

UNIVERSITY OF NORTH TEXAS
MEEN 3100 Manufacturing Processes and MFET 3110 Machining Principles and Practices
Spring 2024. 3 Credit hours (2-hour class / 3-hour lab)

Instructor: Dr. Mark Wasikowski

Class Time and Place: DP K150, Tu 8:30 – 10:20

Office Hours: NTDP F101L or zoom, by appointment.

Contact information: mark.wasikowski@unt.edu (CANVAS email should not be used)

Course format: In-person only. No remote participation.

CATALOG COURSE DESCRIPTIONS:

MEEN 3100: Major manufacturing processes, their capabilities, analysis, and economics. Study of the fundamentals of engineering processes in manufacturing as related to design and production and materials properties. Traditional and non-traditional manufacturing process and selection optimization. Students given laboratory assignments in material removal, forming, casting, joining, forging, and computer aided machining.

MFET 3110: Machine tool manufacturing techniques emphasizing sequence of operations, cutting tool geometry, tooling systems, tool materials and performance characteristics, cutting forces, speeds, feeds, surface finish, horsepower calculation, cutting fluids.

PRE-REQUISITE: ENGR 2332 (Mechanics of Materials) & ENGR 3450 (Material Science) recommended.

REQUIRED TEXT: “DeGarmo's Materials & Processes in Manufacturing, 13th, Black, Wiley. Any format ok – hardcopy or e-book purchase or rental. (Domestic version – NOT Global Edition)

GRADING RUBRIC: A \geq 90, B \geq 80, C \geq 70, D \geq 60, F < 60. Rubrics programmed into CANVAS

1. 25%: classroom attendance, quizzes
2. 20%: Independent Study. Text reading and homework
3. 25%: Laboratory. attendance, safety, lab assignments, lab reports, hardware.
4. 15%: midterm exam, Tuesday, 3 March, 8.30 – 10.20 am.
5. 15%: final exam, Tuesday, 7 May, 8.00 – 10.00 am.

Class and lab attendance mandatory / graded. It is the student’s responsibility to attend class, check CANVAS announcements, assignments, exams, etc. No late homework accepted - solutions available immediately after homework is due. In class quizzes announced or unannounced. Must be present at that time for credit. No quiz make-up. At least one laptop / iPad per team required during lab. Lab requires appropriate dress for safety, including safety glasses. Re-grades must be requested within 1 week after grades are announced, or grade is final. Any student found cheating fails the course and UNT Office of Academic Integrity notified.

Policies: Course complies with applicable UNT policies, including Emergency Notification & Procedures, student behavior and student code of conduct, academic integrity, ODA, SPOT course evaluations, student record retention, Prohibition of Discrimination, Harassment, Retaliation, Sexual Assault Prevention, federal VISA regulations, Academic Support & Student Services. Visit UNT website / advising or counseling for more details.

Syllabus Changes: Instructor reserves the right to change the syllabus. Any changes will be announced in class and documented in CANVAS.