Moberly Area Community College
Common Syllabus
BIO206 Microbiology
Current Term

Instructor:
Office number:
Office hours:
Contact information:
Classroom number:
Class days and time:

Catalog Description: BIO206 Microbiology (3-2-4)
The course studies the role of bacteria and other microorganisms in nature. The principles of the subject can be related to agriculture, domestic science, and nursing. Extensive lab work is required. Students perform simple, Gram, and special stain procedures on bacteria. (FA, SP, SU)

Prerequisite/Co-requisite: BIO101 or BIO205 or instructor approval.

Text(s):
Title: Fundamentals of Microbiology: Body Systems
Author: Pommerville
Edition: 3rd Edition
Publisher: Jones and Bartlett
ISBN: 978-1-2840-1455-6

Other Required Materials: spiral notebook for journaling; computer disk

Purpose of Course: Microbiology will emphasize the biology of human disease. This course is geared toward students in health and allied health science and medical laboratory technology. It will also be an asset to students studying food science, agriculture, environmental science, and health administration. In addition, the study of Microbiology should provide a firm foundation for advanced programs in biological sciences, as well as medicine, dentistry, and other health professions.

Course Objectives: Upon successful completion of this course, students will:
* Become familiar with medically important groups of microbes.
* Learn methods to employ to retard microbial growth.
* Recognize pathways which contagious diseases follow and stages of such diseases.
* Identify the various defenses of the body against microbial infection.
* Learn symptoms, causative agents, and results of contagious diseases associated with various organ systems.

Course Content:
1. History of Microbiology
2. Molecular Biology (Chemistry, Inorganic and Organic)  
3. Characteristics of Life  
4. Taxonomy and Modern Classification of Microorganisms  
5. Protozoa and Parasitic Protozoal diseases  
6. Fungus, unicellular, dimorphic, and systemic  
7. Algae, Unicellular and colonial.  
8. Virus, Retrovirus, Bacteriophage and the stages of replication within the cell  
9. Bacterial morphology, anatomy, and special features  
10. Bacterial Metabolism, Aerobic, and Anaerobic Respiration  
11. Bacterial Genetics, structure of genome.  
12. Study of Pathogenic Bacteria, causative agents, symptoms, disease, toxins, immunization available.  
13. Physical and Chemical Control of microorganisms  

**Assessment of Student Learning:** Per instructor’s policy  

**Grading Scale:**  
A – 90-100%  
B – 80-89%  
C – 70-79%  
D – 60-69%  
F – 0-59%  

**Expected Study Time Commitments:** Students should expect to spend approximately 2 to 4 hours per week studying, reading, and working on assignments for each registered credit hour. For example, 6 to 12 study hours per week may be expected for a 3 credit hour class.  

**Description of Major Assignment(s)/Project(s):**  
Microbiology Lab Experiments:  
1. Compound Microscope, Basic Bacterial shapes and special features,  
2. Study the morphology of Bacteria by Simple Staining  
3. Principle of Gram Staining  
4. Pond water physiology and the study of microorganism  
5. Culture and Sensitivity (Streak Plate Method)  
6. Spore staining by special stains  
7. Negative and Capsule Stain  
8. Physical and Chemical Control by “In Use” test and "Serial Dilution Method"  
9. Effect of various chemicals on Bacteria  

**Schedule of Student Assignment and Activities:** Per instructor  

**Statement to Connect Course with General Education Outcomes:** In compliance with MACC’s General Education Outcomes, the student who successfully completes this course will be able to:
• **Higher Order Thinking**: Students will demonstrate the ability to distinguish among opinions, facts, and inferences; to identify underlying or implicit assumptions; to make informed judgments; to solve problems by applying evaluative standards; and to reflect upon and refine those problem-solving skills. This outcome involves creative thinking, critical thinking, and quantitative literacy.

• **Communication**: Students will demonstrate the ability to communicate effectively through oral, written, or digital channels using the English language or quantitative or other symbolic systems. Students should be able to write and speak with thoughtfulness, clarity, coherence, and persuasiveness; read and listen critically; and select channels appropriate to the audience and message.

• **Managing Information**: Students will demonstrate the ability to discern when there is a need for information; and to identify, locate, evaluate, and effectively and responsibly use and share that information for the problem at hand.

• **Valuing**: Students will demonstrate the ability to understand the moral and ethical values of a diverse society; and to appreciate the values of diversity, equity, and sustainability.

