

COCONINO COMMUNITY COLLEGE

COURSE OUTLINE

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Date: December 4, 1991
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Date: Spring 2003

A. Identification:

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|-------------------------|-------------------|
| 1. Subject Area: | Physics |
| 2. Course Number: | PHY 111 |
| 3. Course Title: | COLLEGE PHYSICS I |
| 4. Credit Hrs: | 4 |
| 5. Catalog Description: | |

Algebra-based study of motion, static and dynamic mechanics, waves and sound,
Prerequisite: MAT 187. General Education: Lab Sciences. Three lecture; three lab.

B. Course Goals:

To give students a general understanding of Physics laws, principles and concepts and provide the students with laboratory opportunities.

C. Course Outcomes:

Students will:

1. explain the concepts of distance, velocity and acceleration.
2. calculate distance, velocity, and acceleration in one and two dimensions
3. Analyze force interactions
4. participate in laboratory investigations, utilizing scientific methods and equipment.
5. utilize concepts of conservation of energy and momentum to analyze and solve problems.
6. apply concepts of static equilibrium to problem solving.
7. define wave types and components and describe wave interaction.
8. describe physical interactions in a planetary system
9. solve problems involving rotational motion

GECC Course
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Student Outcomes list

D. Course Outcomes Assessment:

Will include:

1. Comprehensive final exam
2. Instructor evaluated lab report/project.

E. Course Content:

Will include:

1. Statics
 - a. equilibrium
 - b. center of mass
 - c. torque
2. Kinematics
 - a. distance, velocity, acceleration
 - b. projectile motion
 - c. rotational
3. Dynamics
 - a. force
 - b. Newton's laws
4. Energy
 - a. work
 - b. kinetic and potential energy
 - c. conservation of energy

5. Momentum
 - a. linear
 - b. angular
 - c. conservation of momentum
6. Gravitational and astronomical laws
7. Waves, sound, and simple harmonic motion