Instructor: Dr. Judah Ari-Gur, Room F-246, E-mail: jah.ari-gur@wmich.edu, Tel.: 276-3419
Office Hours: Mon. & Thur. 1-2 p.m., or by appointment.
Catalog Description:
Kinematics and kinetics of particles. Rigid bodies in translation, rotation and plane motion. Includes impulse-momentum and work-energy methods. Introduction to vibrations.
Prerequisites: ME2560, PHYS 2050, PHYS 2060.
Objectives: Most mechanical systems include parts and assemblies in motion. The study of the relationship between load and motion and of methods to analyze and predict their mutual effects is covered in this fundamental course.

Topics: Particle dynamics:
Kinematics (Ch.12).
Kinetics – Force and acceleration (Ch.13).
Work and energy (Ch.14).
Impulse and momentum (Ch.15).
Rigid body (2-D) dynamics:
Kinematics (Ch.16).
Kinetics – Force, moment and accelerations (Ch.17).
Work and energy (Ch.18).
Impulse and momentum (Ch.19).
Rigid body (3-D) dynamics (Chs. 20-21)

Grading: Homework (10%)
Quizzes (15%)
Midterm exam #1 (25%) [Tue., 2 Oct., 2018]
Midterm exam #2 (25%) [Thur., 8 Nov.]
Final exam (25%) [Tue., 11 Dec., 5-7 p.m.]

As the course proceeds, homework problems from the textbook will be assigned. Homework will be collected at the beginning of the Tuesday class. Occasionally, one of the homework problems from the previous 3 weeks will be given as a 15-minute quiz. Essential equations will be provided.

A=90%- ; BA=85%- ; B=80%- ; CB=75%- ; C=70%- ; DC=65%- ; D=60%- ; E=below 60%.
Best learning is achieved by solving problems and asking questions. Do both!

Dynamics is a science based course, but it has direct applications in engineering. Explore the applications to comprehend (and enjoy) the science.

Grades are not assigned by the course instructor. They are gained by the student and only recorded and calculated by the instructor.

Additional information

For the quizzes and exams you are allowed to use only the calculators which are approved for use in the national Fundamentals of Engineering exam. See: http://ncees.org/exams/calculator-policy/ (This will help you to prepare for the eventual licensed Professional Engineer title that you may aspire to acquire. Read about it: http://ncees.org/audience-landing-pages/students/)

Quiz dates are not announced in advance. There are no makeup dates for quizzes. It is your responsibility to always have an allowed calculator with you in class.

The use of a cell phone in the classroom is not allowed.

The use of a computer, tablet or any equivalent device in the classroom is not allowed.

It is your responsibility to attend class, take careful notes, follow instructions and ask questions.

If you send me an e-mail with a question, you will get the answer through e-mail. If I decide that the answer may benefit the entire class, I will send the question and answer to the entire class. In that case, I will modify the e-mail to ensure that I protect your identity.

Homework is a written communication between you and the instructor. Please make sure that it is neat, clear, readable and logically outlined. Write only on one side of the paper, with not more than 2 problems per page. Draw a bold horizontal line across the page to separate between problems. Staple all the pages together in the correct order. All the stapled papers must be of the same type. Write your name clearly, using UPPER CASE letters, on the front page. If these instructions are violated, the homework may be rejected, including a grade of zero. Homework is due at the beginning of the class. Please place it on the instructor’s table.

When you send me an e-mail, please start the subject line with ME2615. It will draw my attention and help me to prioritize it.

Academic conduct

Students are responsible for making themselves aware of and understanding the University policies and procedures that pertain to Academic Honesty. These policies include cheating, fabrication, falsification and forgery, multiple submission, plagiarism, complicity and computer misuse. The academic policies addressing Student Rights and Responsibilities can be found in the Undergraduate Catalog at http://catalog.wmich.edu/content.php?catoid=30&navoid=1263. If there is reason to believe you have been involved in academic dishonesty, you will be referred to the Office of Student Conduct. You will be given the opportunity to review the charge(s) and if you believe you are not responsible, you will have the opportunity for a hearing. You should consult with your instructor if you are uncertain about an issue of academic honesty prior to the submission of an assignment or test.