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

# COURSE NUMBER AND TITLE, CATALOG DESCRIPTION, CREDITS:

## PHY 1020C Fundamentals of the Physical World (3 Credits)

Fundamentals of the Physical World is designed to provide a broad foundation in physical concepts to non-science majors. It emphasizes how physicists approach the problem of describing nature in terms of physical theories and the importance of experimental tests. This course addresses topics in mechanics, heat energy, wave motion, light, electricity and magnetism, and includes elements of modern physics. This is a state designated general education core course in natural sciences.

## PREREQUISITES FOR THIS COURSE:

SB 1720 Testing Exemption or successful completion of all Developmental courses

### CO-REQUISITES FOR THIS COURSE:

None

## GENERAL COURSE INFORMATION:

Topic Outline

Physical theories and the scientific method

Motion, force, work, energy, momentum and conservation principles

Heat as a form of energy, temperature and basic thermal processes

The interaction of light with matter and properties of light

Electricity and magnetism

Models of the atom and fundamentals of atomic physics

## 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:

Recognize and justify the importance of measurements in scientific studies

Describe and analyze the concepts associated with motion, work, energy, momentum and use the conservation principles to investigate related phenomena.

Investigate light’s interaction with matter and use the observations to explain related phenomena in nature.

Describe and investigate the interaction between electric charges.

Explain the relationship between electric and magnetic phenomena.

Outline the development of the atomic theory, and the supporting experimental evidence.

Investigate wave formation/patterns and how they travel through space.B. In accordance with Florida Statute 1007.25 concerning the state’s general education core course requirements, this course meets the general education competencies for science.

Students will demonstrate the ability to critically examine and evaluate scientific observation, hypothesis, or model construction, and to use the scientific method to explain the natural world.

Students will successfully recognize and comprehend fundamental concepts, principles and processes about the natural world

## 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 <https://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 <https://www.fsw.edu/sexualassault>.

## REQUIREMENTS FOR THE STUDENTS:

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

## ATTENDANCE POLICY:

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

## GRADING POLICY:

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

| **Grade Percent** | **Letter Grade** |
| --- | --- |
| 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.)

## REQUIRED COURSE MATERIALS:

(In correct bibliographic format.)

## RESERVED MATERIALS FOR THE COURSE:

Other special learning resources.

## CLASS SCHEDULE:

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

## ANY OTHER INFORMATION OR CLASS PROCEDURES OR POLICIES:

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