allowed unless explicitly mentioned in writing by the instructor. As a part of the zero-tolerance policy, if you have a cellphone or other electronic device capable of communication on your person, if any proctor sees or hears any electronic device during the exam, or if you share your work with someone else, you will be reported to the proper authorities. You may receive a zero on the exam or an F in the class. Other actions including suspension may also be pursued. No one will be allowed to leave the room during an exam. This includes restroom breaks. University-approved recording devices may be located in the room and may be out of sight of the students. These recordings will be managed according to the UTEP-approved regulations for such media. The instructor may create a record of your activity during the exam and may take photographs of your work during the exam. If you are suspected of scholastic dishonesty, you may or may not be directly confronted about your conduct by the instructor or proctor. You will, however, be reported to the Office of Student Conduct and Conflict Resolution (OSCCR) and your exam may not be admissible. Your grade in the class may be available once OSCCR makes a final ruling; this may adversely impact your ability to enroll in other classes. You must arrive before 15 minutes late to an exam to be allowed to take the examination. There will be no makeup exams administered. If you have a university-approved excuse, your instructor will have a process for determining how to handle the missing grade outlined in the syllabus. However, no makeup exams will be given. If you miss more than one exam, the instructor may choose to drop you from the class administratively. This may adversely impact a visa and financial aid. No food or drink may be brought into the examination room. The departmental policy allows for the use of assigned seats. All students must present their UTEP issued ID prior to and during every exam and may be required to sign in. Not having a UTEP issued ID when asked will result in forfeiture of the exam. No other IDs will be accepted. Scholastic dishonesty on homework, lab assignments and all other class assignments will be held to the same standards and requirements of academic honesty as quizzes and exams.

HARASSMENT POLICY

The University (see Handbook of Operating Procedures 1.2.2.4) has a zero-tolerance policy for harassment. Engagement in any behavior considered harassment will be reported to the proper authorities. In addition to generally understood forms of harassment, the department also treats the following behavior as harassment:

- Repeated emails and/or calls regarding subjects that have already been addressed. Once a decision has been made or a question answered, the recipient of the email/call will give a warning to a student who continues to ask the same question. If the student continues, the behavior will be reported. Questions that seek understanding of course material are not harassment, but repeated questions about a grade or an administrative decision are.
- Grades are NOT negotiable, ever. If you believe a grading mistake has been made, you must follow the process described in the UTEP catalog. Any request for a grade elevation NOT based on a mistake is considered harassment and will be reported immediately.
- Remaining in an office after the occupant requests you leave is considered harassment and potentially threatening. You will be reported immediately without warning and depending on the severity, may be reported to law enforcement.
- Similar behavior towards department staff and student advisors will also be treated as harassment, including persistent phone calls, emails, and badgering. Department staff and student advisors are there to help students and should be treated with due respect.

AMERICAN DISABILITIES ACT

If you feel you may have a disability that requires accommodations, contact the Center for Accommodations and Support Services (CASS) at 747-5148 or go to Union East, Room 106.