

COURSE OUTLINE

Revision: Rick Downs, February 2008

DEPARTMENT: Academic Programs

CURRICULUM: The Natural World

COURSE TITLE: Physics Non-Science Majors

COURSE NUMBER: PHYS& 100

TYPE OF COURSE: Academic Transfer
Special Requirement Met: None

AREA(S) OF KNOWLEDGE: The Physical Universe

COURSE LENGTH: 1 quarter

CREDIT HOURS: 5

LECTURE HOURS: 55

LAB HOURS: 0

CLASS SIZE: 25

PREREQUISITES: None

COURSE DESCRIPTION:

Basic laws of physics, such as motion, sound, gravitation, energy, heat and temperature, electricity and magnetism, light, relativity, quantum theory, and nuclear physics. For non-majors; non-lab course.

PHYS& 100 Physics Non-Science Majors
February 2008

STUDENT LEARNING OUTCOMES ADDRESSED:

1. Computation - Use arithmetic and other basic mathematical operations as required by program of study.
2. Critical Thinking and Problem Solving - Think critically in evaluating information, solving physics problems and making decisions.
3. Technology - Select and use appropriate technological tools for personal, academic and career tasks, including the Internet and scientific equipment.
4. Information Literacy - Access and evaluate information from a variety of sources and contexts, including technology.

GENERAL COURSE OBJECTIVES:

At the end of the course the student will:

1. Understand the physical and human environment in terms of physics concepts.
2. Be able to relate the beginning level of physics knowledge learned in this course to the studies of the other branches of science.

TOPICAL OUTLINE:	APPROX. HOURS
I. Mechanics (laws of motion, kinematics, forces, gravitation)	12
II. Work, energy, momentum	8
III. Curvilinear motion, Kepler's laws, satellite mechanics	8
IV. Heat and thermodynamics	8
V. Wave mechanics, sound	6
VI. Electricity and light	8
VII. Aspects of modern physics	<u>5</u>
Total	55

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SLO #	Included in Course Objective Number	SSCC Student Learning Outcomes
SLO 1.1	1, 2	Communication - Read and listen actively
SLO 1.2		Communication - Speak and write effectively
SLO 2.1	1	Computation - Use mathematical operations
SLO 2.2	1	Computation - Apply quantitative skills
SLO 2.3	1	Computation - Identify, interpret, and utilize higher level mathematical and cognitive skills
SLO 3.1		Human Relations - Use social interactive skills to work in groups effectively
SLO 3.2	2	Human Relations - Recognize the diversity of cultural influences and values
SLO 4.1	1	Critical Thinking and Problem Solving -
SLO 5.1		Technology - Select and use appropriate technological tools
SLO 6.1		Personal Responsibility - Be motivated and able to continue learning and adapt to change
SLO 6.2		Personal Responsibility - Value one's own skills, abilities, ideas and art
SLO 6.3		Personal Responsibility - Take pride in one's work
SLO 6.4		Personal Responsibility - Manage personal health and safety
SLO 6.5		Personal Responsibility - Be aware of civic and environmental issues
SLO 7.1	1	Information Literacy - Access and evaluate information
SLO 7.2	1	Information Literacy - Use information to achieve personal, academic, and career goals, as well as to participate in a democratic society

PREPARED BY: Mike
 Steffancin
 DATE: August 2008