Microbiology is one of the most versatile, cutting-edge, applicable fields of study in Biology. Microbiology is present in all aspects of everyday life. Think of the daily news stories on vaccines, diseases, remediation, biotechnology, food production and safety, bioterrorism, etc. All represent a field of microbiology. Microorganisms are everywhere. They are essential to our well-being as individuals, as well as a society. We need them to grow our food, make our medicines, degrade our wastes. On the other hand, some microorganisms can cause devastating diseases despite our daily efforts to control microorganisms (e.g., through the use of disinfectants). Biology 3654 (General Microbiology, 5 units) will explore these microbiology-related themes through both lecture and laboratory.

Overall Course Goals:
1) Understand the abundance and diversity of microbial life on Earth.
2) Understand the role of microorganisms in our everyday lives.
3) Interpret, analyze, and communicate scientific information.
4) Think critically about issues in microbiology.
5) Understand and apply the process of science.

Course Objectives:
1) Articulate why microbes matter to the health of humans and the environment.
2) Determine the consequences of interfering with microorganisms in natural ecosystems.
3) Describe the ways in which phenotypic, genetic, and metabolic diversity allow microbes to adapt to most environmental pressures.
4) Relate abiotic and biotic factors to the growth, survivability and control of microorganisms.
5) Apply your knowledge of microbial genes, genomes, and gene expression to predict microbial function.
6) Relate the structural and functional properties of pathogenic microbes to disease outcomes.
7) Differentiate and apply the multitude of methods available to examine microscopic life in ways that best address microbial research hypotheses.
8) Describe the ways in which molecular and cellular structure informs microbial function.

COURSE INFORMATION

Lecture Meeting Times: Mondays and Wednesdays from 12:30-1:45pm in the Science building, room 2001
Laboratory Meeting Times: As registered

Instructor: Dr. Annika Mosier Office: Science Building 4097
Telephone: (303) 352-3702 Email: annika.mosier@ucdenver.edu

In-Person Office Hours: Monday from 2-3:30 PM
                        Wednesday from 2-3:30 PM
                        OR by appointment

Email Office Hours: Wednesday from 3:30-4:30 PM
If you have an urgent question that cannot wait until this time, please see me during in-person office hours, before or after class, or by scheduling an appointment. You may also address questions to your laboratory TA.
Prerequisites: The prerequisites for this course are General Genetics (BIOL 3832) and General Chemistry I and II and the accompanying labs (CHEM 2031, 2038, 2061 and 2068) with a C- grade or higher. If a student is unsure of his or her preparedness for General Microbiology (BIOL 3654), please see Dr. Mosier immediately.

This course will necessitate considerable study time outside of class in order to master the material. You should evaluate your various other obligations and if you think you will have a problem meeting the demands of this course, you should see Dr. Mosier immediately.

Required Text: The required textbook is a custom version of Brock’s “Biology of Microorganisms.” The custom text is available in the Auraria bookstore. The custom version only includes chapters that will be covered in lecture and is available at a discounted price relative to the full-text.

Required Access Code for Online Assignments: An access code is required for some online assignments. The access code is included with the custom textbook available in the bookstore. If you do not buy the custom textbook in the bookstore (i.e., you bought a used copy of the full textbook), you have the option of purchasing a separate access code online. However, the total cost will be substantially more than the custom version in the bookstore.

Suggested Text: As writing is required across the curriculum in all Biology major courses, the following manual is recommended to ensure continuity in instruction. All Biology majors, as well as other students enrolled in Biology major courses, are expected to have a personal copy of the book entitled “Writing Papers in the Biological Sciences” by Victoria E. McMillan. Note: This book is NOT required for the course; however, it may serve as a useful reference in the laboratory writing assignments and other courses.

Required Clicker: Clicker’s will be used in the course in order to get you thinking more actively in class so that you can learn more and improve your grade. You can purchase an i-clicker+ student remote at the bookstore or online (ISBN 1464120153). Note, i-clicker2 remotes are also acceptable.

Required Calculator: You will occasionally need a basic calculator to solve quantitative microbiology questions. You can use your cell phone calculator during class, but NOT during quizzes and exams.

Canvas: Canvas will be used for all things course related: online assignments; calendar; announcements; grades, etc. Please access the course page in Canvas within one week of the start of class. The laboratory section of the course will have its own Canvas page.

