

# EDISON STATE COLLEGE

Division of Arts and Sciences

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## COMMON COURSE SYLLABUS

**PROFESSOR:**

**OFFICE LOCATION:**

**E-MAIL:**

**PHONE NUMBER:**

**OFFICE HOURS:**

**SEMESTER:**

I. COURSE NUMBER AND TITLE, CATALOG DESCRIPTION, CREDIT HOURS:

**MCB 2010C – MICROBIOLOGY – AA – 5 CREDIT HOURS**

This combined lecture and laboratory course is an introduction to Microbiology. It expands upon general biological concepts including: inorganic and organic chemistry, biochemistry, cell structure and function, metabolism, and genetic mechanisms. These concepts are applied to the morphology, physiology, biochemistry, and genetic mechanisms of microorganisms. The course includes a survey of the representative types of microorganisms and the role of pathogenic microorganisms in causing diseases and infections.

I. PREREQUISITES FOR THE COURSE:

Minimum of a "C" in BSC 1080 for students who wish to enroll in a Health Professions program of studies at Edison State College or minimum of a "C" in BSC 1010 for students seeking to leave Edison State College and enroll in Health Professions degrees elsewhere

II. GENERAL COURSE INFORMATION:

- History of Microbiology
- Morphology and Functional Anatomy of Prokaryotic and Eukaryotic microorganisms
- Microbial Growth and Metabolism
- Control of Microbial Growth
- Microbial Genetics
- Classification and Survey of Microorganisms
- Principles of Disease and Epidemiology
- Microbial Mechanisms of Pathogenicity
- Microorganisms and Human Disease

IV. LEARNING OUTCOMES AND ASSESSMENT:

**GENERAL EDUCATION COMPETENCIES:**

General education courses must meet at least four out of the five following outcomes. All other courses will meet one or more of these outcomes.

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*Communication (COM):* To communicate effectively using standard English (written or oral).

*Critical Thinking (CT):* To demonstrate skills necessary for analysis, synthesis, and evaluation.

*Technology/Information Management (TIM):* To demonstrate the skills and use the technology necessary to collect, verify, document, and organize information from a variety of sources.

*Global Socio-cultural Responsibility (GSR):* To identify, describe, and apply responsibilities, core civic beliefs, and values present in a diverse society.

*Scientific and Quantitative Reasoning (QR):* To identify and apply mathematical and scientific principles and methods.

## ADDITIONAL COURSE COMPETENCIES:

At the conclusion of this course, students will be able to demonstrate the following additional competencies:

LEARNING OUTCOMES	ASSESSMENTS	GENERAL EDUCATION COMPETENCY
List the important contributions made by scientists to microbiology.	Lecture and laboratory examinations, including a laboratory practical exam.	COM
Describe the different types of microscopes used by microbiologists and correctly use a light microscope.		CT, QR, COM, TIM
Perform simple and differential staining techniques.		GSR, CT, COM, TIM
Describe the morphology and functional anatomy of prokaryotic and eukaryotic microorganisms.		COM, CT
Describe the key features of microbial metabolism and explain how microbial metabolic pathways differ from those of other cells.		COM, QR, CT
Describe the physical and chemical requirements for microbial growth and the techniques used to measure microbial growth.		QR, COM, CT
Explain the principles and methods used for the physical and chemical control of microorganisms.		COM, CT
Describe microbial genetics, mutation, and the mechanisms of genetic recombination in microbes.		COM, CT, GSR

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The classification, identification, and defining characteristics of the different groups of microorganisms.		COM, CT
Explain methods of disease transmission, predisposing factors for disease, and the mechanisms of microbial pathogenicity.		COM, CT, TIM
List the causative agents, modes of transmission, clinical symptoms, and treatments for various human infectious diseases.		COM, CT, GSR

V. DISTRICT-WIDE POLICIES:

**PROGRAMS FOR STUDENTS WITH DISABILITIES**

Edison 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.

Lee Campus	Taeni Hall S-116A	(239) 489-9427
Charlotte Campus	Student Services SS-101	(941) 637-5626
Collier Campus	Admin. Bldg. A-116	(239) 732-3918
Hendry/Glades Ctr.	LaBelle H.S.	(863) 674-0408

VI. REQUIREMENTS FOR THE STUDENTS:

VII. ATTENDANCE POLICY:

VIII. GRADING POLICY:

IX. REQUIRED COURSE MATERIALS:

X. RESERVED MATERIALS FOR THE COURSE:

XI. CLAST COMPETENCIES INVOLVED IN THIS COURSE:

XII. CLASS SCHEDULE:

XIII. ANY OTHER INFORMATION OR CLASS PROCEDURES OR POLICIES: