

MICRO 5 Course Outline as of Fall 1981**CATALOG INFORMATION**

Dept and Nbr: MICRO 5 Title: GENERAL MICROBIO
 Full Title: General Microbiology
 Last Reviewed: 8/14/2023

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	5.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	5.00	Lab Scheduled	6.00	6	Lab Scheduled	105.00
		Contact DHR	0		Contact DHR	0
		Contact Total	9.00		Contact Total	157.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00

Total Student Learning Hours: 262.50

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

Catalog Description:

Physiology and genetics of micro-organisms with emphasis on the bacteria. Principles of host-parasite interaction. Usually offered fall and summer.

Prerequisites/Corequisites:

High school chemistry with grade of "B" or better or college chemistry with grade of "C" or better.

Recommended Preparation:

English 1A completed or in progress; Math 155 or 156 or equivalent; Biology 10 or equivalent.

Limits on Enrollment:**Schedule of Classes Information:**

Description: Physiology & genetics of micro-organisms with emphasis on the bacteria. Principles of host-parasite interaction. (Grade Only)

Prerequisites/Corequisites: High school chemistry with grade of "B" or better or college chemistry with grade of "C" or better.

Recommended: English 1A completed or in progress; Math 155 or 156 or equivalent; Biology 10 or equivalent.

Limits on Enrollment:

Transfer Credit: CSU;UC. (CAN BIOL14)

Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area		Effective:	Inactive:
	C	Natural Sciences	Fall 1981	
CSU GE:	Transfer Area		Effective:	Inactive:
	B2	Life Science	Fall 1981	
	B3	Laboratory Activity		
IGETC:	Transfer Area		Effective:	Inactive:
	5B	Biological Sciences	Fall 1981	
	5C	Fulfills Lab Requirement		
CSU Transfer:	Transferable	Effective:	Fall 1981	Inactive:
UC Transfer:	Transferable	Effective:	Fall 1981	Inactive:

CID:

Certificate/Major Applicable:

Not Certificate/Major Applicable

COURSE CONTENT

Outcomes and Objectives:

Students completing Microbiology 5 will have demonstrated by written examination that they have a basic understanding of the following areas:

1. Historical development of microbiology - microorganisms in the transformation of organic matter, germ theory, the development of molecular biology.
2. Cell biology - cell organization and basic chemistry, general principles of molecular genetics and cell metabolism, prokaryotic and eukaryotic cells.
3. Methodology - pure culture, sterilization, cultivation, microscopy, protein separation and characterization.
5. Virus - definition, cell interaction, replication, assay, isolation, and characterization.
6. Microbial genetics - the genome, mutation, selection/adaptation, exchange and recombination regulation.
7. Taxonomy - problems in bacteria, traditional and modern approaches, comparative taxonomy of selected groups.
8. Symbiosis - types, functions, evolution and establishment.
9. Disease - normal flora, human pathogens, mechanisms of pathogenicity, epidemiology, non-specific host defenses, the immune system, factors influencing resistance to infectious disease, the historical perspective on infectious disease, special problems of virus infections, chemo-therapy.
10. Applied microbiology - fermentation, genetic engineering, developments in wine and/or cheese making.

Topics and Scope:

1. Historical development.
2. Cell biology.
3. Methodology.
4. Virus.
5. Microbial genetics.
6. Taxonomy.
7. Symbiosis.
8. Disease.
9. Applied microbiology.

Assignment:

1. Read textbook and additional readings.
2. Lab reports.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Written homework, Essay exams

Writing
0 - 50%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Lab reports, Exams

Problem solving
0 - 0%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Class performances

Skill Demonstrations
0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items, Completion

Exams
0 - 50%

Other: Includes any assessment tools that do not logically fit into the above categories.

None

Other Category
0 - 0%

Representative Textbooks and Materials:

THE MICROBIAL WORLD, 5th ed. by Roger Y. Stanier, Prentice-Hall, 1986.
MICROBIAL BIOLOGY by Eugene Rosenberg and Irun Cohen, Saunders College,

1983.

These are the two most recently used texts. They both meet the needs of this course quite well.