Assessment and Grading

Your grade and how it is determined: Your grade is an important part of class, and the more you learn, the higher it will be. It really is as simple as that. I will determine your grade as fairly as possible: fair to you, fair to others, reflective of what you can demonstrate that you’ve learned, and 100% in accordance with the policies of the University.

Evaluation and breakdown of the final course grade:
Laboratory: 40%
Clicker Questions: 7.5%
Homework Assignments: 7.5%
Quizzes: 30%
Final Exam: 15%
**Laboratory:** 40% of the final course grade. Your TA will grade assignments independently of the lecture component of the course and report a final lab grade to me. Please see the laboratory syllabus for additional details.

**Clicker Questions:** Clicker participation will be recorded for each lecture. Five points will be awarded for each question: 4 points will be awarded for participation and another 1 point for choosing the correct answer. The three lowest questions will be dropped and the remainder will be averaged and multiplied by 7.5% to determine their contribution to your final grade. Missed participation points will require documentation according to the UC Denver Attendance policy. You must register your clicker within Canvas. Do not register your clicker on iclicker.com: if you do, I will not be able to match your responses with your name and you will not receive credit.

**Homework Assignments:** Online homework assignments are accessed via Canvas and will make up 7.5% of the final grade. They will reinforce some of the fundamental course principles, but are not intended to be your only study tool for your exams. The grades for this work will be moved into the Canvas grade system periodically.

**Quizzes:** There will be six in-class quizzes throughout the semester, making up 30% of the final course grade. See the syllabus for the schedule. Quizzes will include material covered in lecture, readings, and online assignments. Your lowest quiz score is dropped automatically in Canvas. Absences from quizzes will only be excused according to University policy.

You are required to use your four-digit test ID for all quizzes and the final exam. Your test ID will be available in the “Test ID” column in Canvas. If you do not have this ID number, your test will NOT be scored. Your Scantrons can be picked up from outside my office. They will be available for two weeks following the quiz/exam.

**Final Exam:** The final exam will be comprehensive and will count for 15% of your final grade. The final exam will include material covered in lecture, readings, and online assignments. You are required to use your four-digit test ID for the final exam (see above). The final exam is mandatory and cannot be taken at a time other than that scheduled by the University in accordance with University policy. The final exam schedule is posted approximately two weeks before finals week.

**Final grades:**
The following table will be used to determine the final class letter grade:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>0-59</th>
<th>60-62</th>
<th>63-66</th>
<th>67-69</th>
<th>70-72</th>
<th>73-76</th>
<th>77-79</th>
<th>80-82</th>
<th>83-86</th>
<th>87-89</th>
<th>90-92</th>
<th>93+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter Grade</td>
<td>F</td>
<td>D-</td>
<td>D</td>
<td>D+</td>
<td>C-</td>
<td>C</td>
<td>C+</td>
<td>B-</td>
<td>B</td>
<td>B+</td>
<td>A-</td>
<td>A</td>
</tr>
<tr>
<td>GPA Equivalent</td>
<td>0.7</td>
<td>1.0</td>
<td>1.3</td>
<td>1.7</td>
<td>2.0</td>
<td>2.3</td>
<td>2.7</td>
<td>3.0</td>
<td>3.3</td>
<td>3.7</td>
<td>4.0</td>
<td></td>
</tr>
</tbody>
</table>

Your final grade will be rounded to the nearest integer. If you get an 89.7%, your final grade will be 90%. If you get 89.45%, your final grade will be 89% (you don’t get 89.5% which rounds to 90%; 89.45% is closer to 89% than it is to 90). There will be no exceptions to the rounding rule.

Grades may be scaled at my discretion if the class average falls below a “C” grade.

**Dropped scores:** Dropped scores (where applicable) will be automatically applied in Canvas. Canvas determines which dropped score(s) has the biggest impact on improving your overall score (based on points rather than on percentages) and then drops those scores. Please contact Dr. Mosier with any concerns about this process.
Grade Dissemination: Grades will only be made available in person or through the course Canvas site.

Grade Disputes: Any grade disputes or requests for re-grades must be submitted in writing to the instructor within 1 week after the grade was posted. All requests must be typed and have your name, student number and email address listed. Please state exactly why you think the question or questions were incorrectly graded. Upon re-grading, the instructor reserves the right to add or subtract points.

