Engineering Mechanics - Dynamics
TEGR 2302-62430
Spring 2018, 12/11/2017 – 1/5/2018

Professor: Dr. Uichung Cho (Engineering Division Chair)  Email: ucho@dcccd.edu
Office Phone Number: 214.860.8620  Office Number: W107A
Office Hours: MTW 1-4PM or by Appointments
Class Days & Time: Online Lectures M/T/W/TH, You should be ready to spend 3Hr/Lesson
Class Room: INET Lecture
Credit Hours: 3 Credit Hours

Course Description: Basic theory of engineering mechanics, using calculus, involving the 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. (3 Lec.)

Course Pre-requisites/Concurrent: MATH 2414 or the equivalent

Course Materials/Supplies Needed
* You need to be able to scan your hand written works into a single PDF file is required. You can use apps for your smart devices or use a scanner.

Core Objectives: This course is designed to help students to understand fundamentals of kinematics (study about the motion of particles and rigid bodies) and kinetics (the study of motion with its cause and effect). In the kinematics - the geometry of motion, students will learn how to mathematically describe the motion in terms of space and time. In the kinetics, students will learn how the external energy, such as force and torque, will change the status of the particles and rigid bodies in space. Physical meaning and practical application of vector analysis, differentials, integrals and trigonometry will be clarified through realistic engineering problems. Physical interpretation of the governing equations will be critical to get good results in this class.

Student Learning Outcomes
After successful completion of this course the student will
(1) Be able to describe motions of particles and rigid bodies to derive appropriate governing equations.
(2) Be able to apply natural laws, such as Newton’s law and energy/momentum conservation, to solve realistic engineering problems.
(3) Be able to visualize spatial and temporal response of various dynamic systems for comprehensive engineering analysis and synthesis.
Milestones

- **Quiz 1**: 12/16, 7-9 PM
- **Mid-Term Exam**: 12/23, 7-10 PM
- **Last Day to Withdraw**: 12/22 (Feel free to discuss your situation before you drop)
- **Quiz 2**: 12/30, 7-9 PM
- **Final Exam**: 1/3, 7-10 PM (Wed) Comprehensive
- **Final Grading**: 1/5

*The above schedule can be slightly changed, which will be emailed. It is your responsibility to check your email everyday for potential changes and critical information.*

**There will be no alternative Quiz and exam schedule in Mini-Mesters, viz Summer/Winter**

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**No Class Days (from School Calendar)**

**Grading**

- **Homework**: 15%
- **Two Quizzes**: 20%
- **Mid Term**: 30%
- **Final Exam**: 35%

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**Late Work Policy:** Late completion of assignments will automatically deduct the score by 5% each day. If you miss one quiz, you will get 70% of the other quiz score. If you miss midterm or final exam without pre-approval, you will get no score. You need to submit legal supporting documents either from medical doctor or government to take alternative exam.

**Attendance Policy - INET**

Students are expected to visit Pearson portal (MasteringEngineering) on every week days. You should also check your email every day.

**Academic Dishonesty:**

Students that caught plagiarizing an assignment will be subject to an “F” in the course and possible expulsion from the college. You will be warned if more than two students show the same wrong answers on up to 3 problems. If there is more than 3 same wrong ones, you will get “F” without warning.

It is highly recommend to take final exam with your proctor. If you have a difficulty in finding a proctor in your area, please contact me before the semester starts.

**Academic honesty is expected, and integrity is valued in the Dallas County Community Colleges. Scholastic dishonesty is a violation of the Code of Student Conduct. Scholastic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion. As a college student, you are considered a responsible adult. Your enrollment indicates acceptance of the DCCCD Code of Student Conduct published in the DCCCD Catalog.**

**Institution Policies:** Please visit [www.mountainviewcollege.edu/syllabipolicies](http://www.mountainviewcollege.edu/syllabipolicies) for a complete list of institutional policies (Stop Before You Drop; Withdrawal Policy; Repeating a Course; Financial Aid; Academic Dishonesty; Americans with Disabilities Act Statement; Religious Holidays; and Campus Emergency Operation Plan and Contingency Plan).