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MENG 3303 – Dynamics of Machinery
Course Syllabus

Semester / Year	Spring 2025
Catalog Description	Analysis of the kinematics and forces in mechanical mechanisms and assemblies. Three hours of lecture per week.
Prerequisites	C or Better in all the following: ENGR 2302 - Dynamics
Section Number	001
Instructor Name	Dr. Chung Hyun Goh
Contact Information	Email: cgoh@uttyler.edu Phone: 903-566-6125 Office: RBN 3007
Class Type / Instruction Mode / Location	Face-to-face / Lecture / RBN 3039
Class Time	Tu/Th 9:30 AM – 10:50 AM
Office Hours	M 11:00 AM – 12:00 PM, Tu/Th 2:30 PM – 3:30 PM or by appointment
No. of Credits	3 credits (Lecture)
Required Textbook	Design of Machinery-An Introduction to the Synthesis and Analysis of Mechanisms and Machines, 6th Ed. – R.L. Norton (Lecture)
Optional References	Motion Simulation and Mechanism Design with SolidWorks Motion 2019, SDC – K.H. Chang (SW Tutorial Sessions) Introduction to Mechanism Design: With Computer Applications, E. Constans and K.B. Dyer, CRC Press
Additional Rules and Requirements	A software package will be selected for use as a learning support tool and the course includes a project as a major component. AI tools are allowed to support students' learning and productivity, provided that their use aligns with academic integrity standards. When required, students must disclose their use of AI.
Evaluation Method	Design Workshop 20%, Tutorial Flipped Classes 10% Mid-term Exam 20% Final Exam 20% Assignment: 30% (Homework 10%, Quizzes 10%, Course Participation 10%)
Grading Policy / Scale	Letter grades, scale: A: 90 – 100; B: 80 – 89; C: 70 – 79; D: 60 – 69; F: < 60
Important Events / Dates	Census date: 01/27/2025 First drop for non-payment: 01/21/2025 Exam date: Mid-term (February 25, 2025), Final Exam (April 29, 2025) Last date to withdraw from one or more 15-week courses: 03/31/2025
Attendance / Makeup	Regular attendance is imperative if you want to do well in this course. Therefore, regular attendance is highly recommended. In case you have to miss a class, it is your

policy / other rules	responsibility to keep up with the class work and be informed of all announcements made in the class on HomeWorks, tests etc. No makeup exams will be authorized without providing an official document showing that your absence is in line with university rules.
Course Learning Objectives / ABET & PEOs Relation	By the end of this course, students will be able to: 1. Recognize different mechanisms and determine the degree of freedom. 2. Analyze a linkage for paths, velocity, and acceleration. 3. Understand the basics of cam mechanisms and apply to a cam-follower design. 4. Apply practical approach to optimum involute spur gears and gear trains design. 5. Apply acquired knowledge and skills during the course and previous courses to solve a design problem requiring resourcefulness.
Tentative Topics / Course Plans	1. Fundamentals of kinematics and dynamics of linkages and mechanisms 2. Kinematic analysis and synthesis of linkages: position, velocity, and acceleration analyses 3. Cam design 4. Gear design and gear trains Frequency domain control design
University Policies	https://www.uttyler.edu/academic-affairs/files/syllabus-information.pdf

Note:
The instructor reserves the right to modify the syllabus at any time during the semester to accommodate unforeseen circumstances, enhance the learning experience, or ensure the course objectives are met. Any changes will be communicated promptly to all students.