



**HOUSTON COMMUNITY
COLLEGE**
JB Coleman Health Science Center

BIOL 2320 – Microbiology for Health Science Majors
Lecture Summer 1 2018
June 4th – July 8th

INSTRUCTOR CONTACT INFORMATION

Instructor: Michael Vu

E-mail: Michael.vu@hccs.edu

Office Hours: By Appointment only. Feel free
to email me anytime to setup a time.

Course Title: **Microbiology for Health Science Major Lecture**

Course Number: **CRN 74772**

Class Location: JB Coleman HSC Room 368

Credit Hours: 3 Units

Time: 10:30 – 12:45 PM Monday thru Thursday

COURSE OVERVIEW Course Student Learning Outcomes for BIOL 2320 - Microbiology

- Describe distinctive characteristics and diverse growth requirements of prokaryotic organisms compared to eukaryotic organisms. Provide examples of the impact of microorganisms on agriculture, environment, ecosystem, energy, and human health, including biofilms.
- Distinguish between mechanisms of physical and chemical agents to control microbial populations.
- Explain the unique characteristics of bacterial metabolism and bacterial genetics.
- Describe evidence for the evolution of cells, organelles, and major metabolic pathways from early prokaryotes and how phylogenetic trees reflect evolutionary relationships.
- Compare characteristics and replication of acellular infectious agents (viruses and prions) with characteristics and reproduction of cellular infectious agents (prokaryotes and eukaryotes).
- Describe functions of host defenses and the immune system in combating infectious diseases and explain how immunizations protect against specific diseases.
- Explain transmission and virulence mechanisms of cellular and acellular infectious agents. Completion of the specific Student Learning Outcomes listed above does NOT and will NOT guarantee the student any specific final course grade at the end of the semester!

Program Student Learning Outcomes (PSLOs) for the Biology Discipline

1. Will display an understanding of biological systems and evolutionary processes spanning all ranges of biological complexity, including atoms, molecules, genes, cells, and organisms.
2. Will integrate factual and conceptual information into an understanding of scientific data by written, oral and/or visual communication. (This may include successful completion of a course specific research project or a case study module).
3. Will demonstrate proficiency and safe practices in the use of laboratory equipment and basic laboratory techniques.
4. Will apply principles of the scientific method to problems in biology in the collection, recording, quantitative measurement, analysis and reporting of scientific data.

GETTING READY

Prerequisites: Must have passed ENGL 1301 Composition I or co-enroll in ENGL 1301. Completion of General Biology I or equivalent college level course is highly recommended.

Textbook: Microbiology with Disease by Taxonomy: 5th edition, by Robert W. Bauman.

INSTRUCTOR GUIDELINES AND POLICIES

Attendance:

You are expected to attend all lecture classes. If you are absent, you are also responsible for materials covered. Class attendance is monitored daily. Although it is your responsibility to drop a course for any reason, the instructor has the authority to drop you for excessive absences. You may be dropped from a course after accumulating absences in excess of 12.5 percent of the total hours of instruction (lecture and lab). For example: - For a 3 credit-hour lecture class meeting 3 hours per week (48 hours of instruction), you can be dropped after 6 hours of absence. Failure to withdraw officially can result in a grade of "F" or "FX" in the course.

Grading

Lecture Exams: There will be a total of four in-class lecture exams (not including the Comprehensive final exam). Multiple choice questions need to be answered on a Scantron. Scantrons will not be provided; it is the student's responsibility to have a scantron and pencils on the day of exams. The lowest of the four exams will be dropped. There will be no make-up exams offered. If you miss an exam due to any reason, it will count as your dropped exam. There will be one final exam. It is possible that lecture will follow after an exam after a short break. The instructor will notify students in advance.

Quiz: You will have four short quizzes. The lowest grade will be dropped. There will be no make-up quiz offered. If you miss an quiz due to any reason, it will count as your dropped quiz.

Grade Computation

Attendance and Participation	5%	A = 90 – 100 %
Lecture Exam (average of 3 exams)	75%	B = 80 – 89%
Final Exam	10%	C = 70 – 79%
Quiz	10%	D = 60 – 69%
Total	100%	F = < 60%
		FX (Failure due to non-attendance)

CANVAS

Course material will be accessible through Eagle online-CANVAS (eagleonline.hcc.edu). You can access using the same username and password as your HCCS email. All course materials will be posted on CANVAS for you to download to your computer or mobile device. Your test and attendance grades will be posted on CANVAS. Please check your Canvas grade book regularly to confirm your grade. The Canvas grade book may not accurately compute your total grade, it is your responsibility to calculate your overall grade based on the percentage weight outline above to determine your current status. If you have any question please email me and I can assist you.

IN CLASS TECHNOLOGY

With the exception of exam time, you are permitted to use laptops/tablets/smart phone during class for course-related activities only. As a courtesy to everyone please turn off your phone or put on silent mode during class time. If you need to answer an important call, please quietly leave the room to answer your phone. **NO ELECTRONIC DEVICE CAN BE USED DURING TEST DAYS.**

Institutional Policies Regarding Emails

All email contacts must be sent using your hccs.edu official email. You must use your hccs.edu student email account for any correspondences. Or you can email me using CANVAS. To protect student's confidential information, emails sent from unofficial HCC email accounts (yahoo.com, gmail.com etc.) may not receive responses.

