



Coastal Bend COLLEGE

Administrative Master Syllabus

Cover Sheet

Purpose: The Administrative Master Syllabus provides a general course description, defines the required elements of the course, and establishes a faculty-driven foundation for course assessment to ensure continuous improvement in student learning, irrespective of the course timeframe, or mode of course delivery.

Course Title: Microbiology for Non-Science Majors (lecture)

Course Prefix and Number: BIOL 2320

THECB Approval Number (10 digit): 2605035103

Department: Biology Division: Math, Science, Kinesiology

Course Type: (check only one)

Academic General Education Course (From ACGM but not a CBC Core Course)

Academic CBC Core Course

WECM Course (Special Topics or Unique Needs Course: Y or N)

Weekly Contact Hours (Lecture – Lab – External): 3 - 0 - 0

Course Catalog Description:

This course covers basic microbiology and immunology and is primarily directed at pre-nursing, pre-allied health, and non-science majors. It provides an introduction to historical concepts of the nature of microorganisms, microbial diversity, the importance of microorganisms and acellular agents in the biosphere, and their roles in human and animal diseases. Major topics include bacterial structure as well as growth, physiology, genetics, and biochemistry of microorganisms. Emphasis is on medical microbiology, infectious diseases, and public health.

Prerequisites/Co-requisites:

TSI Requirements: TSI Reading & Writing

Approval: The contents of this document have been reviewed and are found to be accurate.

Prepared by (Content Expert): Elester Williams II Digitally signed by Elester Williams II
Date: 2022.09.27 08:42:59 -05'00'

Reviewed by Director or Coordinator: Richard Cowart Digitally signed by Richard Cowart
Date: 2022.10.18 08:48:42 -05'00'

Approved by Dean of CTE or NAH or TGE: Mark L. Secord Digitally signed by Mark L. Secord
Date: 2022.10.18 10:14:19 -05'00'

Revised 8/11/2021



Coastal Bend COLLEGE

Master Course Syllabus

Course Name: BIOL 2320 Microbiology for Non-Science Majors (lecture)

Course Description: This course covers basic microbiology and immunology and is primarily directed at pre-nursing, pre-allied health, and non-science majors. It provides an introduction to historical concepts of the nature of microorganisms, microbial diversity, the importance of microorganisms and acellular agents in the biosphere, and their roles in human and animal diseases. Major topics include bacterial structure as well as growth, physiology, genetics, and biochemistry of microorganisms. Emphasis is on medical microbiology, infectious diseases, and public health.

Semester Hour Credit: 3

Lecture Hrs. per Week/Lab Hrs. per Week/External Hrs. per Week: 3-0-0

Curriculum Capacity:

Face-to-Face Lab
Online Lab
Face-to-Face Lecture
Online
Virtual Face-to-Face
Interactive video (multi-locations)
Hybrid
Clinical

Recommended enrollment threshold:

Face-to-Face Lab
Online Lab
Face-to-Face Lecture
Online
Virtual Face-to-Face
Interactive video (multi-locations)
Hybrid
Clinical

Textbook and/or other major required readings:

Title: Microbiology Fundamentals: A Clinical Approach with Connect and Inclusive Access

Author: Marjorie Kelly Cowan and Heidi Smith

Publisher: McGraw Hill

Edition: 4

ISBN: Not Applicable if Inclusive Access is used. If student opts out of Inclusive Access:
9781260702439

The Student Learning Outcomes for the course are the same regardless of modality or location.

**Course Outcomes
(WECM or LDACGM)**

1. Describe distinctive characteristics and diverse growth requirements of prokaryotic organisms compared to eukaryotic organisms.
2. Provide examples of the impact of microorganisms on agriculture, environment, ecosystem, energy, and human health, including biofilms.
3. Distinguish between mechanisms of physical and chemical agents to control microbial populations.
4. Explain the unique characteristics of bacterial metabolism and bacterial genetics.
5. Describe evidence for the evolution of cells, organelles, and major metabolic pathways from early prokaryotes and how phylogenetic trees reflect evolutionary relationships.
6. Compare characteristics and replication of acellular infectious agents (viruses and prions) with characteristics and reproduction of cellular infectious agents (prokaryotes and eukaryotes).
7. Describe functions of host defenses and the immune system in combating infectious diseases and explain how immunizations protect against specific diseases.
8. Explain transmission and virulence mechanisms of cellular and acellular infectious agents.

The following general education course competencies (TGE) or Marketable SCAN Skills (CTE/NAH) are addressed in this course: General education course competencies (TGE) or Marketable SCAN Skills (CTE/NAH) assessed are indicated with an asterisk *.

