# Valencia College – Microbiology- MCB 2010C

#  CRN 22996

##  Spring 2021 Course Syllabus

Credit hours: 4

Contact hours: 6 (3 lecture, 3 Laboratory)

Instructor: Professor Ahmed

Phone: 407-582-1407

Email: mahmed20@valenciacollege.edu

Office hours: Canvas inbox

Meeting times: Lecture: online

 Lab: online

All Digital eTextbook & Labs Connect access to the labs and LSPrep

 ISBN: 9781260451245



**Respondus Lockdown Browser will be required for all exams and quizzes in the course**

Course Description: This lecture/ lab course is designed for Health Science majors. Survey of microbial forms with emphasis on bacteria and viruses: morphology, physiology, genetic mechanisms, and control of microorganisms. Pathogenic processes and microbes discussed in detail. (Special Fee: $104.00).

Specific Course Goals: To prepare nursing and other allied health majors to function safely and knowledgably in environments where pathogenic microbes are present causing human disease or where microbes are the subject of academic, medical or scientific inquiry.

Special Accommodations: Students with disabilities who qualify for academic accommodations must provide a letter from the Office of Students with Disabilities (OSD) and discuss specific needs with the professor during the first week of classes. The Office of Students with Disabilities determines accommodations based on appropriate documentation of disabilities (West Campus SSB 102, ext. 1523).

Academic Honesty: All work submitted by students is expected to be the result of individual effort. Any student caught cheating on an exam, copying homework or plagiarizing – *using someone else’s words or thoughts without giving credit* – will be treated according to Valencia’s policy on academic honesty. Engaging in acts of academic dishonesty will result in penalties ranging from a zero grade on the assignment, quiz, lecture test, to failure of the course and expulsion from the college.

Classroom Conduct: Valencia is dedicated not only to the advancement of knowledge and learning but also to the development of responsible personal and social conduct. As a registered student, you assume the responsibility for conducting yourself in a manner that contributes positively to Valencia’s learning community and that does not impair, interfere with, or obstruct the orderly conduct, processes, and functions of the college as described in the [Student Code of Conduct.](https://valenciacollege.edu/about/general-counsel/policy/documents/Volume8/8-03-Student-Code-of-Conduct.pdf)

Attendance: This is an online course, available 24/7, managed through Canvas. You must have access to the Internet (available on all Valencia campuses) to complete the course requirements. Your online attendance will be checked each week based on your participation in the course and submission of coursework. In the event of an extended absence, you should contact me via email or phone as soon as possible to indicate the reason. If you do not access the course website or contact me letting me know of your absence for a period of seven consecutive days, you will be contacted and if there is no communication within 48 hours, you will be withdrawn from the course up until the withdraw deadline. After the withdraw deadline, students with an absence of more than 7 days will receive the final grade that is earned according to the course grading policy.

Withdrawal:Per Valencia Policy 4-07 a student who withdraws from class before the *withdrawal deadline March 26,2021* will receive a grade of “W.” It is the responsibility of students to withdraw themselves before the withdrawal deadline. A student is not permitted to withdraw from this class after the withdrawal deadline; if you remain in the class after the withdrawal deadline, you can only receive a grade of A, B, C, D, F. Any student who withdraws from a class during a third or subsequent attempt in the same course will be assigned a grade of “F.”

Withdrawal/Drop: January 19, 2021 is the Drop/100% Refund deadline

 March 26, 2021 is the withdrawal deadline for a W “grade”

## Valencia Student Core Competencies:

**Think**: clearly, critically and creatively, analyze, synthesize, integrate and evaluate (lectures and examinations).

**Value**: make reasoned value judgments and responsible commitments (laboratory classes).

**Communicate**: with different audiences and using varied means (group work, written assignments and lab reports).

**Act**: purposefully, reflectively and responsibly (laboratory classes).

Course Evaluation : Lecture Tests-——————————————————————--240 pts.

 Lecture Quizzes ————-—————————————————100 pts.

Lab Exams————————————————————————100 pts.

Labs ——————————————————————————-100 pts.

Learning Activities Assignments————--——————————---90 pts.

 Learning Outcomes Assignments ——————————————-155 pts.

 Lecture Final Exam————————————————————--100 pts.

 Required Attendance Activities————————————————5 pts.

 Online Connect Learn Smart Homework————————————-100 pts

 Discussions————————————————————————10 pts

**TOTAL POINTS POSSIBLE** …………………...….……….……….1000 pts

Grade Calculation Formula: Add the total number of points from all your tests, quizzes, etc. and then divide by 1300 cumulative points in the course. Refer to grading scale below.

Grading Scale: A = 90% – 100% D = 60% – 69.9%

B = 80% – 89.9% F = 0% – 59.9%

C = 70% - 79.9%

## MAKE-UP POLICY\*:

* No makeups for Lecture Tests and Lecture Quizzes
* No makeups for Lab Exams, and Final Lecture Exam:

Full-score makeups are given ONLY if written documentation is provided to the professor.

In such a case you MUST contact the professor by email or phone (you can leave a voicemail) no later than the day of the test/quiz to notify the professor of your absence and your desire to makeup the test/quiz; otherwise you forfeit your right to a makeup; and if for ANY reason you miss the scheduled makeup, you will not be given another makeup chance.