**College / Instructor Policies:**

**Academic Dishonesty**: MACC board policy is as follows: “Academic dishonesty by students damages institutional credibility and unfairly jeopardizes honest students; therefore, it will not be tolerated in any form.” Forms of academic dishonesty include but are not limited to the following: violations of copyright law, plagiarism, fabrication, cheating, collusion, and other academic misconduct. Incidents of dishonesty regarding assignments, examinations, classroom/laboratory activities, and/or the submission of misleading or false information to the College will be treated seriously. The procedure for handling academic dishonesty is outlined in the Student Handbook (*Policy Handbook*, M.010). In cases of alleged academic dishonesty, the burden of proof is on the student, not on the instructor.

**Attendance Policy**: Students are expected to attend all class sessions for which they are enrolled. The College reserves the right to drop or withdraw students from courses due to lack of attendance.

Students need to be aware that dropping/being dropped from a course and their last date of attendance in the course may impact their financial aid.

MACC faculty are required to track attendance and report lack of attendance. An instructor must complete the appropriate steps to drop a student within one week following the student’s violation of the attendance policy. Additionally, a student’s attendance rate will be calculated based upon the first day the academic session begins (not the student’s date of enrollment in the course). If a student does not attend a course as defined below, the student will be dropped as “Never Attended.”
**Term Length Drop Calculations**

16-week: Any student who misses two (2) consecutive weeks of class will be dropped from the course by the instructor unless acceptable justification is provided by the student and the student still has the opportunity to be successful in the course.

8-week: Any student who misses one (1) consecutive week of class will be dropped from the course by the instructor unless acceptable justification is provided by the student and the student still has the opportunity to be successful in the course.

4-week: Any student who misses two (2) consecutive days of class will be dropped from the course by the instructor unless acceptable justification is provided by the student and the student still has the opportunity to be successful in the course.

Intersession: Any student who misses one (1) day of class will be dropped from the course by the instructor unless acceptable justification is provided by the student and the student still has the opportunity to be successful in the course.

Acceptable justification may include, but is not limited to, family emergencies, illness or injury, college-approved co-curricular and extra-curricular activities, and religious holidays.

**Definition of Course Attendance**

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<tr>
<th>In Seat Course</th>
<th>Physically attending scheduled, face-to-face, class meetings</th>
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<tr>
<td>Virtual Course</td>
<td>Being present, via appropriate platform, for scheduled class meetings/activities</td>
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| Hybrid Course  | Physically attending scheduled, face-to-face, class meetings and active participation in the online portion of the course which may include any or all of the following:  
  • Completion of quizzes or exams during class meetings and online  
  • Submission of assignments during class meetings and online  
  • Participation in discussions during class meetings and online |
| Online Course  | Active participation in an online course includes the following:  
  • Completion of quizzes or exams  
  • Submission of assignments  
  • Participation in threaded discussions |
Simply logging into the Learning Management System (Canvas) and/or accessing the course and course related material does not constitute active participation for the online component of hybrid courses or for online courses. *(Policy Handbook, I.090 & M.095)*

**Tardiness:** Per instructor’s policy

**Make-up and late work:** Per instructor’s policy

**Extra-credit work:** Per instructor’s policy

**Student Email:** MACC Mail is the official student email system at MACC. Official college communication is sent via this email system. Students are responsible for checking their MACC Mail account regularly. Students may also receive notifications and reminders from MACC through the online learning platform. However, students should remain aware that the online learning platform messaging system and MACC Mail (student email) system are two separate systems.

**ADA Statement:** Students who have disabilities that qualify under the Americans with Disabilities Act may register for assistance through the Office of Access and ADA Services. Students are invited to contact the Access Office to confidentially discuss disability information, academic accommodations, appropriate documentation and procedures. For more information, please call either the Moberly office at (660) 263-4100 x 11240 or the Columbia office at (573) 234-1067 x 12120, or visit our web page at [http://www.macc.edu/index.php/services/access-office](http://www.macc.edu/index.php/services/access-office).

**Title IX Statement:** MACC maintains a strict policy prohibiting sexual misconduct in any form, including sexual harassment, sexual discrimination, and sexual violence. All MACC employees, including faculty members, are considered mandated reporters of sexual misconduct and as such are expected to contact the Title IX Coordinator when they become aware, in conversation or in writing, of an incident of sexual misconduct. For more information on this policy or to learn about support resources, please see [http://www.macc.edu/sexual-misconduct-policy](http://www.macc.edu/sexual-misconduct-policy) (links to an external site) or contact Ms. Cheryl Lybarger, MACC’s Title IX Coordinator, at 660-263-4110, ext. 11369 or CherylLybarger@macc.edu.