COURSE POLICIES

Communication: Microbiology-related questions should be posted in the discussion section on Canvas. You can use this section to: (1) ask questions; (2) receive help from and offer help to other students; and (3) learn from and build an online knowledge base. The discussion section is an open, dynamic forum among ALL participants in the class. Students are expected to take an active role in helping address other student’s questions. General questions (e.g., “Did anyone find my clicker in the classroom?”) should be also posted in the discussion section on Canvas. Before you post questions, please search the existing discussions for keywords related to your question.

There are a lot of you and one of me. Where possible, please first use the resources available to you to address your questions (e.g., textbook, internet, fellow students, Canvas, etc.). I want to help you and will help you, but only after you’ve made some effort to help yourself. When contacting me directly, please email me with “Biol 3654” in the subject line, followed by a brief description of your question. Please send emails from your university student account. Refer to the CLAS email policies described below.

Attendance: While attendance is not mandatory, you should attend as many class sessions as possible. Students attending class consistently do better than those not attending class. The things we discuss in class establish educational context. Paying careful attention to the instructor gives you important information on what to study and how to study for it. Attendance at lab is mandatory (see your lab syllabus).

Make-ups or late assignments will not be accepted without proper documentation according to the UC Denver Student Attendance and Absences Policy:
http://www.ucdenver.edu/faculty_staff/employees/policies/Policies%20Library/OAA/StudentAttendance.pdf

If you are unable to complete an assignment on-time due to religious observances, you must notify me two weeks in advance of the due date.

Evaluation Academic Integrity and Student Code of Conduct: There is “zero tolerance” for academic dishonesty (including but not limited to plagiarism and cheating) or any other academically unethical behavior (including violation of the student conduct code). All work submitted for grading must be 100% the student’s own original work unless specifically stated in the assignment/assessment directions. Bringing a fellow student’s i-clicker to class is considered cheating. In the Sciences, copying verbatim from any source (another student’s work, journals, textbooks, books, websites, etc.)—even with citation—is considered unethical when that work is being presented as original work. Students must demonstrate their understanding and ability to synthesize and evaluate information by putting their work in their own words. The University policies on academic dishonesty and student conduct as described in the course catalog will serve as the basis for dealing with any such issues in this course. Academic dishonesty will result minimally in an “F” grade on the assignment/exam and maximally in an “F” grade in the course. Academic and conduct violations will be reported to the University CLAS Ethics Committee.

Disruptive Behavior: No disruptive behavior will be tolerated. Anything you do that potentially disturbs others is reason to be excused from the classroom. Please think carefully about how your actions affect others.
and what the impact would be if everyone acted in even a mildly disruptive way. Disruptive behavior will be dealt with in accordance to University policy. Please report any disruptive behavior to Dr. Mosier immediately.

The classroom is a learning environment and should be free from pager, cell phone, tablet, and computer interruptions. Disruptions from any electronic device will be cause for removal from the course. The only appropriate use for a laptop during class is taking notes. Please inform Dr. Mosier if you have a genuine need for a gadget to be out and on during class (expectant parent, sick child, rescue worker, on-call professional, etc). Our brains cannot process multiple inputs simultaneously and distractions of even just a few seconds will affect your learning and your grade.

**Wait-listed students:** Students are only added according to CLAS policy (see below).

**Drop Deadlines:** Please be aware of the dates at which you can drop class. There are two dates: one for CLAS students and one for non-CLAS students; please make sure you know which applies to you. If you haven’t dropped by this date, please talk to your CLAS academic advisor. If you are not a CLAS student, I follow the rules of CLAS, not your College or School.

**Incomplete Grade Policy:** The current university policy concerning incomplete grades will be followed in this course. Incomplete grades are given only in situations where unexpected emergencies prevent a student from completing the course and the remaining work can be completed the next semester. I have the final authority on whether you qualify for an incomplete. Incomplete work must be finished by the end of the subsequent semester or the “I” will automatically be recorded as an “F” on your transcript.

**Campus closure:** If the University is closed, class will be cancelled. Please check the Registrar’s website or your local news channel if you believe campus may be closed. You can also call the UCD Campus hotline to check on campus closures at 877-463-6070.

