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

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

**BSC 1010 BIOLOGICAL SCIENCE I (3 CREDITS)**

This introduction to cell biology is designed to meet entrance requirements for upper division majors in biology, psychology, or other pre-professional programs. The course addresses and integrates concepts associated with the basic physical and chemical properties of living matter as they relate to the structure and function of the cell, cell reproduction, Mendelian and molecular genetics (DNA replication and gene expression), energy metabolism, metabolic control systems, and cell-to-cell communication systems.

1. **PREREQUISITES FOR THIS COURSE:**

(SB 1720 Testing Exemption or successful completion of all Developmental courses) and (BSC 1005C or BSC 1005 or 1 credit of high school biology) with a “C” or better

**CO-REQUISITES FOR THIS COURSE:**

BSC 1010L

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

* Characteristics of living organisms
* Basic atomic structure
* Chemical bonding and biomolecules
* Properties of water
* Prokaryotic and eukaryotic cells
* Thermodynamics
* Enzyme structure and function
* Membrane structure and function
* Cell communication
* Photosynthesis
* Cellular respiration and fermentation
* DNA structure and protein synthesis
* Regulation of gene expression
* DNA replication and the cell cycle
* Meiosis
* Patterns of inheritance

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. Integral General Education Competency or competencies: **Think**

Course Outcomes or Objectives Supporting the General Education Competency Selected:

* Explain how the special properties of water make life possible.
* Explain the role of energy transfer in biological processes.
* Relate the structure of biological membranes to their functions.
* Explain how cells store and use genetic information.

2. Supplemental General Education Competency or competencies: **Evaluate**

* Describe basic atomic structure and its role in the formation of chemical bonds.
* Interpret the laws governing inheritance.

**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.**

* Describe the characteristics of living organisms.
* Describe basic atomic structure and its role in the formation of chemical bonds.
* Relate chemical bonds to the structure of the major biomolecules.
* Explain how the special properties of water make life possible.
* Compare and contrast the structure and function of prokaryotic and eukaryotic cell components.
* Explain the role of energy transfer in biological processes.
* Describe the function of enzymes and enzyme inhibitors in biochemical reactions.
* Relate the structure of biological membranes to their functions.
* Identify mechanisms involved in cell communication and response to stimuli.
* Explain how photosynthetic organisms convert light energy to chemical energy.
* Explain how cells convert chemical energy in fuel molecules into useable energy.
* Explain how cells store and use genetic information.
* Explain how prokaryotes and eukaryotes regulate gene expression
* Explain the cellular life cycle including DNA replication, cell division and control mechanisms.
* Summarize how genetic information is passed from one generation to the next during reproduction.
* Interpret the laws governing inheritance.

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.)