

# Piedmont Technical College Course Syllabus

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## COURSE INFORMATION

**Course Prefix/Number:** BIO 225

**Title:** Microbiology

**Responsible Division:** Arts and Sciences

**Last Day to Withdraw from this Course:** For the last date to withdraw from this course, consult the current *Student Calendar*.

### Course Description:

For course, credit hour, pre-requisite(s) and co-requisite(s) information, visit the Detailed Course Information page: [www.ptc.edu/courses/BIO225](http://www.ptc.edu/courses/BIO225).

### Textbook and Other Materials:

For textbook information and additional required and/or supplemental materials, visit the [college bookstore](http://www.ptc.edu/bookstore) ([www.ptc.edu/bookstore](http://www.ptc.edu/bookstore)).

### Proctored Examinations:

Proctored examinations for distance learning courses taken at non-PTC campuses may require a proctoring fee for each exam taken.

## COURSE POLICIES

Course policies are available online through the *Academic Catalog* and *Student Handbook*. Visit the [Course Policies page](http://www.ptc.edu/syllabus/policies) ([www.ptc.edu/syllabus/policies](http://www.ptc.edu/syllabus/policies)) for a detailed list of important policies and more information.

## GRADE POLICY

Detailed grading policy information can be found on the [Grading Policy webpage](http://www.ptc.edu/grading-policy) (<http://www.ptc.edu/grading-policy>). Final grade appeal information is available in the [Academic Catalog](http://www.ptc.edu/catalog/) (<http://www.ptc.edu/catalog/>).

## **ACCOMMODATIONS**

### **Accommodations for ADA:**

Information is available on the [Student Disability Services webpage](http://www.ptc.edu/ada) (<http://www.ptc.edu/ada>).

## **TITLE IX HARASSMENT AND SEXUAL ASSAULT INFORMATION**

In accordance with Title IX of the Education Amendments of 1972, Piedmont Technical College does not discriminate on the basis of sex in its education programs or activities. Title IX protects students, employees, and applicants from sex discrimination in admissions and employment to include discrimination based on gender identity or failure to conform to stereotypical notions of masculinity or femininity. More information regarding Title IX, including contact information for the Title IX coordinators, is available at [Title IX Harassment and Sexual Assault Information](https://www.ptc.edu/about/legal-disclosures/title-ix-harassment-and-sexual-assault-information) (<https://www.ptc.edu/about/legal-disclosures/title-ix-harassment-and-sexual-assault-information>).

## **RATIONALE**

### **Why do I need this course?**

This course provides fundamental concepts of human microbiology while providing basic concepts of the disease process. Students are taught proper laboratory handling and control of microorganisms to prevent contamination.

## **PROGRAM INFORMATION**

For program information including required courses, program learning outcomes, gainful employment information and advisement information, refer to the Academic Program webpage. Go to [Academics](http://www.ptc.edu/academics) (<http://www.ptc.edu/academics>), select your program, and then select Credentials Offered.

## **COURSE STUDENT LEARNING OUTCOMES**

Upon successful completion of this course and/or clinical, each student will be able to:

- Explain relationships and apply appropriate terminology relating to the structure, metabolism, genetics, and growth of prokaryotic microorganisms, eukaryotic microorganisms, and viruses.
- Explain principles of physical and chemical methods used in the control of microorganisms and apply this understanding to the prevention and control of infectious diseases.
- Explain the role of the human body's normal microflora.
- Explain interactions between opportunistic and pathogenic microorganisms and susceptible hosts that result in infection and/or disease and apply these interactions to disease symptoms.
- Explain nonspecific body defenses and the immune responses and apply this understanding to the infectious disease process as well as the prevention and control of infectious diseases.
- Demonstrate appropriate laboratory skills and techniques related to the isolation, inoculation, staining, identification, assessment of metabolism, and control of microorganisms.
- Develop the ability to work both independently and with others in the laboratory.
- Demonstrate the ability to make and interpret laboratory observations; formulate and test hypotheses; conduct and evaluate experiments; collect and analyze data; draw and assess appropriate conclusions; report results.
- Develop an information base for making personal health decisions in regard to infectious diseases as well as applying microbiology concepts to real world applications.

## **GENERAL EDUCATION COMPETENCIES**

### **Piedmont Technical College General Education Competencies for All Graduates:**

*This course may address one or more of the following General Education Competencies (assessment will be stated when applicable):*

#### **Communicate effectively.**

Assessment:

Lab Report(s)

#### **Apply mathematical skills appropriate to an occupation.**

Assessment:

Interpret data for incorporation into lab reports.

**Employ effective processes for resolving problems and making decisions.**

Assessment:

N/A

**Demonstrate the basic computer skills necessary to function in a technological world.**

Assessment:

Lab reports will be prepared using WORD and submitted using dropbox.

*To validate proficiency in the general education competencies, students in some programs will be tested using Work Keys.*