**Grievance Procedure:** If you have a grievance with any aspect of class, the first step is to meet with Dr. Mosier during office hours or by appointment to discuss the problem. This discussion should not take place by e-mail. If we can’t resolve the concern then you can make an appointment to discuss the problem with the Department Chair, Dr. John Swallow (John.Swallow@ucdenver.edu). If you have a grievance about lab, the first step is to meet with your TA. If the situation cannot be resolved by the TA, you should arrange a meeting with the lab coordinator, Ms. Munira Lantz (munira.lantz@ucdenver.edu). If you are unable to resolve the issue with Ms. Lantz, you should arrange to meet with the Chair, Dr. John Swallow (John.Swallow@ucdenver.edu). These meetings MUST take place in person as grievances cannot be discussed effectively over email.

**Disability Access:** The University of Colorado Denver is committed to providing reasonable accommodation and access to programs and services to persons with disabilities. Students with disabilities who want academic accommodations must register with Disability Resources and Services (DRS) in Academic Building 1, #2116, Phone: 303-315-3510, Fax: 303-315-3515.

I will do everything I can to accommodate all students and enhance their learning experience. If you require special accommodations for completion of any assignments, please notify me two weeks in advance of the due date and provide me with a copy of DRS’s letter.

**Military duty:** If you are a student in the military with the potential of being called to military service and/or training during the course of the semester, you are encouraged to contact the College of Liberal Arts & Sciences Advising Office immediately. We gladly accommodate deployments and trainings, but we do need advanced notice.
**Religious observances:** In accordance with University policy, religious observances are considered excused absences if they are declared at the start of the semester so that accommodations can be made in a timely manner. If you do not declare your religious observances at the start of the semester (by end of week 1), they will not be considered excused absences.
Fall 2014 CLAS Academic Procedures and Deadlines

The following policies, procedures and deadlines pertain to all degree-seeking students in the College of Liberal Arts and Sciences (CLAS). Please also consult the Official University Academic Calendar and see your advisor if you have questions or concerns.

• **Schedule verification**: It is each student’s responsibility to verify online that his/her official registration and schedule of classes is correct before classes begin and prior to the drop/add deadline. Failure to verify schedule accuracy is not sufficient reason to justify a late adds or drops.

• **E-mail**: Students must activate and regularly check their official CU Denver e-mail account for university related messages. Those who forward e-mail should check CU Denver e-mail regularly for messages not automatically forwarded.

• **Waitlists**:
  • Students are automatically notified if they are enrolled in a class from a waitlist via their official CU Denver email account.
  • Students are not automatically dropped from a class if they never attended, stopped attending, or do not make tuition payments, though instructors may request administrative drops.
  • Waitlists are purged after the 1st week of classes. To add a course from August 26 - September 3, it is the student's responsibility to get a CLAS Instructor Permission to Enroll in a Course form at [http://www.ucdenver.edu/academics/colleges/CLAS/clas-advising/Pages/CLASAdvising.aspx](http://www.ucdenver.edu/academics/colleges/CLAS/clas-advising/Pages/CLASAdvising.aspx) or [http://www.ucdenver.edu/academics/colleges/Graduate-School/Pages/default.aspx](http://www.ucdenver.edu/academics/colleges/Graduate-School/Pages/default.aspx), have it signed electronically or in person and submit it according to the instructions on the form. Students and faculty will receive emails with directions for completing registration via official university email and students must complete registration and verify their schedules before census, September 3rd, by 5p.m. *After Sept 3*; students should meet with their CLAS advisor to learn more about how to petition to add a course late.

• **Late adds** (after September 3, 2014) will be approved only when circumstances surrounding the late add are beyond the student’s control. This will require a written petition and verifiable documentation. Petition forms are available in the CLAS advising office, NC 4002, or the Graduate School, LSC 1251. The signature of a faculty member on a Schedule Adjustment Form does not guarantee that a late add petition will be approved.

• **Late drops** (after November 10, 2014) will be approved only when circumstances surrounding the late drop are beyond the student’s control. This will require a written petition and verifiable documentation. Petition forms are available in the CLAS advising office NC 4002 or the graduate school, LSC 1251. The signature of a faculty member on a Schedule Adjustment Form does not guarantee that a late drop petition will be approved.

• **Tuition**: Students are responsible for completing arrangements with financial aid, family, scholarships, etc. (depending on tuition plan selected) to pay their tuition prior to Census Date, September 3, 2014. Students who drop after that date are (1) financially responsible for tuition and fees, (2) academically responsible and will receive a "W" grade, and (3) are ineligible for a refund of COF hours or tuition.