Health & Wellness: Students will recognize the importance of maintaining health and wellness.

Science and Technology Literacy: Students will develop a capacity to use knowledge of how technology and science affect their lives.

Ethics: Students will recognize the importance of maintaining health and wellness.

Analytical Reasoning: Students will use logical reasoning in problem solving.

The following program student learning outcome are assessed for this course:

Critical Thinking Skills: Students will demonstrate an ability to use creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.

Communication Skills: Students will display effective development, interpretation and expression of ideas through written, oral and visual communication.

Empirical/Quantitative Skills: Students will display competence in the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

Teamwork Skills: Students will demonstrate an ability to consider different points of view and to work effectively with others to support a shared purpose or goal.

Evaluation Methods:

Exam average
Assignment average

Course Grading: Please see individualized instructor policies for course evaluation methods. Students will be assessed on the same measure across each discipline as per CBC guidelines.

Major Course Assignments and/or exams counting for at least 10% of a final course grade:

Exams will account for 75% of the student grade. All other assignments, homework, and activities will account for the remaining 25% of the student grade.

Grade Scale:

90-100 = A
89- 80 = B
79-70 = C
69-60 = D
59 or Below = F

Course Subject Matter Outline:

Unit I: Chapters 1-5
Chapter 1: Microbes: An Introduction
Chapter 2: Tools of the Laboratory: The Methods for Studying Microorganisms
Chapter 3: Prokaryotic Profiles: The Bacteria and Archaea
Chapter 4: Eukaryotic Cells and Microorganisms
Chapter 5: An Introduction to the Viruses

Unit II: Chapters 6-10
Chapter 6: Microbial Nutrition, Ecology, and Growth
Chapter 7: Microbial Metabolism
Chapter 8: Microbial Genetics and Genetic Engineering
Chapters 9 & 10: Physical and Chemical Control of Microbes

Unit III: Chapters 11-13, 16-21
Chapter 11: Microbe-Human Interactions: Infection and Disease
Chapter 12: Host Defenses I: Overview and Nonspecific Defenses
Chapter 13: Host Defenses II: Specific Immunity & Immunization
Chapter 16: Infectious Diseases Affecting the Skin and Eyes
Chapter 17: Infectious Diseases Affecting the Nervous System
Chapter 18: Infectious Diseases Affecting the Cardiovascular and Lymphatic Systems
Chapter 19: Infectious Diseases Affecting the Respiratory System
Chapter 20: Infectious Diseases Affecting the Gastrointestinal Tract
Chapter 21: Infectious Diseases Affecting the Genitourinary System

Additional Course Requirements:

Class Attendance and Classroom Conduct Policies

Attendance Policy: Please see individualized instructor policies for attendance, which is pursuant to any related policy as outlined by the college handbook, financial aid agreements, or any other college related understanding (e.g. athletics, organizations).

Telephone Support: Toll Free: 866-722-2838 or Direct Line: 361-354-2508

I.T. Support Blackboard

<http://coastalbend.edu/it/>

IT Help Desk
1-361-354-2508

helpdesk@coastalbend.edu

Live Chat: Fall/Spring Hours: Monday - Thursday from 8 a.m. to 5 p.m. Summer Hours: Monday – Thursday from 7 a.m. to 6 p.m.

Tutoring Services: Coastal Bend College is committed to the academic success of all students enrolled at the college. A variety of services, including academic support, individual tutoring sessions, group tutoring sessions, and online tutoring, are available to students depending on the availability of tutors for the subject matter requested. All tutoring is provided at no cost to current CBC students who are currently enrolled at CBC. On-demand tutoring services are accessible 24 hours a day, seven days a week through the TutorMe platform, which may be accessed through your Blackboard account. To request a tutor, please complete the online tutor request form found at <http://www.coastalbend.edu/tutoring/> to submit your request. If you have any questions about tutoring programs, you can contact to tutoring@coastalbend.edu.

Beeville	Alice	Kingsville	Pleasanton
3800 Charco Road Beeville, TX 78102 1-866-722-2838	704 Coyote Trail Alice, TX 78332 1-866-891-2981	1814 Brahma Blvd. Kingsville, TX 78363 1-866-262-1615	1411 Bensdale Pleasanton, TX 78064 1-866-361-4222

Grady C. Hogue Learning Resource Center (Library): Located on the Beeville campus, the operation hours are Monday - Friday from 8:00 a.m. to 5:00 p.m.

(Summer semesters will observe the CBC campus operation hours) For locations and hours of the CBC library in Alice, Kingsville, and Pleasanton sites please visit the library web page link below.

