

Master Course Syllabus

BIOL 2320 Lecture Microbiology for Non-Science Majors (2605035103)

*****NOTE TO STUDENT*****

Student success is our number one priority at Coastal Bend College and we realize that prompt, effective communication 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. If you ever have any problems contacting your instructor, or do not receive a prompt response to your inquiries, please contact the Division Chair of STEM, or the Dean of Transfer and General Education, as soon as possible. Their contact information is provided below:

<p>Mark L. Secord, Dean of General and Transfer Education 361-354-2408 secordm@coastalbend.edu</p>	<p>Richard E. Cowart, EdD., Division Chair of STEM 361-592-1615 ext. 4024 recowart@coastalbend.edu</p>
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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 with students, course information with specific reading schedules, assignments, and testing information during the first week of class. Additionally, the course information will be posted to Blackboard (THECB 60x30TX compliance).

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 Hours Credit: 3

Lecture/Lab Hours: 3-0

Prerequisite: College level reading/writing.

Corequisite: Biol 2120 (lab)

TSI Requirements: TSI Reading, TSI Writing

Textbook: Microbiology Fundamentals: A Clinical Approach 3rd Edition by Cowan & Smith

ISBN: 9781260163377

Student Learning Outcomes: Upon successful completion of this course, students will:

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.

Course 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 (Exam I : Chapters 1-5)

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 (Exam II: Chapters 6-10)

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 (Final Exam: Chapters 11-13; 16-21)

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

Technical Support:

Email Support:	helpdesk@coastalbend.edu cabrigo@coastalbend.edu
Telephone Support:	866-722-2838 ext. 2508 (Toll Free) 361.354.2508 (Direct Line)
Live Chat:	Fall/Spring Hours: Monday-Thursday 8 a.m. to 8 p.m.; Friday 8 a.m. to 5 p.m. Summer Hours: Monday-Thursday 7 a.m. to 6 p.m.

Tutoring Services: Coastal Bend College offers free tutoring services to all CBC students who need academic assistance. Services include One-on-One, Group, and Online tutoring to all current CBC students. The Tutoring



Coordinator’s office is at CBC-Beeville in the Student Success Center (SSC), Room 140 which is in the R.W. Dirks building. The SSC’s hours of operation are Monday -Thursday from 8 am – 8 pm. Tutoring services are also available at all the CBC site locations and students can visit the site’s SSC. For questions regarding tutoring services, please contact the CBC Tutoring Coordinator at (361) 354-2838 ext. 2578 or visit us at our website at: <http://coastalbend.edu/tutoring/>.

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 - Thursday 8:00 a.m. - 6:00 p.m.; Friday 8:00 a.m.- 5:00 p.m.

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

Grady C. Hogue Learning Resource Center (Library): <http://lrc.coastalbend.edu/about>
 Online Catalog : <http://lrc.coastalbend.edu/catalog>
 Library Website: <http://lrc.coastalbend.edu/about>
 Hours and Locations: <http://lrc.coastalbend.edu/hours>

Pleasanton Public Library: <https://pleasanton.biblionix.com/>
 115 N. Main St., Pleasanton, TX 78064
 Monday – Friday 9:00 a.m. – 6:00 p.m.
 Saturday 9:00 a.m. – 1:00 p.m.

Financial Aid: Resources available for students for financial aid, work study, and veteran benefits. For additional information, visit our website at www.coastalbend.edu/finaid or contact us at 361-354-2238. Office hours: Monday-Thursday 7-6 and Friday 8-5 (THECB 60x30TX compliance.)

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 \(Legal\)](#)

Student 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 Student Services so the most appropriate accommodations can be determined. Specialized services are available through the Office of Disability Services (SSB 4.104, 471-6259). For more information contact (361) 354-2300.

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 \(Local\)](#).

Coastal Bend College



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 (www.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.