• **Graduation**: Undergraduate students wishing to graduate in Fall 2014 should (1) first meet with their CLAS advisor; (2) meet with their major and minor advisor(s), who will complete the electronic form required to verify eligibility to graduate; and (3) apply for graduation online through UCDAccess. These steps must be completed by no later than 5PM on September 3rd.
which is an absolute deadline without exception.

• Graduate students wishing to graduate in Fall 2014 must apply for graduation online through UCDAccess and have a Request for Admissions to Candidacy on file with the CU Denver Graduate School (LSC 1251) no later than 5 PM, September 3, 2014, which is an absolute deadline without exception.

---

**Important Dates and Deadlines**

*All dates and deadlines are in Mountain Standard Time (MST)*.

- **August 18, 2014**: First day of classes.
- **August 24, 2014**: Last day to add or waitlist a class using the UCDAccess student portal. Last day to drop a class without a $100 drop charge—this includes section changes.
- **September 1, 2014**: Labor Day—no classes, campus closed.
- **September 3, 2014**: Census date.
  - 9/3/14, 5 PM: Last day to add structured courses without a written petition for a late add. This is an absolute deadline and is treated as such. This deadline does not apply to independent studies, internships, project hours, thesis hours, dissertation hours, and late-starting modular courses.
  - 9/3/14, 5 PM: Last day to drop a Fall 2014 course or completely withdraw from all courses using a UCD Access Portal and still receive a tuition refund, minus the drop fee(s). After this date, tuition is forfeited and a "W" will appear on the transcript. This includes section changes. This is an absolute deadline.
  - 9/3/14, 5 PM: Last day to apply for Fall 2014 graduation.
  - 9/3/14, 5 PM: Last day to request pass/fail or non-credit option for a course.
  - 9/3/14, 5 PM: Last day to petition for a reduction in Ph.D. dissertation hours.
- **September 15-24, 5 PM**: Early Alert open to faculty
- **October 27, 2014, 5 PM**: Last day for non-CLAS majors to drop individual courses instructor permission only. After this date, a dean’s signature is required on a Schedule Adjustment Form. **Note**: Withdrawal from all classes does not require individual instructor signatures. Students must obtain a dean’s signature to withdraw from all classes.
- **November 10, 2014, 5 PM**: Last day for CLAS majors to drop individual courses or withdraw from all classes without a petition and dean’s approval. After this date, a petition is required in order to obtain dean’s signature approval on a Schedule Adjustment Form. Petition forms are available in NC 4002 for undergraduates and LSC 1251 for graduates.
- **November 24-30**: Fall break, no classes but campus open.
- **November 27**: Thanksgiving Day—no classes, campus closed
- **December 6, 2014**: Last day of classes
- **December 8-13**: Final Exam week
- **December 13**: Fall 2014 commencement
- **December 22, 2014**: Final grades available on UCDAccess and transcripts (tentative).
<table>
<thead>
<tr>
<th>Class Meeting</th>
<th>Day</th>
<th>Date</th>
<th>Homework</th>
<th>Quiz</th>
<th>Module</th>
<th>Topic</th>
<th>Book Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mon</td>
<td>18Aug14</td>
<td>n/a</td>
<td>n/a</td>
<td>Introduction</td>
<td>The Microbial World</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Wed</td>
<td>20Aug14</td>
<td>n/a</td>
<td>n/a</td>
<td>(1) Structure &amp; Function</td>
<td>Bacteria</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Mon</td>
<td>25Aug14</td>
<td>n/a</td>
<td>n/a</td>
<td>Archaea</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Wed</td>
<td>27Aug14</td>
<td>n/a</td>
<td>n/a</td>
<td>Eukaryotes</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>n/a</td>
<td>Mon</td>
<td>01Sep14</td>
<td>n/a</td>
<td>n/a</td>
<td><strong>No Class</strong></td>
<td><strong>No Class</strong></td>
<td>n/a</td>
</tr>
<tr>
<td>5</td>
<td>Wed</td>
<td>03Sep14</td>
<td>n/a</td>
<td>n/a</td>
<td>Viruses</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>Mon</td>
