

# El Paso Community College

## Syllabus

### Part II

## Official Course Description

<b>SUBJECT AREA</b>	<u><b>Biology</b></u>
<b>COURSE RUBRIC AND NUMBER</b>	<u><b>BIOL 1309</b></u>
<b>COURSE TITLE</b>	<u><b>Biology for Non-Science Majors II (Lecture) (C) (MNS)</b></u>
<b>COURSE CREDIT HOURS</b>	<u><b>3                    3                    0</b></u> <b>Credits                    Lec                    Lab</b>

### I. Catalog Description

This course will provide a survey of biological principles with an emphasis on humans, including evolution, ecology, plant and animal diversity, and physiology. This course is NOT intended for science majors. **Prerequisites: BIOL 1308 and 1108 with a “C” or better. Corequisite: BIOL 1109. (3:0).**

### II. Course Objectives

This course stresses the theoretical aspects of human anatomy and physiology.

#### A. Unit I. From Cells to Organ Systems: Tissues

1. Use correct anatomical terminology and orientation.
2. Explain the basic concept of homeostasis and demonstrate, using scientific investigation, how this key concept is the most important unifying theme of the body systems. In using scientific investigation, students will demonstrate:
  - a) effective development, interpretation, and expression of ideas and **communication skills** through written, oral, and/or visual communication of their scientific investigation, outcomes, and conclusions.
  - b) **critical thinking skills** by engaging in creative thinking, innovation, inquiry, and demonstrating analysis, evaluation, and synthesis of information.
  - c) **empirical and quantitative skills** by formulating an inquiry and following an investigative process using empirical and/or qualitative/quantitative reasoning to satisfy the inquiry. This includes the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.
  - d) **teamwork skills** by being able to consider different points of view and by effectively working with others to support a shared purpose or goal in their scientific investigation.
3. Discuss the feedback systems (negative and positive feedback systems).
4. Discuss the integumentary system.

#### B. Unit II. The Skeletal System and The Muscular System

1. Discuss bone development.
2. Describe the various functions of the skeletal system.
3. Describe disorders of the skeletal system.
4. Distinguish between the different types of muscle tissue.
5. Discuss the functions and differences between the different types of muscles.

6. Describe disorders of the muscular system.
- C. Unit III. Cardiovascular, Lymphatic and Immune Systems
1. Identify the components and functions of blood.
  2. Describe the structure and function of the heart and major blood vessels of the body.
  3. Describe cardiovascular disorders.
  4. Explain the basic functions of the Lymphatic and Immunity Systems.
  5. Apply physiological concepts to tissue rejection and other disorders of the immune system.
- D. Unit IV. The Respiratory System
1. Discuss the anatomy and physiology of the upper and lower respiratory tracts.
  2. Discuss the physiology of breathing.
  3. Describe disorders of the Respiratory System.
- E. Unit V. The Nervous System and the Endocrine System
1. Discuss the anatomy and physiology of the various part of the Nervous System.
  2. Explain the physiology of special senses: eye-sight, hearing/equilibrium, taste, olfaction, touch, and general senses such as temperature, vibration, pain, stretch.
  3. Describe disorders of the Nervous System and sensory mechanism.
  4. Discuss the effects of drugs on the Nervous system.
  5. Explain how the endocrine system regulates the bodily functions and discuss the functions of the different endocrine glands.
  6. Describe disorders of the Endocrine System.
- F. Unit VI. Digestive System and Nutrition
1. Discuss the functions of the organs of the Digestive System.
  2. Identify the accessory organs of the Digestive System and their function in digestion.
  3. Discuss the concept of metabolism, including special topics such as nutrition and weight control.
  4. Describe disorders of the Digestive System and the role of the gut microbiome.
- G. Unit VII. Urinary System and the Male and Female Reproductive Systems
1. Discuss the anatomy and physiology of the Urinary System and its function in homeostasis.
  2. Discuss disorders of the Urinary System.
  3. Discuss the anatomy and physiology of the Male Reproductive System and Female Reproductive Systems.
  4. Discuss the human's sexual response and have a knowledge of STD's and how this relates to society.

### **III. THECB Learning Outcomes (ACGM)**

Upon successful completion of this course, students will:

1. Describe modern evolutionary synthesis, natural selection, population genetics, micro and macroevolution, and speciation.
2. Describe phylogenetic relationships and classification schemes.
3. Identify the major phyla of life with an emphasis on plants and animals, including the basis for classification, structural and physiological adaptations, evolutionary history, and ecological significance.
4. Describe basic animal physiology and homeostasis as maintained by organ systems.

5. Compare different sexual and asexual life cycles noting their adaptive advantages.
6. Illustrate the relationship between major geologic change, extinctions, and evolutionary trends.

**IV. Evaluation**

A. Pre-assessment: None Available

B. Post-Assessment:

1. **Grade:** The number, frequency, and type of quizzes and exams is left to the discretion of the instructor. The type can be multiple choice, true, false, etc., and it is very desirable to include a section to evaluate the student's written expression (objective/essay combination). Take-home exams are not recommended for this course.

C. Grading Scale:

90 –100 %	=	A
80 –89 %	=	B
70 –79 %	=	C
60 –69 %	=	D
Below 60 %	=	F

**V. Disability Statement (Americans with/Disabilities Act [ADA])**

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024)

**VI. 6 Drop Rule**

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.

**VII. Title IX and Sex Discrimination**

Title 9 (20 U.S.C. 1681 & 34 C.F.R. Part 106) states the following "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving Federal financial assistance." The Violence Against Women Act (VAWA) prohibits stalking, date violence, sexual violence, and domestic violence for all students, employees and visitors (male and female). If you have any concerns related to discrimination, harassment, or assault (of any type) you can contact the Assistant to the Vice President for Student and Enrollment Services at 915-831-2655. Employees can call the Manager of Employee Relations at 915-831-6458. Reports of sexual assault/violence may also be reported to EPCC Police at 915-831-2200.