Grady C. Hogue Learning Resource Center (Library): <http://lrc.coastalbend.edu/about>

Financial Aid: Resources are available for students for financial aid, work study, and veteran benefits. For additional information, visit our website at <http://coastalbend.edu/finaid> or contact us at 361-354-2238. Office hours: Monday - Friday from 8:00 a.m. to 5:00 p.m.

ADA Statement: No qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of the College District, or be subjected to discrimination by the College District. Nor shall the College District exclude or otherwise deny equal services, programs, or activities to an individual because of the known disability of an individual with whom the individual is known to have a relationship or association. 42 U.S.C. 12132; 28 CFR 35.130(g). See at: [GA \(Legal\)](#)

Students with Disabilities: Please notify your instructor of any modification/adaptation you may require to accommodate a disability-related need. You will need to provide documentation to the Director of Accessibility Services so the most appropriate accommodations can be determined. Specialized services are available through the Office of Accessibility Services (OAS) (SSB 4.104, 471-6259). For more information, please email oas@coastalbend.edu.

Scholastic Dishonesty: Each student is charged with notice and knowledge of the contents and provisions of Coastal Bend College's rules and regulations concerning student conduct. All students shall obey the law, show respect for properly constituted authority, and observe correct standards of conduct. Scholastic dishonesty shall constitute a violation of these rules and regulations and is punishable as prescribed by Coastal Bend College Policies FLB (Local) and FM (Local). Scholastic dishonesty shall include, but not be limited to, cheating on a test, plagiarism, and collusion. See at: [FLB \(Local\)](#) and [FM \(Local\)](#).

Use of E-mail for Official Correspondence to Students: All students should be familiar with the college's official email student notification policy. Students are expected to check their CBC email on a frequent and regular basis to stay current with college-related communications, recognizing that certain communications may be time-critical.

Copyright Law and Intellectual Property Rights Policy: Copyright is the right of an author, artist, composer or other creator of a work of authorship to control the use of his or her work by others. Protection extends to literary works, musical works, dramatic works, pantomimes and choreographic works, pictorial and graphic works, sculpture, motion pictures and other audiovisual works, sound recordings and architectural works. Generally speaking, a copyrighted work may not be reproduced by others without the copyright owner's permission. The public display or performance of copyrighted works is similarly restricted. Generally, the unauthorized reproduction, performance or distribution of a copyrighted work is copyright infringement and may subject the infringer to civil and criminal penalties. The Fair Use Doctrine outlines exceptions to this Law and is outlined in Coastal Bend College Policy, [CT \(Legal\)](#).

Coastal Bend College, its faculty, students and employees must comply with Copyright Law. Detailed information on Copyright Law and Intellectual Property Rights is available in Coastal Bend College Policy [CT \(Legal\)](#) and [CT \(Local\)](#).

Questions regarding this information should be directed to the Director of Library Services at: library@coastalbend.edu or the Office of Marketing and Public Relations at: socialmedia@coastalbend.edu.

Intellectual Property: Student /Third Party Works: Rights to copyrightable or patentable works created by a student or a third party, that is, not a College District employee, shall reside with the author/ creator. Detailed information on Copyright Law and Intellectual Property Rights is available in Coastal Bend College Policy [CT \(Legal\)](#) and [CT \(Local\)](#).

Questions regarding this information should be directed to the Director of Library Services at: library@coastalbend.edu or the Office of Marketing and Public Relations at: socialmedia@coastalbend.edu.

NOTE: The College website (<http://coastalbend.edu>) serves as the main source with the most current version of the Coastal Bend College Board Policies and the Coastal Bend College Catalog.

Student success is our number one priority at Coastal Bend College and we realize that prompt, effective communication (such as emails, assignment feedback, discussion boards and announcements) plays a significant role in achieving that goal. It is vitally important that you have the proper contact information for your instructor. This should include their phone number, email address, and if applicable, their office number, and office hours. **Faculty schedules can be located online at <http://coastalbend.edu/hb2504/>** If you have any problems contacting your instructor, or do not receive a prompt response to your inquiries, please contact the Dean or Division Coordinator/Program Director as soon as possible. Their contact information is provided below:

Mark L. Secord, Dean Transfer and General Education 361-354-2408 secordm@coastalbend.edu	Richard E. Cowart, EdD., Coordinator Math, Science, Kinesiology 361-592-1615 ext. 4024 recowart@coastalbend.edu
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We wish you all the best in your education and encourage you to contact us if you have any questions or concerns.

Keeping student success in sight, faculty in each of the courses will review the course information, including specific reading schedules, assignments, and testing information, with students during the first week of class.

Additionally, the course information will be posted to Blackboard.

This master syllabus is subject to change due to unforeseen circumstances.