

ROSE-HULMAN INSTITUTE OF TECHNOLOGY

Department of Mechanical Engineering

ES 204 – Mechanical Systems

Webpage: <http://www.rose-hulman.edu/ES204/index.shtml>

OBJECTIVES

This course is designed to build on the material presented in ES 201 and to deepen the student engineers' understanding of the kinematics and kinetics of particles and rigid bodies. In order to meet this objective a certain level of expertise in both mathematics and conservation and accounting principles are required. It will be assumed, therefore, that you have taken the prerequisite courses (ES 201 and MA 201) and are able to work problems involving vector mechanics, calculus and equilibrium of particles and rigid bodies and problems involving conservation of energy, linear and angular momentum. If you are having trouble in these areas you should consult your instructor as to an appropriate course of action, but do not expect him or her to devote class time to this material.

INSTRUCTORS

Instructor	Dr. Kawano	Dr. Moseley	Dr. Onyancha	Dr. Purdy
Office	D-108	E-102	D-109	C-105
Phone	x-8813	x-8263	x-8601	x-8321

COURSE TESTING

The examinations will be closed book and closed notes. However, **one** 8.5" x 11" help sheet with equations and process steps written on **one** side will be permitted per exam (i.e., one side for Exam 1, two sides for Exam 2, etc.). Sample problems are not allowed on help sheets. Your help sheet(s) must be signed and turned in with each exam. Students found with any additional notes or crib material will receive a zero for the examination and be subject to any additional penalties at your instructor's discretion. You may use Maple on the exams, but no existing worksheets are allowed. **No makeup examinations will be given.** If an examination is missed with an approved excuse, the grade received on the final examination will also be used for the missed exam.

VALID EXCUSES

A valid excuse consists of a memorandum on Institutional letterhead from the Dean of Students. Job and graduate/professional school interviews, attending scientific conferences, and Institute-sponsored activities may also be valid excuses, provided that you notify your instructor **in writing** and **at least one week in advance** of the event. Illness and exceptional circumstances are, of course, valid excuses if a confirming memo from the Dean of Students is provided within one week of the event.

FINAL COURSE GRADE

Your final course grade will be based upon the following weighted average:

Homework/Quizzes	15%
Laboratory	10%
Examinations 3 @ 15%	45%
Final Examination	<u>30%</u>
	100%

Note: You must pass the exams to pass the class.

ACADEMIC ACCOMODATIONS

If you have documented special needs, contact your instructor as soon as possible so that recommended academic accommodations can be provided while protecting your privacy. **It is your responsibility to request these accommodations at least one week in advance of exams, quizzes, etc.**

TEXT

Course notes bought in the bookstore.

REFERENCES

Vector Mechanics for Engineers: Dynamics, 9th Ed., by Beer, Johnston and Cornwell, McGraw-Hill, 2009.

Dynamics – Engineering Mechanics, 5th Ed., by Bedford and Fowler, Addison-Wesley, 2008.

Engineering Mechanics – Dynamics, 5th Ed., by Meriam and Kraige, J. Wiley & Sons, 2002.

Engineering Mechanics, Statics and Dynamics, 1st Ed., by R. C. Hibbeler, Prentice Hall, 2007.

CAVEAT

Your instructor reserves the right to modify the course content, schedule, policies, etc., outlined in this syllabus.

