WELCOME TO MICROBIOLOGY! Please do not hesitate to ask questions. I would like everyone to be successful microbiologists this term. We will cover a wealth of material, and time is scarce. Your active participation in learning both in and out of class is essential!

Instructor Information: Chris Briggs  
Email: christopher.briggs@mtsac.edu  
Phone: 909-274-5808  
Office: Bldg. 60, Room 2110, or I will be nearby.  
If I am contacted after Thursday afternoon, I may not reply until Monday morning.

Student Hours: M: 1 – 2:30 pm (bldg. 61 – room 3318)  
Tu: 10 – 11 am (office)  
W: 1 – 2:30 pm (office)  
I reserve these times just for you, so please feel free to stop by. Other times are available by appointment.

Class Meetings: Lecture: M & W, 3:30 – 4:55 pm  
Lab: M & W, 5:20 – 6:45pm  
Room 7-1104  
Room 60-2506

Website: http://faculty.mtsac.edu/cbriggs and MoodleRooms (accessible through myportal.mtsac.edu)

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics</th>
<th>Reading</th>
<th>Assessment / Assignment</th>
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<tr>
<td>1</td>
<td>Feb 22</td>
<td>Introduction to Microbiology</td>
<td>Ch. 1</td>
<td>Take-home quiz on syllabus due</td>
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<td>Feb 24</td>
<td>The Microbial World and You</td>
<td>1</td>
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<td>2</td>
<td>Feb 29</td>
<td>Principles of Disease and Epidemiology</td>
<td>14</td>
<td>First chart due</td>
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<td>Mar 02</td>
<td>Observing Microorganisms</td>
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<td>3</td>
<td>Mar 07</td>
<td>Cells – prokaryotic structure and function</td>
<td>4</td>
<td>Bring in pathogen charts</td>
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<td>Mar 09</td>
<td>Cells – eukaryotic structure and function</td>
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<td>4</td>
<td>Mar 14</td>
<td>Classification of Microorganisms</td>
<td>4</td>
<td>Reliability writeup due</td>
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<td></td>
<td>Mar 16</td>
<td>Prokaryotes: Bacteria and Archaea</td>
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<td>5</td>
<td>Mar 21</td>
<td>Exam 1</td>
<td>11</td>
<td>Exam 1 (Ch. 1, 3, 4, 10, 14)</td>
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<td>Mar 23</td>
<td>Eukaryotes: Fungi, etc.</td>
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<td>6</td>
<td>Mar 28</td>
<td>Eukaryotes: Fungi, etc.</td>
<td>12</td>
<td>Article report 1 due</td>
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<td>Mar 30</td>
<td>Viruses, Viroids, and Prions</td>
<td>12</td>
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<td>7</td>
<td>Apr 04</td>
<td>Microbial Metabolism</td>
<td>13</td>
<td>Response to reliability due</td>
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<td>Apr 06</td>
<td>Microbial Metabolism</td>
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<td>8</td>
<td>Apr 11</td>
<td>Microbial Growth</td>
<td>5</td>
<td>Digital charts due</td>
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<td>Apr 13</td>
<td>Control of Microbial Growth</td>
<td>6</td>
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<td>9</td>
<td>Apr 18</td>
<td>Antimicrobial Drugs</td>
<td>7</td>
<td>Wikipedia due</td>
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<td>Apr 20</td>
<td>Microbial Genetics</td>
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<td>10</td>
<td>Apr 25</td>
<td>Exam 2</td>
<td>8</td>
<td>Exam 2 (Ch. 5-7, 11-13, 20)</td>
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<td>Apr 27</td>
<td>Microbial Genetics</td>
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<td>11</td>
<td>May 02</td>
<td>Biotechnology and DNA Technology</td>
<td>8</td>
<td>Organization due</td>
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<td>May 04</td>
<td>Microbial Mechanisms of Pathogenicity</td>
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<td>12</td>
<td>May 09</td>
<td>Innate Immunity: Nonspecific Defenses</td>
<td>15</td>
<td>Article report 2 due</td>
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<td>May 11</td>
<td>Adaptive Immunity: Specific Defenses</td>
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<tr>
<td>13</td>
<td>May 16</td>
<td>Adaptive Immunity: Specific Defenses</td>
<td>16</td>
<td>Case studies due</td>
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<td></td>
<td>May 18</td>
<td>Practical Applications of Immunology (highlights)</td>
<td>17</td>
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<td>14</td>
<td>May 23</td>
<td>Disorders Assoc. w/ the Imm. Syst. (highlights)</td>
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<td>May 25</td>
<td>Bioterrorism</td>
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<td>15</td>
<td>May 30</td>
<td>Holiday – No classes</td>
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<td>Jun 01</td>
<td>Catch up &amp; Review</td>
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<td>16</td>
<td>Jun 08</td>
<td>1:30 – 4 pm: Cumulative Lecture Final Exam</td>
<td>Lecture final</td>
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<td></td>
<td>Jun 08</td>
<td>4:30 – 7 pm: Lab Final Exam</td>
<td>Lab final</td>
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2017 Continue applying these ideas. Come back, visit, share your successes!

