

**COURSE INFORMATION**

COURSE PREFIX. / NO.:	BIO 102
COURSE TITLE:	Biological Science II
LECTURE HRS. / WEEK:	3.0
LAB HRS. / WEEK:	3.0
CREDIT HRS. / SEMESTER	4.0

**DL ATTENDANCE/VA STATEMENT  
TEXTBOOK INFORMATION****COURSE DESCRIPTION**

This is a continuation of introductory biology which includes classification of organisms and structural and functional considerations of all kingdoms (particularly major phyla as well as viruses). Vertebrate animals and vascular plants are emphasized.

**COURSE COMPETENCIES**

Upon successful completion of this course students should be able to:

**Module 1: Prokaryotes, Protistes, and Fungi**

- Describe the scope of the biological sciences.
- Demonstrate appropriate use of biological terminology.
- Discuss the theories advanced by natural historians on the origin of life on earth.
- Classify bacteria by morphology, cell grouping and staining properties.
- Characterize the morphologies and life cycles of common protozoa.
- Characterize the morphologies and life cycles of red, brown, and green algae.
- Use differences in life cycles to differentiate between the phyla of fungi.
- Make properly detailed biological drawings.
- Follow written instructions.
- Record thoughtful observations.

**Module 2: The Plant Kingdom**

- Characterize the differences in reproductive methods between the major divisions of nonvascular and vascular plants.
- Discuss the role of earth's geological and climatic changes on the evolution of plants.
- Be able to identify key events and key stages in the life cycles of each of the major divisions of the plant kingdom.
- Characterize the trajectory of differentiation in plant cells.
- Locate specific structures and tissue types using microscopic examination of prepared specimens.
- Make properly detailed biological drawings.
- Follow written instructions.
- Record thoughtful observations.

### **Module 3: Plant Physiology**

- Identify the role of each of the plant hormones.
- Explain transport mechanisms for water and nutrients in vascular plants.
- Describe the role of environmental factors in seed germination.
- Explain the role of photoperiod in induction of flowering.
- Characterize the physiological processes involved in tropisms.
- Make properly detailed biological drawings.
- Follow written instructions.
- Record thoughtful observations.

### **Module 4: The Animal Kingdom:**

- Identify distinguishing characteristics of the major animal phyla.
- Differentiate between levels of organization in various phyla of animals.
- Identify an animal by its scientific name.
- Demonstrate proper dissection techniques.
- Make properly detailed biological drawings.
- Follow written instructions.
- Record thoughtful observations.

### **Module 5: Animal Behavior**

- Differentiate between instinct and adaptive behavior.
- Identify the common components of instinctive behaviors.
- Identify the role of eminent behaviorists in the development of the current understanding of adaptive animal behavior.
- Discuss theories relating to the biological origins of behavior in man.
- Record thoughtful observations.
- Write a satisfactory journal style scientific paper.

### **MINIMAL STANDARDS**

Minimal standards for performance of course competencies are indicated by achieving a 60% accuracy level on evaluation instruments used in the course performance evaluation strategy.

### **COURSE REQUIREMENTS**

#### **Attendance Policy**

Students are responsible for attending class and laboratory meetings in the course and for completion of all reading and written assignments. If a student is absent from a class or laboratory meeting, it is the student's responsibility to obtain and complete any assignment that may have been made in the missed meeting. Students who are absent from more than 20% of the total contact class and laboratory hours will be withdrawn from the course in accordance with the York Technical College attendance policy.

## **Withdrawal from a Course**

A student may withdraw from a course after the drop/add period until midterm with a grade of "W" (withdrawn). To withdraw from a course, the student must obtain and complete a Request for Withdrawal form from his advisor or from Student Services. Students who withdraw after midterm may receive a "W" at the discretion of the instructor if performance has been satisfactory to the point of withdrawal. Otherwise, such withdrawals will receive a grade of "WF."

## **Student conduct**

Students are required to conform to all conduct codes as specified in the York Technical College Handbook and Catalog. Students found guilty of academic dishonesty such as cheating or plagiarism will be given a grade of zero and may be subject to further disciplinary action.

## **EVALUATION STRATEGIES/GRADING**

The competencies of each module may be evaluated by any of the following methods: examination (written or oral), presentation, written report, written assignment, daily quiz, laboratory quiz, homework, or other appropriate instruments. The grading scale for the course will be as follows:

Module 1	(quizzes and module exam)	10% of course grade
Module 2	(quizzes and module exam)	10% of course grade
Module 3	(quizzes and module exam)	10% of course grade
Module 4	(quizzes and module exam)	10% of course grade
Module 5	(quizzes and module exam)	10% of course grade
Laboratory Grade	(participation and documentation)	25% of course grade
Final Exam	(comprehensive)	25% of course grade

Grades will be determined using the following scale:

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

The above requirements and topics are standard and required for the course. Individual instructors will provide statements of additional requirements and/or policy.

## **ENTRY LEVEL SKILLS**

A student entering this course should possess reading comprehension and writing skills on at least the 10<sup>th</sup> grade level.

**PREREQUISITES/CO-REQUISITES:** None