ME101/L – Introduction to Engineering (2 units)
CSUN – Spring 2025, Tickets: 20837 (Lecture) & 20838 (Lab)
Tue/Thu -- Lecture: 4:00-4:25 pm & Lab: 4:30-5:55 pm, Room: JD-1105

Instructor

Ghassan "Gus" H. Elias: BS/MS; Industrial/Manufacturing Systems Engineering
-Expertise: Engineering Consulting, Decision-Making/Risk Analysis and Facility Planning. Quality Assurance & Control, Industrial Safety & Material Control, Global safety certification programs for installing & commissioning electronic & pneumatic devices in General (Non-Hazardous) Locations, Hazardous 'Classified' Areas & Potentially Explosive Atmospheres.
Email address: **Gus.Elias@csun.edu** Faculty Office: **JD-3308**
Office hours: Tuesday/Thursday 6:00 - 6:30 pm
ME Department Office: JD-4513; (818) 677-2187

Course Resources:

Online Access -

- CSUN website: www.csun.edu
- CANVAS online access: https://www.csun.edu/it/canvas
- For lecture modules & other instructions: **http://www.csun.edu/~ghe59995/**

Textbooks -

- 1. "Engineering Your Future", 9 th Edition, by Oakes and Leone. Publisher: Oxford University Press. Hardcopy. Aavailable at the Matador Bookstore or at online resources such as Amazon.com. **((REQUIRED))**
- 2. "Engineering Ethics", 4th edition, C. Fledderman, Prentice Hall,
- ISBN-13: 978-0-13-214521-3 ***((Recommended))***
- 3. "Introduction to Excel", 5th edition, Kuncicky & Larsen, Prentice Hall, 2013
ISBN-10: 0133083659 • ISBN-13: 9780133083651 ***((Recommended))***

Catalog Description

Co-requisite: ME101L.
Freshman orientation course introducing the Mechanical Engineering Program, the profession and the University. Tools of the trade: the Internet, word processing, spreadsheets, power point, computer-aided design, basic lab measurement instruments, commercial component catalogs and numerically controlled machine tools to support prototype fabrication; are introduced in the context of engineering practice. Fundamental engineering analysis/design is explored through simple examples covering all aspects of mechanical engineering. Technical communication (written and oral) will be emphasized, using written assignments and presentations to the class. Teamwork skills are important to students' success as engineering students and professional engineers, so these skills will be discussed with the goal of teaching positive behaviors and attitudes in working with others.
1 hour lecture, 3 hours lab per week. (Available for General Education, E Lifelong Learning for Mechanical Engineering majors.)
Note: At the end of the semester, the Department of Mechanical Engineering may require that all ME101 students take an Accreditation Board for Engineering and Technology (ABET) quiz. More information will be given to the class when available.

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COURSE LEARNING OUTCOMES:

This course will contribute to enhancing ***your:***

1. Understanding of software needed in today's engineering work environment: Excel, Word, PowerPoint, and Computer Aided Design (CAD) Software (AutoCAD and SolidWORKS).
2. History of engineering and engineering majors.
3. Career possibilities by industry, function, and major field.
4. Statistical profile of the engineering profession.
5. Engineering design process.
6. Engineering ethics.
7. Resources available at the University Oviatt Library, and how to use them.
8. Technical communication skills (written and oral).
9. Working on a team in a project environment, team-building skills, inter-personal skills.
10. Project management tools.
11. Error in data measurement, and estimation of accumulation of error in analysis results.
12. Units and conversions needed by mechanical engineers working in a world with diverse systems of units.

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NOTE #1: Activate **and** use **solely** your CSUN email address for ALL academic correspondences. Do not use your personal email address to communicate with the instructor. Messages from non-CSUN email addresses will **NOT** be acknowledged. Instructor will only utilize SOLAR's email database to communicate with class members.

NOTE #2: **F**ailure to formally drop a course within the allotted time frame by CSUN will result in the issuance of a **"WU"** grade which is equivalent to **"F"**, thus detrimentally affecting your GPA.

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***** This course syllabus is your contract with the CECS, ME Dept. and the instructor. Students must read the syllabus thoroughly and adhere fully to ALL of the stated terms and listed guidelines. No Exceptions! *****

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Important Notes:

- The weekly tasks will be announced during the lecture and lab sessions.
- By the third-fourth week into the semester, groups consisting of 4-to-6 members will be formed on a random basis.
- Assignments will be given throughout the semester along with a midterm & final term project.
- Class presentations should be expected.
- Only students present in class can take the weekly quizzes.
- Attend ALL lectures promptly --- Be motivated.

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STANDARD OPERATING PROCEDURES

1. Class members are expected to maintain personal and professional standards consistent with the Code of Ethics of the National Society of Professional Engineers, the Preamble and Fundamental Canons of which are as follows:

Engineering is an important and learned profession. As members of this profession, engineers are expected to exhibit the highest standards of honesty and integrity. Engineering has a direct and vital impact on the quality of life for all people. Accordingly, the services provided by engineers require honesty, impartiality, fairness and equity, and must be dedicated to the protection of the public health, safety, and welfare. Engineers must perform under a standard of professional behavior that requires adherence to the highest principles of ethical conduct. Engineers, in the fulfillment of their professional duties, shall:

- *Hold paramount the safety, health and welfare of the public.*
- *Perform services only in areas of their competence.*
- *Issue public statements only in an objective and truthful manner.*
- *Act for each employer or client as faithful agents or trustees.*
- *Avoid deceptive acts.*
- *Conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the honor, reputation, and usefulness of the profession.*

Engineers uphold and advance the integrity, honor and dignity of the engineering profession by:

- *using their knowledge and skill for the enhancement of human welfare;*
- *being honest and impartial, and serving with fidelity the public, their employers and clients;*
- *striving to increase the competence and prestige of the engineering profession; and*
- *supporting the professional technical societies of their disciplines.*

2. Students must take ORIGINAL NOTES and submit ONLY ORIGINAL WORK. Notes taken by other students in previous semesters are NOT allowed in the class. Class members are expected to comply with University regulation governing intellectual property, origin of work, and honesty. Failure to maintain these standards will result in student disciplinary action and a grade of "F" in both the course and lab sections.

