

## **COURSE OUTLINE** **Biological Vocabulary**

### **Course Description**

BI 101. Biological Vocabulary. 1 hour credit. This course will enable the student to gain knowledge of common biological terminology by pronouncing, spelling and defining approximately 300 general biology words.

### **Course Relevance**

The vocabulary learned in this class prepares the student for the more rigorous five-credit hour General Biology course by covering the terminology of the first ten chapters of that General Biology course. Students who would like to enter a biology related field would also find this course helpful.

### **Required Materials**

None.

Biological Vocabulary PowerPoint Program on CD-Rom. The program must be used in the Academic Achievement Center for this class. Other required materials are provided to the student. These include use of a CD-ROM entitled "Life Sciences Living Lexicon" and various readings in biology.

### **Supplemental Materials**

Chapter handouts, online resources, biology text

### **Learning Outcomes**

The intention is for the student to be able to:

1. Use the principles of word building.
2. Classify prefixes by type.
3. Match course terms from a list of terms and definitions and be able to spell and pronounce each term accurately.

### **Learning PACT Skills that will be DEVELOPED and/or documented in this course**

Through involvement in this course, the student will develop ability in the following PACT skill area(s):

#### **Communication Skills**

1. Creation and delivery of messages
  - Through the analysis of biological vocabulary terms, the student will develop the ability to predict the meaning of new terms, to communicate aurally and in writing with peers and to make connections between the terms and written material outside the course.

## **Major Summative Assessment Task(s)**

These learning outcome(s) and the Learning PACT skill(s) will be demonstrated by

1. Identifying and recalling the meaning of specific vocabulary words by their context usage in prepared sentences within a summative writing exercise.
2. Demonstrating the correct usage of specific vocabulary words in written sentences within a summative writing exercise.

## **Course Content**

- I. Skills/Competencies – Actions that are essential to achieve the course outcomes:
  - A. Use the principles of word building to understand biological terms
  - B. Classify prefixes by their meanings
  - C. Match course terms with a list of definitions
  - D. Be able to spell and pronounce each term accurately
  - E. Be aware of the basic biological concepts that accompany a set of terms
  - F. Analyze one biology related article per chapter and answer questions that apply the meanings of the biological terms
- II. Themes – Key recurring concepts that run throughout this course:
  - A. Principles of biological word building
  - B. Using prefixes to modify base words
  - C. Relating particular words to different aspects of biology
  - D. Using biological readings to integrate vocabulary terms into knowledge
- III. Issues – Key areas of conflict that must be understood in order to achieve the intended outcome:
  - A. Word building in the English language
  - B. Interrelationships between biology and other scientific disciplines
  - C. Differences in pronunciation of scientific words and secular words
- IV. Concepts – Key concepts that must be understood to address the issues:
  - A. Importance of spelling and pronouncing biological vocabulary words correctly
  - B. Importance of interrelationships of biology and other science disciplines
  - C. Understanding that biological vocabulary is a world vocabulary

## **Learning Units**

- I. Principles of word building
  - A. Prefixes, suffixes, and root words
  - B. Combining forms and combining vowels
- II. Prefixes used to describe size, shape, texture, direction, number, exponential form
- III. Terms related to scientific method: definitions, spelling, and pronunciation
- IV. Terms related to basic chemistry: definitions, spelling, and pronunciation
- V. Terms related to chemistry of life: definitions, spelling, and pronunciation
- VI. Terms related to cell structure: definitions, spelling, and pronunciation

- VII. Terms related to membrane structure and function: definitions, spelling, and pronunciation
- VIII. Terms related to metabolism: energy and enzymes – definitions, spelling, and pronunciation
- IX. Terms related to photosynthesis: definitions, spelling, and pronunciation
- X. Terms related to cellular respiration: definitions, spelling, and pronunciation
- XI. Terms related to cell division: definitions, spelling, and pronunciation
- XII. Terms related to meiosis and sexual reproduction: definitions, spelling, and pronunciation
- XIII. Readings that are an integral part of the Learning Units

### **Learning Activities**

Independent learning activities are assigned for completion within or outside the classroom. These activities include computer work, readings related to chapter topics, pronunciation and spelling of terms, and definitions of biological terms.

### **Grade Determination**

Grades are based on the assessment tasks and completion of spelling, definition, and pronunciation of terms as well as relating readings to learned vocabulary.