Questions/Problems

If you have any questions or problems at any time, contact me as soon as possible. The worst thing you can do is wait till the end to contact me. By taking an active part in your education, you will make your academic experience much more rewarding and exciting!!

REPEATING COURSES (THREE-PEAT RULE)

Please be advised that HCC is charging additional tuition for students who enroll in the same class three or more times at HCC. While it is the hope of HCCS that students will be successful in their first attempt at classes, we realize that life demands, academic struggles, and other issues may result in students needing to take the same class more than once. Speaking with an advisor will help you develop student success skills, improving your overall academic performance. If a student repeats a course in which a grade (A-F) has been received, the highest

grade received at HCC is the permanent grade for the course and will be used in computing the GPA. All grades earned in a given course will be reflected on the transcript. Other colleges may compute the GPA differently than HCC.

COURSE WITHDRAWALS (6-Drop Rule)

Students must withdraw by the withdrawal deadline in order to receive a “W” on a transcript. Final withdrawal deadlines vary each semester and/or depending on class length, please visit the online Academic Calendar, any HCC Registration Office, or any HCC advisor to determine class withdrawal deadlines. Be certain you understand HCC policies about dropping a course and consult with a counselor/advisor to determine if withdrawing is in your best interest. It is your responsibility to withdraw officially from a class and prevent an “F” from appearing on your transcript. Senate Bill 1231 limits the number of W’s a student can have to 6 classes over the course of their entire academic career. This policy is effective for students entering higher education for the first time in fall 2007 and subsequent terms. Withdrawals accumulated at any other Texas public higher education institution count toward the 6 course total. Withdrawals for certain circumstances beyond the students control may not be counted toward the 6-drop limit. In addition, withdrawing from a course may impact your financial aid award or eligibility. Contact the Financial Aid Office or website to learn more about the impact of withdrawing on financial aid. For international student, dropping a course could affect your visa status. Please consult your counselor before requesting a withdraw.

HCCS IS COMMITTED TO YOUR SUCCESS

Your success is our primary concern! If you are experiencing challenges achieving your academic goals, please contact your instructor or an early intervention coach. We can provide assistance with academic needs, ADA accommodations, classroom difficulties, financial concerns, and other issues.

Any student who may be facing challenges in affording or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is encouraged to contact the Dean of Students Services for support. Additionally, please notify your professor (me) if you are comfortable in doing so. This will enable me to provide you with guidance on resources that I am aware of relating to essential needs.

Tutoring

HCCS provides free online tutoring for all HCC students. Go to www.hccs.askonline.net; use your own e-mail address; choose a username and password you will remember; put your HCC student ID number in the Comment Box. Summer hours for tutoring may varies so please contact the online tutoring early.

Counseling Services

Counseling services are available to students who are experiencing difficulty with academic issues, selection of college major, career planning, disability accommodations, or personal issues. Please contact the counseling service for summer hours.

ADDITIONAL INSTRUCTOR AND INSTITUTIONAL POLICIES ACADEMIC INTEGRITY

This instructor is committed to a high standard of academic integrity in the academic community. In becoming a part of the academic community, students are responsible for honesty and independent effort. Failure to uphold these standards includes, but is not limited to, the following: plagiarizing written work or projects, cheating on exams or assignments, collusion on an exam or project, and misrepresentation of credentials or prerequisites when registering for a course. Cheating includes looking at or copying from another student's exam, orally communicating or receiving answers during an exam, having another person take an exam or complete a project or assignment, using unauthorized notes, texts, or other materials for an exam, and obtaining or distributing an unauthorized copy of an exam or any part of an exam. Plagiarism means passing off as his/her own the ideas or writings of another (that is, without giving proper credit by documenting sources). Plagiarism includes submitting a paper, report, or project that someone else has prepared, in whole or in part. Collusion is inappropriately collaborating on assignments designed to be completed independently. These definitions are not exhaustive. When there is clear evidence of cheating, plagiarism, collusion, or misrepresentation, disciplinary action may include but is not limited to requiring you to retake or resubmit an exam or assignment, assigning a grade of zero or "F" for an exam or assignment; or assigning a grade of "F" for the course. Additional sanctions including being withdrawn from the course, program or expelled from school may be imposed on a student who violate the standards of academic integrity. Cheating on a test includes:

- Copying from another students' test paper
- Using materials not authorized by the person giving the test
- Collaborating with another student during a test without authorization
- Knowingly using, buying, selling, stealing, transporting, or soliciting in whole or part the contents of a test that has not been administered
- Bribing another person to obtain a test that is to be administered.
- Plagiarism means the appropriation of another's work and the unacknowledged incorporation of that work in one's own written work offered for credit. Collusion means the unauthorized collaboration with another person in preparing written work offered for credit.

