MCB2010 MICROBIOLOGY

MCB2010, This course introduces basic principles of morphology, physiology, biochemistry and genetics of microorganisms. The students will learn representative types of microorganisms including bacteria, algae, protozoa and viruses and the roles of various microorganisms in health and disease, modes of transmission and the effects of their activities in our biosphere.

Corequisite Course: Students are strongly recommended to take the laboratory component MCB 2010L.
Prerequisite Courses: BSC 2010/2010L or BSC 2085/2085L, CHM 1033/1033L or CHM 1045/1045L.

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E-mail: LLabiste@mdc.edu
Faculty website: http://faculty.mdc.edu/llabiste
North Campus Science Complex
Office hours: TBA


Lectures: The lecture schedule indicates the chapter reading assignments in the text for each lecture period. The student is expected to read the assigned material before the schedule date, and should be prepared to discuss assigned material in class. Students should be aware that due to the overwhelming amount of concepts to be learned; the professor will not lecture over all topics covered in each chapter, and it is the responsibility of each student to learn material that is not even covered during lecture time. Presentation of the lecture material will consist of contemporary media, technical applications, and animations of different biological process, and/or use of handouts in Anatomy and Physiology.
**Assignments:** (125 points); The chapter assignments (one for each chapter) to be completed will be worth 125 total points. The assignments can be found on [http://connect.mcgraw-hill.com](http://connect.mcgraw-hill.com). Adequate time will be given to complete all assignments, which must be submitted by the deadline date announced in class. **Failure to do so, will result in a “0”**.

The website can also be found through my faculty webpage at [http://faculty.mdc.edu/llabiste](http://faculty.mdc.edu/llabiste) and click on the Connect link.

**Lecture Exams:** (275 points); 5 exams worth 55 points each. All exams will be administered during each regular scheduled class periods. Exams will be administered approximately every two-three weeks.

**Grading:** The grade will reflect the combined scores of both Assignments and Exams, The final grade for each student will be determined by the total of all scores obtained in these learning activities. Grades will be assigned according to the following scale:

- **125** points from Assignments.
- **275** points from 5 exams.

**400 points Total**

A=400-358 pts.
B=357-318 pts.
C=317-278 pts.
D=277-238 pts.
F=237 pts. or below

However, the performance of the class will be monitored during the semester and a curve may be applied to calculate the final grades if applicable and only at the discretion of the professor.

Please note: **“There will be no make-up exams.”** Therefore, attendance to each class exam is mandatory. Due to the nature of the online assignments and examinations, no make-ups will be accepted. You will be given a deadline by which to “submit” your assignment and/or exams, failure to do so by the deadline date to be announced, will result in a “0”. Extenuating circumstances that prevent students from submitting or attending a particular exam will be dealt with on an individual basis and will be subject to a 10% deduction of the grade for that particular assignment or exam. Make sure you contact your professor immediately in such circumstances.

The exams will consist of **multiple choice** questions, **short answer** questions, **essay** questions, **true / false** questions, **matching** questions or exam that requires the student to complete a **project**. The questions will cover material discussed in lectures, online assignments, and textbook reading assignments. Questions that involve applications of learned material, logical reasoning, and critical thinking will also be included in lecture exams. **If any, extra credit points** will be earned, it will be through additional **exam questions** added to each unit exam or assignments designated at the discretion of the professor.

**Notice that receiving an exam and looking at it constitutes taking the exam.** You are responsible to bring the appropriate supplies needed (i.e. pencils, Scantron sheets, pens, white-out) for the exams, since these materials will not be provided by the professor.
Incomplete Grades: Incomplete “I” grades will be given in the consultation with the student and upon agreement with the instructor only when extenuating circumstances have prevented the student from completing the course. In order to be considered for an “I” grade, a student must have successfully completed a minimum of one-half of the work in the course with a grade of C or better. Note the incomplete “I” grades must be completed at the time agreed upon between the professor and the student. If not completed by the agreed time, the incomplete “I” becomes an F.

Withdrawals: The professor is not required to withdraw/drop students from the course. It is the student’s responsibility to determine his/her status in the course at all times, and makes that decision, if necessary. The last day to drop this course with a “W” is TBA.

Attendance: Attendance to all learning activities is mandatory. You are responsible for all deadlines, directions, discussions, materials, activities, assignments, or announcements covered in class. Attendance will be checked for every session. The professor reserves the right to deny entry, require withdrawal or fail students who are constantly late or have had four undocumented absences during the semester. If a student has an undocumented absence after the withdrawal deadline, the professor will assign a failing (F) grade regardless of the student’s performance in the course at the time. This will be enforced according to the rules and procedures established in the current Miami-Dade College catalog and Student Handbook. Your performance in the course depends on your attendance, so please make every effort to attend all classes as schedule.