* Documentation = official written documentation of hospitalization, court summons, or police report.
* \*Exception: If you notify the professor **via email** during the FIRST week of classes that you will be missing class on a specific date due to an unavoidable emergency, I will allow you a “maximum point” makeup without documentation, for a lecture test/quiz should you be absent when a lecture test/quiz is given (**this does NOT apply for the Final lecture Exam**). **NOTE:** **Failure to take the Final Exam at the end of the semester will result in an “F” grade in the course.**
* *Homework Assignments and all Assessments* must be completed on time online on the designated due dates (check CANVAS).

## Lecture Schedule (Topics)

Chapter 1: The Main Themes of Microbiology

Chapter 2: The Chemistry of Biology

**Quiz #1 (ch. 1,2)**

Chapter 3: Tools of the Laboratory

Chapter 13: Microbe-Human Interactions

**Test #1 (ch.1, 2, 3, 13) Lecture PowerPoint 1a and b**

Chapter 4: Bacteria and Archaea

Chapter 5: Eukaryotic Cells and Microorganisms

**Quiz #2 (ch. 4, 5)**

Chapter 6: Viruses and Prions

**Test #2 (ch. 4, 5, 6) Lecture PowerPoint 2a and b**

Chapter 7: Microbial Nutrition and Growth

Chapter 8: Microbial Metabolism

**Quiz #3 (ch. 7,8)**

Chapter 11: Physical and Chemical Control of Microbes

Chapter 12: Antimicrobial Treatment

**Test #3 (ch. 7, 8, 11, 12) Lecture PowerPoint 3a and b**

Chapter 9: Microbial Genetics

**Quiz #4 (ch. 9)**

Chapter 24: Microbes and the Environment

Chapter 25: Applied Microbiology and Food and Water Safety

**Test #4 (ch. 9, 24, 25) Lecture PowerPoint 4**

Chapter 14: The Host Defenses I

Chapter 15: Host Defenses II

**Quiz #5 (ch. 14)**

**(Chapter 14 and 15 content will be included in final exam) Lecture PowerPoint 5**

**Final Exam (comprehensive):** TBA (Week of April 26-May 2)

## To Access the Lecture Power Points (Textbook Chapters)

1. From the Valencia home page, click “Faculty and Staff”

2. Under Faculty Resources, click “Faculty Websites”

3. Click “Faculty Front Door Only”

4. Click “Ahmed”

5. Click “Course Materials”

6. Under Course Materials click on Content, then follow the appropriate links

## Lab Schedule

| **Week of:** | **Experiments** |
| --- | --- |
| January 11 | Lab Safety |
| January 11 | Metric Measurements |
| January 18 | Aseptic Technique- Broth Culture to Sterile Agar Plate |
| January 18 | Aseptic Technique- Broth Culture to Sterile Broth |
| January 25 | Isolation Methods- Quadrant Streak Plate Method |
| February 1 | Microscopy  |
| February 8 | Staining- Preparing a smear from a bacterial sample |
| February 8 | Staining- Gram Staining |
| February 15 | How Enzymes Work |
| February 22 | Cell Respiration- Yeast Fermentation |
| March 1 | Lab Midterm Exam |
| March 1 | Microbial Growth- FTM |
| March 8 | Spring Break |
| March 15 | Control of Microbial Growth- Effect of UV Light |
| March 15 | Control of Microbial Growth- Antimicrobial Sensitivity Testing |
| March 22 | Identification of Unknown Bacteria |
| March 29 | DNA Biology and Technology- Isolation of DNA |
| April 5 | Bacterial Genetics- Transformation |
| April 12 | Blood |
| April 19 | Lab Final Exam |

## Tips to Help You Do Well in this Course

- Be absolutely serious and dedicated.

- Come to EVERY laboratory meeting; and come prepared.

- See the instructor whenever you have questions/concerns.

- Study the material presented online/laboratory.

- Don’t cram for tests. Ideally, you should study the material at least 2 or 3 times before taking the test.

- Study hard first by yourself, then when you feel that you could take the test and do reasonably well, study with one or two other classmates who have also studied hard.

-Record all of your grades in the table on this syllabus

\*Disclaimer:Changes in the course syllabus and grading policy may be made at any time during the term at the discretion of the professor.

## MCB 2020C– Microbiology Spring 2021

| Graded Assignments |  YOUR  POINTS | TOTAL POINTS POSSIBLE |
| --- | --- | --- |
| LECTURE TEST #1 |  | 60 |
| LECTURE TEST #2 |  | 60 |
| LECTURE TEST #3 |  | 60 |
| LECTURE TEST #4 |  | 60 |
| LECTURE FINAL EXAM |  | 100 |
| LECTURE QUIZ #1 |  | 20 |
| LECTURE QUIZ #2 |  | 20 |
| LECTURE QUIZ #3 |  | 20 |
| LECTURE QUIZ #4 |  | 20 |
| LECTURE QUIZ #5 |  | 20 |
| Midterm LAB EXAM |  | 50 |
| Final LAB EXAM |  | 50 |
| ONLINE LABS:1 2 3 4 5 6 7 8 9 1011 12 13 14 15 16 17 |  | 100 |
| Online Connect Learn Smart Homework |  | 100 |
| Required Attendance Activities |  | 5 |
| Learning Outcome Assignments |  | 155 |
| Learning Activities Assignments |  | 90 |
| Discussions |  | 10 |
| TOTAL POINTS |  | 1000 |