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| **PROFESSOR:** | **PHONE NUMBER:** |
| **OFFICE LOCATION:** | **E-MAIL:** |
| **OFFICE HOURS:** | **SEMESTER:** |

1. **COURSE NUMBER AND TITLE, CATALOG DESCRIPTION, CREDITS:**

**PHY 1007L PHYSICS FOR THE HEALTH SCIENCES LABORATORY (1 CREDIT)**

This laboratory course accompanies PHY 1007 and is a one-semester course for students in the health sciences who need a background in physics which is broad in scope and stresses applications in the health field. The course is designed to enhance the learning of physical concepts through a hands-on approach, emphasizing inquiry and problem solving in laboratory investigations.

1. **PREREQUISITES FOR THIS COURSE:**

(SB 1720 Testing Exemption or successful completion of all Developmental courses); and MAT 1033 or higher with a minimum grade of “C”

**CO-REQUISITES FOR THIS COURSE:**

PHY 1007

1. **GENERAL COURSE INFORMATION:** Topic Outline.

* Graphing
* Ratios
* Motion
* Free Fall
* The Pendulum
* Centripetel Force/Friction
* Hooke’s Law (elasticity)
* Rational Equilibrium
* Work and Power
* Archimedes’ Principle
* Thermometer Fixed Points
* Specific Heat
* Ohm’s Law
* Electromagnets
* Speed of Sound in Air
* Reflection and Refraction
* Nuclear Radiation/Attenuation

1. **All courses at Florida SouthWestern State College contribute to the general education program by meeting one or more of the following general education competencies:**

**C**ommunicate clearly in a variety of modes and media.

**R**esearch and examine academic and non-academic information, resources, and evidence.

**E**valuate and utilize mathematical principles, technology, scientific and quantitative data.

**A**nalyze and create individual and collaborative works of art, literature, and performance.

**T**hink critically about questions to yield meaning and value.

**I**nvestigate and engage in the transdisciplinary applications of research, learning, and knowledge.

**V**isualize and engage the world from different historical, social, religious, and cultural approaches.

**E**ngage meanings of active citizenship in one’s community, nation, and the world.

**A.**  **General Education Competencies and Course Outcomes**

1. Listed here are the course outcomes/objectives assessed in this course which play an integral part in contributing to the student’s general education along with the general education competency it supports.

General Education Competency: **Evaluate**

Course Outcomes or Objectives Supporting the General Education Competency Selected:

* Visualize the relationship between physical variables, analyze experimental data, and make predictions based on observations and experimental data.
* Investigate how measurement data are simplified, identify trends in the experimental data and generalize.
* Describe and analyze motion, visualize the relationship between distance and time, distinguish between motion with uniform velocity and non-uniform motion.
* Describe and analyze motion with constant acceleration. Visualize the relationship between velocity and use it to predict the motion of falling objects.
* Investigate the force necessary to keep an object moving in a constant circular path. Determine the magnitude of the centripetal force required to keep an object in a circular path.
* Verify and investigate Hooke’s Law, and determine the spring constant for various elastic systems.
* Explain mechanical rotational equilibrium, applying Newton’s laws to rotational motion and rigid bodies.
* Analyze and investigate the concepts of work and energy and the rate at which work is done.
* Distinguish between “density” and “specific gravity”; apply Archimedes’ principle in determining these properties for solid samples.
* Investigate and summarize the relationship between the temperature on the Fahrenheit scale and the temperature on the Celsius scale.
* Investigate and identify thermal properties and processes, and determine experimentally the values of certain heat constants for various metals and liquids.
* Investigate the proportionality relationship between voltage and electric current, visualize the relationship by plotting graphs, and compute the electrical resistance from the slope of a graph.
* Distinguish between the concepts of “node,” “antinode,” and “resonance” by investigating the properties of waves and their interaction with matter; calculate the speed of wave.

1. **DISTRICT-WIDE POLICIES:**

**Programs for Students with Disabilities**

Florida SouthWestern State College, in accordance with the Americans with Disabilities Act and the College’s guiding principles, offers students with documented disabilities programs to equalize access to the educational process. Students needing to request an accommodation in this class due to a disability, or who suspect that their academic performance is affected by a disability should contact the Office of Adaptive Services at the nearest campus. The office locations and telephone numbers for the Office of Adaptive Services at each campus can be found at <http://www.fsw.edu/adaptiveservices>.

**REPORTING TITLE IX VIOLATIONS**

Florida SouthWestern State College, in accordance with Title IX and the Violence Against Women Act, has established a set of procedures for reporting and investigating Title IX violations including sexual misconduct.  Students who need to report an incident or need to receive support regarding an incident should contact the Equity Officer at [equity@fsw.edu](mailto:equity@fsw.edu).  Incoming students are encouraged to participate in the Sexual Violence Prevention training offered online.  Additional information and resources can be found on the College’s website at <http://www.fsw.edu/sexualassault>.

1. **REQUIREMENTS FOR THE STUDENTS:**

List specific course assessments such as class participation, tests, homework assignments, make-up procedures, etc.

1. **ATTENDANCE POLICY:**

The professor’s specific policy concerning absence. (The College policy on attendance is in the Catalog, and defers to the professor.)

1. **GRADING POLICY:**

Include numerical ranges for letter grades; the following is a range commonly used by many faculty:

90 - 100 = A

80 - 89 = B

70 - 79 = C

60 - 69 = D

Below 60 = F

(Note: The “incomplete” grade [“I”] should be given only when unusual circumstances warrant. An “incomplete” is not a substitute for a “D,” “F,” or “W.” Refer to the policy on “incomplete grades.)

1. **REQUIRED COURSE MATERIALS:**

(In correct bibliographic format.)

1. **RESERVED MATERIALS FOR THE COURSE:**

Other special learning resources.

1. **CLASS SCHEDULE:**

This section includes assignments for each class meeting or unit, along with scheduled Library activities and other scheduled support, including scheduled tests.

1. **ANY OTHER INFORMATION OR CLASS PROCEDURES OR POLICIES:**

(Which would be useful to the students in the class.)