Schedule and readings are subject to change. Please prepare for our meetings by reading the introductory material for each day before you come to class.
Required Texts
Textbook: Tortora, Funke, and Case. Microbiology: An Introduction. 10th, 11th, or 12th edition. Benjamin Cummings / Pearson. Some students find it useful to bring their textbook to class, so that it is easier to follow along.


- Leboffe and Pierce. A photographic atlas for the microbiology laboratory. 3rd edition or newer.
- A good medical dictionary, such as Taber’s.

Some Important Dates and Holidays
• February 22 - Spring Semester Begins
• March 4 - Last day to add a class; last day to drop with a refund
• March 6 - Last day to drop without a “W”
• March 31 - Holiday
• May 30 - Holiday
• April 29 - Last day to drop with a "W"
• June 6 - 10: Final Exams

Objectives
Upon completion of this course, my goal is for all students to be able to:
1. explain the basic features of every major group of microorganisms.
2. describe the physiology and genetic processes of microorganisms.
3. apply physical and chemical methods of controlling microorganisms.
4. explain the dynamics of host-parasite interaction.
5. diagnose specific diseases on the basis of symptoms and laboratory test results.
6. perform basic microbiology lab procedures.
7. demonstrate safe handling procedures for microorganisms.

Course student learning outcomes: http://www.mtsac.edu/instruction/outcomes/sloinfo.html
Catalog Description: Fundamental concepts of microbiology including viruses, bacteria, fungi, protozoa and parasitic worms. 4 units. Degree applicable, CSU, UC. Prerequisites: CHEM 10 or CHEM 40.

Grading
Please make all score verification requests either by email or at my office desk. You will receive one overall grade for lecture and lab combined. Your lab score will make up approximately one-third of your final grade.

Pre-lecture assignments varies = 50 pts
Reports on journal articles 2 x 25 pts = 50
Pathogen charts project = 50
Pathogen test (case studies) = 50
Exams 1 and 2 2 x 50 pts = 100
Final Exam = 200
Lecture total = 500
Lab total = 230
Course total = 730

Extra credit (maximum possible) = 10 pts

Grading Scale:
A ≥ 90%
B ≥ 80 %
C ≥ 70 %
D ≥ 60 %
F < 60 %

Lecture
We will use lecture time to introduce ideas and to discuss challenging topics. One benefit of being gathered together is the opportunity to learn from each other. We will be open to new ideas, and our discussion may drift into very interesting territory. Some students get frustrated by what seem like “off-topic” digressions, but I encourage you to keep an open mind, since the scope of our class can reasonably encompass a broad swath of inquiry, from economics to art to sociology. I will do my best to guide our discussions in useful directions while responding to your valuable input. I hope that you will recognize the benefits of what otherwise might seem like tangents and “off-topic” explorations.

Lab: The laboratory portion of this class is outlined in a separate document.
Assignments

Pre-lecture Assignments: These are meant to prepare you for our discussions that day. They include take-home quizzes, worksheets, written work, and other class preparation.
Links to all remaining assignments are on our webpage: http://faculty.mtsac.edu/cbriggs

Lecture Exams

These assess your grasp of large sets of material. Review early and often. Exams are a combination of objective questions (matching, multiple-choice), short-answer questions, and diagrams to complete. Prepare to explain what you know, not just repeat it. Part of the training in this course is the ability to work under pressure (such as those in the medical professions do all the time)! As part of your studying, practice writing out answers to chapter questions with a timer running to simulate test-taking conditions. Review for our final exam in lecture by getting comfortable with everything on our study guides.

My Expectations

Attendance: The most successful students come to class. Please save yourself from distraction and keep everyone safe by leaving children and friends elsewhere.

Enrollment Policy: Be sure to attend consistently in the first two weeks. If you miss a class in the first two weeks, please tell me if you intend to stay in the class, since I will drop absent students to make room for those on the waitlist. Otherwise, if you intend to drop the course, please do it officially.

Considerate Behavior: Please help maintain our positive learning environment by arriving on time, limiting unrelated conversations, and minimizing your use of cell phones. Cell phones may not be used during exams or other forms of assessment such as quizzes or in class assignments. If you touch your cell phone during any in-class graded assignment, I must assume that you are cheating, take the exam from you, and give you a grade of zero.

