BIO 038 COR with Post 2015 SLO Data

West Hills College Coalinga

Course Outline of Record Report

08/04/2018

BIO038 : Microbiology

General Information

Author(s):	-
Subject (CB01):	BIO
Number (CB01):	038
Course Title (CB02):	Microbiology
Department:	Biology
Proposal Start:	Spring 2018
TOP Code (CB03):	(0403.00) Microbiology
SAM Priority Code (CB09):	Non-occupational
Distance Education Approved:	Yes
Course Control Number (CB00):	CCC000228817
Curriculum Committee Approval Date:	Pending
Board of Trustees Approval Date:	Pending
External Review Approval Date:	09/27/2010
Course Description:	BIO 38 is a consideration of the morphology, anatomy, physiology, and taxonomy of microorganisms with an emphasis on the methods of isolation, identification and the diseases they cause.
Submission Rationale:	No value

Faculty Requirements

Master Discipline Preferred:	• Biological Sciences • Biological Sciences
Alternate Master Discipline Preferred:	No value
Bachelors or Associates Discipline Preferred:	No value
Additional Bachelors or Associates Discipline:	No value

Course Development Options

Course Basic Skill Status (CB08)

Course is not a basic skills course.

Course Special Class Status (CB13)

Course is not a special class.

Grade Options

- Letter Grade methods

☐ Allow Students to Gain Credit by Exam/Challenge

Allowed Number of Retakes

0

Course Prior to College Level (CB21)

Not applicable.

Rationale For Credit By Exam/Challenge

No value

Retake Policy Description

No value

☐ Allow Students To Audit Course

Associated Programs

☐ Course is part of a program (CB24)

Associated Program

No value

Award Type

No value

Transferability & Gen. Ed. Options

Request for Transferability (CB05)

Transferable to both UC and CSU

Transferability Status

Approved

Units and Hours

Summary

Minimum Credit Units (CB07)	2	**Total Course In-Class (Contact) Hours**	108	**Total Student Learning Hours**	108
Maximum Credit Units (CB06)	2	**Total Course Out-of-Class Hours**	-	**Faculty Load**	-

Credit / Non-Credit Options

Course Credit Status (CB04)

Credit - Degree Applicable

Course Non-Credit Category (CB22)

Credit Course.

Non-Credit Characteristics

No value

Course Classification Code (CB11)

Credit Course.

Funding Agency Category (CB23)

Not Applicable.

☐ Cooperative Work Experience Education Status (CB10)

☐ Variable Credit Course

Weekly Student Hours

	In Class	Out of Class
Lecture Hours	3	-
Lab Hours	3	-
Activity Hours	-	-

Course Student Hours

Course Duration (Weeks)	18
Hours per unit divisor	54
Course In-Class (Contact) Hours	
Lecture	54
Lab	54
Activity	-
Total	108
Course Out-Of-Class Hours	
Lecture	-
Lab	-
Activity	-
Total	-

Time Commitment Notes for Students

No value

Faculty Load

Extra Duty: -

Faculty Load: -

Units and Hours - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class
No value	No value	No value	No value

Requisites

Prerequisite

BIO010 - Fundamentals of Biology

AND

Prerequisite

CHEM002A - Introductory Chemistry I

AND

Prerequisite

ENG051A - Introduction to Communication Skills

Entrance Skills

Skill	Content Review
No value	No value

Limitations on Enrollment

Limitation	Provide Rationale
No value	No value

Specifications

Methods of Instruction	Methods of Instruction Rationale
Lecture	A. Visual slide-based lectures
Internet Research	D. Recommended Internet links
Study	B. Assigned textbook and lab manual readings
Lab	E. Individual and group laboratory experiences

Other	C. Computer-aided tutorials

Assignments

Cultural Pluralism Assignment and Methodology
The instructor will initiate discussion related to the spread of HIV and how different cultural practices and misunderstandings have led to the propagation of the disease on a global scale.
Critical Thinking Assignments
A. Qualitative interpretation of laboratory results based on observations
B. Quantitative interpretation of graphs, charts, and other representations of scientific data
C. Exams require integration of concepts developed at various times during the semester
D. Short answer "case studies" on exams that require reasoning and logic to solve
E. Species of unknown bacteria determined through lab tests decided upon by student.
F. Case studies and/or short paper(s) require application of knowledge in a consistent, thoughtful pattern.
Writing Assignments/Proficiency Demonstration
A. Case Studies or Short Paper(s)
B. Laboratory review sheets with short answer essay questions
C. Formal lab reports
D. Write-up of Unknown Identification

Methods of Evaluation	Methods of Evaluation Rationale
Tests	B. Quizzes
Final Exam	A. Exams
Other	C. Lab Write-ups
Other	D. Unknown Organism Identification
Other	E. Case Studies and/or Short papers

Equipment

0

Textbooks

Author	Title	Publisher	Date	ISBN
Tortora, Funke, and Case	Microbiology: An Introduction	Benjamin Cummings	2016	9.7803219289e+012

Other Instructional Materials

Description	Author	Citation
No Value	No Value	No Value

Materials Fee

0

Learning Outcomes and Objectives

Course Objectives

A. Differentiate between viruses, prokaryotes, and eukaryotes

B. Appraise the roles that microorganisms play on this planet

C. Understand laboratory techniques for handling and identifying microorganisms

D. Identify unknown bacteria using standard microbiological lab tests

CSLOs

BIO-038-CSLO-02: The student will compare and contrast the chemical characteristics for various microbes with regards to infections, treatment, and control. Expected SLO Performance: 70.0

BIO-038-CSLO-05: The student will present his/her findings in the determination of an unknown biological entity using appropriate microbiologic laboratory protocols. Expected SLO Performance: 70.0

BIO-038-CSLO-04: The student will evaluate contemporary issues in everyday life using microbiologic information. Expected SLO Performance: 70.0

BIO-038-CSLO-03: The student will describe microbial metabolic pathways. Expected SLO Performance: 70.0

BIO-038-CSLO-01: The student will compare and contrast the physical characteristics for various microbes with regards to infections, treatment, and control. Expected SLO Performance: 70.0

Outline

Course Outline

a. Overview of the microbial world
b. Basic chemistry
c. Anatomy of prokaryotic and eukaryotic cells
d. Control of microbial growth
e. Microbial genetics
f. Classification of prokaryotes, eukaryotic microorganisms, and viruses
g. Principles of disease
h. Microbial pathogenicity
i. Nonspecific and specific immune responses
j. Microorganisms and human disease
k. Environmental and applied microbiology

Lab Outline

a. Microscopy
b. Microbial metabolism and growth
c. Biochemical Testing
d. Aseptic Technique
e. Bacterial Isolation
f. Bacterial Cultivation
g. Basic staining techniques
h. Differential Staining techniques
i. Phylum Nematoda and Phylum Platyhelminths
j. Kingdom Fungi
k. Kingdom Protista