



ENGR 2302 – Engineering Mechanics: Dynamics

Course Syllabus

Semester / Year	Summer II / 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	450,451										
Instructor Name	Dr. Hussain Rizvi										
Contact Information	Email: hrizvi@uttyler.edu Office: HEC A206										
Class Type / Instruction Mode / Location	Hybrid Course 450: RBN 2011 451: HEC A218										
Class Time	450: MWF 8:00 AM –10:15 AM 451: MWF 8:00 AM –10:15 AM										
Office Hours	MW 10:30 am -12:00 pm, 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	<p>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.</p> <p>This course allows the use of AI tools (such as ChatGPT, Copilot, Gemini, etc.) only in lab report writing. Students will be notified as to when these tools should be used, along with guidance on how to use them. Using AI tools outside of these parameters violates UT Tyler's Honor Code, constitutes plagiarism, and will be treated as such.</p>										
Evaluation Method	<table> <tr> <td>Quiz</td> <td>10%</td> </tr> <tr> <td>Homework</td> <td>15%</td> </tr> <tr> <td>First Exam</td> <td>25%</td> </tr> <tr> <td>Second Exam</td> <td>25%</td> </tr> <tr> <td>Final Exam</td> <td>25%</td> </tr> </table>	Quiz	10%	Homework	15%	First Exam	25%	Second Exam	25%	Final Exam	25%
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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: 07/09/26 (Th) Midterm 1: 07/15/26 (W) (<i>tentative</i>); Midterm 2: 07/27/26 (M) (<i>tentative</i>) Last date to withdraw from one or more courses: 07/29/26										



	Final date: 08/07/26 (F) Time: 8:00 am – 10:15 am
Attendance / Makeup policy / other rules	<ol style="list-style-type: none">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: <ol style="list-style-type: none">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	<ol style="list-style-type: none">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/