Accommodations: If you feel that you have a disability that may prevent you from succeeding in this class please contact the DSP&S office. The office is located in the Student Services Building (9B). 909-274-4290. http://www.mtsac.edu/dsp/ Please tell me if there is anything I can do to better accommodate you.

Late Assignments: All assignments are due by the beginning of lecture on the due date. I try to strictly enforce this because we often work from your completed assignment in class. Work on your assignment early enough so that if problems arise, you have time to deal with them. See below for my policy on late assignments.

- On time: Turned in by the beginning of class 100% maximum possible
- Turned in within 48 hours of when due 90% maximum possible
- Turned in after 48 hours have passed 50% maximum possible
- Turned in after graded assignments are returned No score, but I can still give you feedback

Make-up exams: I do not give make-up exams. If you are ill, or have some kind of emergency, and will miss an exam as a result, call me as soon as you are able and leave a message (before class meets, if possible). I am at 909-274-5808. I will then use your final exam score to replace the missed exam score. You will be able to make up one exam in this manner, but not the final.

Please note: Many students find the final exam especially challenging because of the amount of material it covers. I would like to see you do well in this class, so I recommend taking exams as they occur, getting your feedback, and improving as you go.

Cheating, Plagiarism, and Academic Integrity: Cheating and plagiarizing are dishonest, unfair, and devalue your degree. As a result, the college and the biology department have regulations that carry serious penalties, including failing this course. These regulations are detailed in the College Catalog and in our lab manual, and part of my job is to enforce them.

Some Advice for Success: Microbiology can be a difficult subject, requiring lots of time outside of class. My advice is that you seek help before you think you need it!
1. Introduce yourself to your classmates. Working with a group of inquisitive friends is a great way to identify material that you do not understand.
2. Study your notes the same day or the following day. We remember a very small percentage of what we hear, but if we review what we have heard, early and often, then we are more likely to remember it.
3. Ask Questions: If you do not understand the material, please ask, or write your question down and ask later. Ask your friend in class, or ask me anytime. Since I love teaching, I am happy to help you understand the material. Asking questions if you don’t understand is one of the most powerful things you can do to learn.
Mt. San Antonio College
Biological Sciences Department Policy on Student Cheating

POLICY:
1. No dictionaries, reference materials, notes, or programmable calculators may be used during any exam or quiz unless authorized by the professor.
2. No electronic devices, of any type, may be used during any exam or quiz unless authorized by the professor. Electronic devices include, but are not limited to: cell phones, PDAs (personal digital assistants), earphones, cameras, MP3 players, translation devices, and electronic dictionaries.
3. No talking, signaling, sharing of note cards, calculators or other materials is allowed during any exam or quiz, unless authorized by the professor.
4. Only the materials required or authorized for an exam or quiz should be taken out of your notebook, backpack, pocket, or purse. All other materials should be put away as instructed, including electronic devices.
5. Students may not leave the classroom during an exam or quiz unless authorized by the professor. If a student leaves the room without permission, the test or quiz will be forfeited at that time.
6. This policy will be strictly enforced by all professors in all classes taught in the Department.

CONSEQUENCES:
7. A single act of cheating or academic dishonesty in any form may result in receiving a 0 on that test, quiz or assignment.
8. Action taken by the professor will be consistent with the college policy on cheating and academic dishonesty. In addition, a report regarding the violation will be submitted to the Director of Student Life for further action, which may also result in further disciplinary action, including, but not limited to suspension or expulsion from the college.

WHAT IS CHEATING?
Some examples of cheating include, but are not limited to:
a. Plagiarism, which is the use of materials authored by another person or obtained from a commercial source or the use of passages without proper acknowledgment.
b. Having or using unauthorized materials during any exam or quiz
c. Notes concealed in or written on clothing, hats, or skin (as examples).
d. Looking at another student’s work during any exam or quiz.
e. Changing answers on a returned exam in order to claim there had been a grading error.
f. Sharing any content of exams or quizzes with individuals who have not yet taken it.
g. Removing an exam or quiz from the classroom without the professor’s approval.
h. Taking photos of exams, quizzes, completed ScanTrons®, or exam keys.
i. Turning in work that was generated by other individuals or by the same individual but in a prior semester, including but not limited to: lab report data, lab report or homework questions, homework assignments, and extra credit assignments.
j. Working together on a lab experiment when told to work individually.
k. Falsifying lab data.
l. Allowing another student to look at your exam or quiz, or allowing another student to copy your homework, lab reports, or other assignments. (If that work is duplicated you may also receive the same penalties listed above for violation of the Biology Department Policy on Cheating, and the college policy on cheating and academic dishonesty.)
m. Falsifying documents, including signatures.

If you are unclear about what constitutes cheating in your class or for a particular assignment, please contact your instructor for clarification before the assignment is due.

Keep this policy for your records. Last updated February 22, 2013