

MECH 2340 –Dynamics

Instructor	Dr. Louis J. Everett
Office	Annex 115, 747-7987
Office hrs	To be selected by class.
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Text	<i>Engineering Mech: Dynamics Edition: 14th</i> by Hibbeler. And Mastering Engineering with Learning Catalytics – see black board Course ID UTEPDYNAMICSSPRING2016

Course description: This course covers Newtonian mechanics both kinematic (study of motion) and kinetic (study of force and its effects on motion).

Course Outcomes: At the end of this class the typical student will be able to apply Newtonian mechanics to compute motions of rigid bodies. Textbook methods will be extended to be applicable to problems one might face in practice; however problems will be simplified to make them tractable in a reasonable length of time. These skills will enable students to work on real world problems. Students will also be able to reason about an object's motion to make qualitative predictions about how it will behave and be able to use Newtonian methods to defend their position. These logical abilities will enable the graduate to create new systems by understanding how a never before constructed system should behave.

Grading:

Mid-term exams	-	60% (3 x 20%)
Final exam	-	20%
Homework and In Class participation	-	20%
Team Support	-	maximum 15 points extra credit added 5 each to exams 2, 3, and final.

The final is *comprehensive* and is NOT optional!

Course topics:

- 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) Planar kinematics of a rigid body
- 6) Planar kinetics of a rigid body: force and acceleration
- 7) Planar kinetics of a rigid body: work and energy
- 8) Planar kinetics of a rigid body: impulse and momentum

Homework: Assigned on Mastering Engineering.

Exams: There will be 4 examinations, three during the semester (mid-terms) and one final. The final will be comprehensive. **I will not give make up exams. If you miss an exam due to a UTEP approved reason (see the catalog) I will count the next exam as two scores.**

Participation: In class response will be used to help judge the participation credit and supplement the homework. Being prepared for class (reading the text, watching videos), coming to class and doing homework problems should help secure a high participation grade.

Team Support: The 15 points extra credit will be given provided your team's performance on exams improves. All teams must have 4 members. Example: On exam 1, add all team scores together to find the number X1. On exam 2, add all team scores together to get X2. If $X2 > X1 + N2$ ($N2$ is a number chosen by Everett the instructor) all team members earn 5 points extra on exam 2.

Announcement: *If you feel you may have a disability which will make it difficult for you to carry out the work as I have outlined and/or if you need special accommodations/assistance due to a disability, please contact the Disabled Student Services Office at 747-5148, go to Room 106E Union, or email dss@utep.edu.*

Albert Einstein once said: "Insanity is doing the same thing over and over again and expecting different results." If you fail the first test, change something don't study the same way or you WILL fail again.