<td>08Sep14</td>
<td>Homework-1 Quiz-1</td>
<td>(2) Methods in Microbiology</td>
<td>Cultivation</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Wed</td>
<td>10Sep14</td>
<td>n/a</td>
<td>n/a</td>
<td>Cultivation-Independent Analyses</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>8</td>
<td>Mon</td>
<td>15Sep14</td>
<td>n/a</td>
<td>n/a</td>
<td>Genomics</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>Wed</td>
<td>17Sep14</td>
<td>Homework-2 Quiz-2</td>
<td>(3) Information Flow</td>
<td>Cell Division &amp; DNA Replication</td>
<td>4, 5, 8</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Mon</td>
<td>22Sep14</td>
<td>n/a</td>
<td>n/a</td>
<td>Gene Expression</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>Wed</td>
<td>24Sep14</td>
<td>Evaluation n/a</td>
<td>n/a</td>
<td>Genetic Regulation</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>12</td>
<td>Mon</td>
<td>29Sep14</td>
<td>n/a</td>
<td>n/a</td>
<td>Mechanisms of Genetic Variation</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>13</td>
<td>Wed</td>
<td>01Oct14</td>
<td>Homework-3 Quiz-3</td>
<td>(4) Evolution</td>
<td>Origin &amp; Evolution</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Mon</td>
<td>06Oct14</td>
<td>n/a</td>
<td>n/a</td>
<td>Measuring Microbial Diversity</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>15</td>
<td>Wed</td>
<td>08Oct14</td>
<td>n/a</td>
<td>n/a</td>
<td>Diversity of Life Across the Domains</td>
<td>n/a</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Mon</td>
<td>13Oct14</td>
<td>Homework-4 Quiz-4</td>
<td>(5) Metabolism</td>
<td>Energetics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Wed</td>
<td>15Oct14</td>
<td>n/a</td>
<td>n/a</td>
<td>Carbon Utilization</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>18</td>
<td>Mon</td>
<td>20Oct14</td>
<td>n/a</td>
<td>n/a</td>
<td>Biosynthesis</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>19</td>
<td>Wed</td>
<td>22Oct14</td>
<td>n/a</td>
<td>n/a</td>
<td>Metabolic Diversity-Phototrophy</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>20</td>
<td>Mon</td>
<td>27Oct14</td>
<td>n/a</td>
<td>n/a</td>
<td>Metabolic Diversity-Chemoilthotrophy</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>21</td>
<td>Wed</td>
<td>29Oct14</td>
<td>n/a</td>
<td>n/a</td>
<td>Metabolic Diversity-Anaerobic Metabolism</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>22</td>
<td>Mon</td>
<td>03Nov14</td>
<td>Homework-5 Quiz-5</td>
<td>(6) Environmental Microbiology</td>
<td>Microbial Ecosystems and Communities</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Wed</td>
<td>05Nov14</td>
<td>n/a</td>
<td>n/a</td>
<td>Microbial Ecosystems and Communities</td>
<td></td>
<td>19</td>
</tr>
<tr>
<td>24</td>
<td>Mon</td>
<td>10Nov14</td>
<td>n/a</td>
<td>n/a</td>
<td>Biogeochemical Cycles of the Elements</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>25</td>
<td>Wed</td>
<td>12Nov14</td>
<td>n/a</td>
<td>n/a</td>
<td>Microbiology of the Built Environment</td>
<td></td>
<td>21</td>
</tr>
<tr>
<td>26</td>
<td>Mon</td>
<td>17Nov14</td>
<td>Homework-6 Quiz-6</td>
<td>(7) Medical Microbiology</td>
<td>Microbial Interactions with Humans - Normal</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Wed</td>
<td>19Nov14</td>
<td>n/a</td>
<td>n/a</td>
<td>Microbial Interactions with Humans - Pathogenicity</td>
<td>23, 29</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Mon</td>
<td>01Dec14</td>
<td>n/a</td>
<td>n/a</td>
<td>Control of Infectious Disease</td>
<td></td>
<td>5, 27</td>
</tr>
<tr>
<td>29</td>
<td>Wed</td>
<td>03Dec14</td>
<td>n/a</td>
<td>n/a</td>
<td>All</td>
<td>Putting it all together, Review, Catch-up</td>
<td>All</td>
</tr>
<tr>
<td>30</td>
<td>TBD</td>
<td>TBD</td>
<td>n/a</td>
<td>n/a</td>
<td>All</td>
<td><strong>Final exam-comprehensive</strong></td>
<td>All</td>
</tr>
</tbody>
</table>

*Lecture schedule and readings are subject to change. Readings are from Brock Biology of Microorganisms.

*See Canvas for homework assignments and due dates. Homework is due the day before the quiz at 11pm.

$Quizzes will be held at the beginning of class.