Possible punishments for academic dishonesty may include a grade of 0 or F in the particular assignment, failure in the course, and/or recommendation for probation or dismissal from the College System. (See the Student Handbook)

STUDENT BEHAVIOR EXPECTATIONS

Students are expected to conduct themselves appropriately while on College property or in an online environment. The instructor would institute established HCCS disciplinary action. Students who pose a threat to the safety of others will be subject to immediate withdrawal from the classroom. Please refer to the HCC Student Handbook.

AMERICANS WITH DISABILITIES ACT STATEMENT

HCCS is dedicated to providing the least restrictive environment for all students. We promote equity in academic access through the implementation of reasonable accommodations as required by the Vocational Rehabilitation Act of 1973, Title V, Section 504 and the Americans with Disabilities Act of 1990 (ADA) which will enable students with disabilities to participate in and benefit from all post-secondary educational activities. If you require reasonable accommodations because of a physical, mental, or learning disability, please contact the Counseling Office to obtain the necessary information to request accommodations. Upon completion of this process, please notify your instructor as soon as possible and preferably before the end of the first two weeks of class to arrange for reasonable accommodations.

COMPUTER VIRUS PROTECTION

Computer viruses are, unfortunately, a fact of life. Using removable devices on more than one computer creates the possibility of infecting computers and diskettes with a computer virus. This exposes the computers of the college, your personal computer, and any others you may be using to potentially damaging viruses. The college has aggressive anti-virus procedures in place to protect its computers, but cannot guarantee that a virus might not temporarily infect one of its machines. It is your responsibility to protect all computers under your control and use and ensure that each diskette you use, whenever or wherever you use it, has been scanned with anti-virus software. Since new viruses arise continually, your anti-virus software must be kept current. And, since no anti-virus software will find every virus, keeping backup copies is extremely important.

EQUAL OPPORTUNITY STATEMENT

It is the policy of the HCCS to provide equal employment, admission and educational opportunities without regard to race, color, creed, national origin, gender, age, veteran's status, sexual orientation, or disability. FERPA The academic, financial and non-directory information on your student account is confidential and protected by the Family Educational Rights & Privacy Act (FERPA). We cannot release certain information to another person without your written authorization. Further information regarding Student Records and FERPA can be found at;<http://www.hccs.edu/district/about-us/procedures/student-rights-policies--procedures/> A final evaluation activity will occur during the published final evaluation period. The appropriate dean, director, or department chair must approve any variation to this schedule.

TITLE IX OF THE EDUCATION AMENDMENTS OF 1972, 20 U.S.C. A§ 1681 ET. SEQ. 8 8

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status-in educational programs and activities. If you require an accommodation due to pregnancy, please contact an Abilities Services Counselor. The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to the ADA Counselors for assistance. It is important that every student understands and conforms to respectful behavior while at HCC. Sexual misconduct is not condoned and will be addressed promptly. Know your rights and how

to avoid these difficult situations. Log in to: www.edurisksolutions.org . Sign in using your HCC student e-mail account, then go to the button at the top right that says Login and enter your student number.

Campus Carry

At HCC the safety of our students, staff, and faculty is our first priority. As of August 1, 2017, Houston Community College is subject to the Campus Carry Law (SB11 2015). For more information, visit the HCC Campus Carry web page at <http://www.hccs.edu/district/departments/police/campus-carry/>.

TENTATIVE INSTRUCTIONAL OUTLINE: The Instructor reserves the right to change the instructional outline if needed. Students will be informed in a timely manner of any changes.

Week 1	4-Jun	Introduction/Syllabus Overview Chapter 1: A Brief History of Microbiology Chapter 2: The Chemistry of Microbiology
	5-Jun	Chapter 3: Cell Structure and Function
	6-Jun	Chapter 4: Microscope, Staining and Classification
	7-Jun	Chapter 5: Microbial Metabolism/ Quiz #1
Week 2	11-Jun	Exam 1
	12-Jun	Chapter 6: Microbial Nutrition and Growth
	13-Jun	Chapter 7: Microbial Genetics Chapter 8 : Recombinant DNA Technology
	14-Jun	Chapter 9: Controlling Microbial Growth in the Environment/ Quiz #2
Week 3	17-Jun	Exam 2
	18-Jun	Chapter 10: Controlling Microbial Growth in the Body: Antimicrobial Drugs
	19-Jun	Chapter 11: Characterizing and Classifying Prokaryotes Chapter 12: Characterizing and Classifying Eukaryotes
	20-Jun	Chapter 13: Characterizing and Classifying Viruses, Viroids and Prions/ Quiz #3
Week 4	25-Jun	Exam 3
	26-Jun	Chapter 14: Infection, Infectious Disease, and Epidemiology
	27-Jun	Chapter 15: Innate Immunity
	28-Jun	Chapter 16: Adaptive Immunity/ Quiz #4
Week 5	2-Jul	Exam 4
	3-Jul	Chapter 17 : Immunization and Immune Testing Chapter 18: Immune Disorder
	4-Jul	Holiday
	5-Jul	Final Exam