

ENGR 2302 – Engineering Mechanics: Dynamics
Course Syllabus

Semester / Year	Fall / 2026
Catalog Description	Motion of particles, rigid bodies, and systems of particles; Newton's Laws; work and energy relationships; principles of impulse and momentum; application of kinetics and kinematics to the solution of engineering problems.
Prerequisites	C or better in ENGR2301 or CENG2301 Engineering Mechanics: Statics
Section Number	050
Instructor Name	Dr. Hussain Rizvi
Contact Information	Email: hrizvi@uttyler.edu Office: HEC A206
Class Type / Instruction Mode / Location	Hybrid Course 050: RBN 3039
Class Time	050: TuTh 8:00 AM –9:20 AM
Office Hours	MF 9:00 am -10:30 am, or by appointment outside of the regular office hours.
No. of Credits	3 credits
Required Textbook	Engineering Mechanics: Dynamics, 15th edition, Russell C. Hibbeler
Optional References	NA
Additional Rules and Requirements	Since the mechanical engineering program is designed to prepare students for professional practice, all submitted work (e.g., homework, lab reports, projects, presentations) is expected to meet professional standards. Work that does not reflect professional quality may be subject to grade reductions, even if professionalism is not explicitly listed in the grading rubric. Students can use AI programs (ChatGPT, Copilot, etc.) in this course. If you utilize an AI tool to help create content for an assignment, you must acknowledge and cite the tool's contribution to your work.
Evaluation Method	Quiz 10% Homework 15% First Exam 25% Second Exam 25% Final Exam 25%
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: 09/08/26 (Tu) Midterm 1: 09/24/26 (Th) (<i>tentative</i>) Midterm 2: 10/29/26 (Th) (<i>tentative</i>) Last date to withdraw from one or more courses: 10/30/26 Final date: 12/08/26 (Tu) Time: 8:00 am – 10:00 am Academic Calendar: https://www.uttyler.edu/academics/academic-calendar-26-27/

Attendance / Makeup policy / other rules	1. Lecture attendance will be checked using Canvas quiz function. 2. No make-up exam(s). 3. All assignments MUST be submitted to Canvas for grading. 4. Student with SAR status should contact the UT Tyler Office of Student Accessibility and Resources for exam arrangements.
Course Learning Objectives / ABET & PEOs Relation	By the end of this course, students will be able to: 1. Set up and solve particle kinematics problems using rectilinear and curvilinear, planar and three-dimensional, coordinate systems. 2. Set up and solve kinetics of particles problems, planar and three-dimensional, using Newton's second law, work and energy, and impulse and momentum methods. 3. Set up and solve kinematics of rigid bodies problems in planar coordinate systems. 4. Set up and solve kinetics of rigid bodies problems using Newton's second law, work and energy, and impulse and momentum methods.
Tentative Topics / Course Plans	1. Kinematics of a Particle. 2. Kinetics of a Particle: Force and Acceleration. 3. Kinetics of a Particle: Work and Energy. 4. Kinetics of a Particle: Impulse and Momentum. 5. Planner Kinematics of a Rigid Body. 6. Planner Kinematics of a Rigid Body: Force and Acceleration
University Policies	https://www.utt Tyler.edu/offices/academic-affairs/faculty-resources/syllabus-information/