3. Class members are expected to attend ALL class sessions, promptly & entirely and are responsible for the course material, reading assignments, class presentations, discussions, and practice problems. Tardy/Late submissions of assignments are unacceptable. NO EXCEPTIONS!

4. Class members must always be considerate and respectful to their colleagues.

5. Pagers, Cellular Phones, Alarms, etc., *MUST BE TURNED OFF* during class sessions throughout the semester. IMPORTANT NOTICE: Unless otherwise authorized, the use of PC Laptops, cameras, video recorders, internet-ready devices, mobile phones, AND the exchange of textbooks or notes during the exams/quizzes is strictly prohibited. Violation of this policy will result in the student's dismissal from the class and issuance of an "F" grade for the course. NO EXCEPTIONS!

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Formats for Work:

1. Generally, assignments will be submitted via CANVAS: https://www.csun.edu/it/canvas
2. If you miss fulfilling a given task, you simply lose it. **No make-ups will be given --- No exceptions.**
3. Individual assignments and group projects will be utilized throughout the semester.
4. Each student must turn in his/her own homework, unless a group task is assigned by the instructor. All submissions are to be individual efforts with the exception of the team project reports.
5. The format for the project will be outlined in class. Written reports will be evaluated for compliance to the format requirements, the writing quality, timeliness, and content.

COURSE EVALUATION / GRADE SCALE

**** plus/minus grading will be used ****

---Refer to the last page of the syllabus for more information on grades---

Lecture --- administered in class and via CANVAS:

5% - Attendance and participation in the class.
75% - Online quizzes (administered while in the lab, and possibly remotely too).
20% - Input to discussion topics and special assignments/presentations.

Lab section --- on-campus attendance is required:

5% - Attendance and participation in the lab.
30% - Lab assignments (a due date will be announced for each task).
30% - Midterm Project – "Ship the Chip" / Team Report & Group Presentation.
35% - Final Research and/or Design Project & In-Class Group Presentation.

Letter-Grade Scale (*NO CURVING!*):
((Refer to the last page for more information on the grading criteria.))

A ≥ 90	**88 ≤ A- < 90**	**85 ≤ B+ < 88**
80 ≤ B < 85	**78 ≤ B- < 80**	**75 ≤ C+ < 78**
70 ≤ C < 75	**68 ≤ C- < 70**	**60 ≤ D < 68**	**F < 60**

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Academic Dishonesty:

Academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form at California State University Northridge. All students involved in academic dishonesty will be disciplined in accordance with university regulations and procedures. Discipline may include suspension and/or expulsion from the University.

"Cheating or plagiarism in connection with an academic program at a CSU campus is listed in Section 41301, Title 5, California Code of Regulations as an offense for which a student may be expelled, suspended or given a less severe disciplinary sanction.

Academic dishonesty is an especially serious offense and diminishes the quality of scholarship and defrauds those who depend on the integrity of the University's programs." Please consult university policy regarding plagiarism and the consequences.

https://catalog.csun.edu/policies/academic-dishonesty/

Any student caught cheating or plagiarizing in this class will receive a zero for the assignment and may be referred to the dean's office for additional consequences.

Academic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person. The instructor reserves the right to submit your papers to turnitin.com for identifying papers containing unoriginal material.

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For Your Information: Grade Evaluation Criterion

* A grade range of A to A- is reserved for work that is exceptional. This means that it (1) is professional and reflects the writer's/s' careful consideration of audience and purpose; (2) shows perfect to near-perfect understanding of the necessary concepts and analytical tasks; (3) where appropriate, it shows the capacity to think creatively or to see implications beyond the immediate scope of the question; (4) contains all necessary information (invention); (5) is arranged in a logical manner (6), is memorable; (7) delivery is visually appealing; and (8) is free of mechanical errors and is formatted as specified. Work must be flawless to attain an A/A-. Work with minor flaws that is nonetheless excellent in other ways will earn an A-.

* A grade in the B range means that the work is acceptable at the graduate level (B- range) to very good (B/B+). This work satisfies all (B+) or most (B/B-) of the requirements of the question & research tasks, shows the capability to think beyond the task by relating it to other areas of knowledge in or outside of the course; is neatly presented and shows above-average use of academic English. If the work is decently written, is formatted basically correctly, and covers most of the required content, but has several minor flaws or one major flaw, the grade is B-.

* A grade in the C range means that the work, while covering much of the required ground, does not show graduate-level analytic and expressive ability. That is, major and minor items may be missing or incorrect; and while the language may communicate most points adequately, it does not qualify as above-average academic work.

* A grade in the D range shows that the work does not, overall, achieve an acceptable level of coverage of the requirements AND/OR the language is insufficient to make the writer's points understandable to the reader. The content may be either incorrect to an unacceptable degree, or very incomplete.

* A grade of F indicates that so little of the required content is covered that grading the paper is an exercise in futility. It may mean that very major points have clearly not been grasped or have been misunderstood by the student. An F may also indicate that the ideas are expressed in such a way that they are not at all understandable to the reader. A grade of F is also awarded when assigned work is not handed in, or not handed in by the set deadline.

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