Course Syllabus

Course Information

Course Prefix, Number, Section	MECH 3V95.002 (3 semester credit hours)
Course Title	Engineering Machining & Fabrication
Semester	Fall 2025
Days & Times	August 25, 2025-December 9, 2025 Wednesday 01:00 pm - 03:45 pm
Classroom Location	ECSW 1.160

Professor Contact Information

Professor	Wei Li, Ph.D.
Office Phone	972-883-3983
Email Address	Wei.Li@UTDallas.edu
Office Location	ECSW 4.355C
Office Hours	By appointment

Course Pre-requisites, Co-requisites, and/or Other Restrictions

Pre-requisites: MECH 3305 (Computer Aided Design)

Course Description

This course provides students with fundamental knowledge and skills for designing, fabricating, and evaluating engineering prototypes using both traditional and modern manufacturing processes. Topics mainly include the safe and effective operation of manual machining tools and computer numerical control (CNC) machines. Students will also learn the use of computer-aided manufacturing (CAM) software, basic techniques in geometry dimensioning and measurement, and methods for quality inspection.

Student Learning Objectives/Outcomes

- Be able to operate traditional machining tools to fabricate prototypes that meet specified geometric and surface quality requirements.
- Be able to perform basic measurement and metrology techniques to evaluate the dimensional accuracy of fabricated parts.
- Be able to control the automatic machining tools, develop CAM machining strategies, and generate G-code programs to produce components with complex geometries.

Suggested Textbooks and Materials

Class slides and handouts will be the primary course of course materials

Optional textbooks and some other reference materials can be ordered online or purchased at the UT Dallas Bookstore.

Technical Requirements
In addition to a confident level of computer and internet literacy, students must meet certain minimum technical requirements must to gain a successful learning experience. Please review the important technical requirements outlined on the Getting Started with eLearning webpage.

Course Access and Navigation
This course can be accessed using your UT Dallas NetID account on the eLearning website.

Please see the course access and navigation section of the Getting Started with eLearning webpage for more information.

To become familiar with the eLearning tool, please see the Student eLearning Tutorials webpage.

UT Dallas provides eLearning technical support 24 hours a day, 7 days a week. The eLearning Support Center includes a toll-free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service.

Communications
This course utilizes online tools for interaction and communication. Some external communication tools such as regular email and a web conferencing tool may also be used during the semester. For more details, please visit the Student eLearning Tutorials webpage for video demonstrations on eLearning tools.

Student emails and discussion board messages will be answered within 3 working days under normal circumstances.

Server Unavailability or Other Technical Difficulties
The University is committed to providing a reliable learning management system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and contact the online eLearning Help Desk. The instructor and the eLearning Help Desk will work with the student to resolve any issues at the earliest possible time.

Exams
There will be two examinations: midterm and final. Examinations aim to test if the students can effectively use computer aided design and manufacturing software, the traditional and non-traditional manufacturing machines, and related measurement and inspection methods.

Proctored Final Exam Procedures
If your course has a proctored exam requirement, please see the UTD Testing Center webpage and Distance Learning Proctored Exams webpage to make arrangements.

Course Policies
Make-up exams
No make-up exams will be given. In the event of an excused absence (illness, job-related travel, holy day absence, etc. proper documents must be provided), the weight of the exam will be shifted to the remaining exams.

Late Work
Late work will not be graded.

Class Participation
Regular attendance and active participation are essential to success in this course. Students are expected to attend every class session on time. Frequent absences or tardiness may result in a warning. If a student is late or absent three times or more without a valid excuse, participation credit will be reduced or forfeited entirely.

Classroom Citizenship
Students are expected to maintain a respectful and distraction-free learning environment. All cell phones and other communication devices must be turned off or silenced during class. The use of laptops and tablets is permitted only for course-related activities such as taking notes. Use of electronic devices for messaging, social media, or unrelated browsing during class is not allowed and may impact your participation grade.

Comet Creed
This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

Academic Support Resources
The information contained in the following link lists the University's academic support resources for all students.

Please go to Academic Support Resources webpage for these policies.

UT Dallas Syllabus Policies and Procedures
The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to UT Dallas Syllabus Policies webpage for these policies.