Student Responsibilities and Conduct: Professional students are responsible for taking charge of their own education by being prepared before every laboratory/class and conduct themselves appropriately during all learning activities. Proper classroom etiquette is required for you to attend this class; please do not talk while the professor is lecturing. The professor will not tolerate class interruptions that prevent other students to benefit from the learning process. This will include the obvious unwarranted behavior, as well as any operation of beepers and cellular phones during regular classroom periods. The professor reserves the right to expel disrupting students from the classroom at any time, ask students to surrender their electronic devices and request disciplinary action from the Dean for Academic Affairs and even assign a failing grade to those who display such anti-pedagogic behavior, or dishonorable conduct (those who cheat or help cheat) during class examinations.

The professor will allow students to use a tablet or laptop (NO CELL PHONES) in the class as long the student is using it for material pertaining to the class. If the tablet or laptop is being used in any other fashion, the professor will expel the student from the class. Out of consideration for others and common courtesy turn off or silence your cell phone during class. If the professor sees, hears, or catches you using the phone in the class, he will deduct 2 points off your assignment scores for each time you ignore the No Phone Rule.
GENERAL LEARNING OUTCOMES

In our course, through this class, we will try to help you obtain some of the listed Learning Outcomes.

Purpose: Through the academic disciplines and co-curricular activities, General Education provides multiple, varied, and intentional learning experiences to facilitate the acquisition of fundamental knowledge and skills and the development of attitudes that foster effective citizenship and life-long learning.

As graduates of Miami Dade College, students will be able to:

1. Communicate effectively using listening, speaking, reading, and writing skills.
2. Use quantitative analytical skills to evaluate and process numerical data.
3. Solve problems using critical and creative thinking and scientific reasoning.
4. Formulate strategies to locate, evaluate, and apply information.
5. Demonstrate knowledge of diverse cultures, including global and historical perspectives.
6. Create strategies that can be used to fulfill personal, civic, and social responsibilities.
7. Demonstrate knowledge of ethical thinking and its application to issues in society.
8. Use computer and emerging technologies effectively.
9. Demonstrate an appreciation for aesthetics and creative activities.
10. Describe how natural systems function and recognize the impact of humans on the environment.

STUDY TIPS AND GUIDELINES FOR SUCCESS

Participate in class; When in doubt, ask (There are no dumb questions)
Get Help Right Away
Work with a Study Group
Tie Ideas and Concepts together
Learn the Vocabulary
Prepare for Lecture before Class
Utilize Additional Recourses Available to You
Come to Class

95% of students need to do more than just sit through lectures and reread their notes. Spend 1-2 hour blocks of time EVERY DAY actively writing or discussing concepts to make them a part of your memory.

***Study Every Day and Prepare Outlines***
<table>
<thead>
<tr>
<th>Topic</th>
<th>Week</th>
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<tbody>
<tr>
<td>Chapter 1. Microbiology World and You</td>
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<tr>
<td>Chapter 2. Chemical Principles</td>
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<td>Chapter 3. Observing Microorganisms Through a Microscope</td>
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<td>Chapter 4. Functional Anatomy of Prokaryotic and Eukaryotic Cells</td>
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<td>Chapter 5. Microbial Metabolism</td>
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<td>Chapter 6. Microbial Growth</td>
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<td><strong>Exam 1</strong></td>
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<td>Chapter 7. The Control of Microbial Growth</td>
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<td>Chapter 8. Microbial Genetics</td>
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<td>Chapter 9. Biotechnology and DNA Technology</td>
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<td>Chapter 10. Classifications of Microorganisms</td>
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<td><strong>Exam 2</strong></td>
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<td>Chapter 11. The Prokaryotes: Domains Bacteria and Archaea</td>
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<td>Chapter 12. The Eukaryotes: Fungi, Algae, Protozoa, and Helminths</td>
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<td>Chapter 13. Viruses, Viroids, and Prions 7</td>
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<td>Chapter 14. Principle of Disease and Epidemiology</td>
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<td>Chapter 15. Microbial Mechanisms of Pathogenicity</td>
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<td><strong>Exam 3</strong></td>
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<td>Chapter 16. Innate Immunity: Nonspecific Defenses of the Host</td>
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<td>Chapter 17. Adaptive Immunity: Specific Defenses of Host</td>
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<td>Chapter 18. Practical Applications of Immunology</td>
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<td>Chapter 19. Disorders Associated with the Immune System</td>
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<td>Chapter 20. Antimicrobial Drugs</td>
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<td><strong>Exam 4</strong></td>
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</table>
Chapter 21. Microbial Disease of the Skin and Eyes
Chapter 22. Microbial Disease of the Nervous System
Chapter 23. Microbial Diseases of the Cardiovascular and Lymphatic Systems
Chapter 24. Microbial Disease Respiratory System
Chapter 25. Microbial Disease of the Digestive System
Chapter 26. Microbial Disease Urinary and Reproductive Systems
Chapter 27. Environmental Microbiology
Chapter 28. Applied and Industrial Microbiology

Exact lecture topics, assignments, and exams are subject to change.