

METX 119L, Microbiology Lab Summer Session II, 2019

Instructor: Todd Hillaker
T/W/Th 8:30am to 12:30noon
T/W/Th 1:00pm to 5:00pm
Thimann Labs, room 229

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Lab Schedule

Week 1	Tue. 7/30 Introduction Lab Safety Ex 1 Microscopy Calibration & Micrometry	Wed. 7/31 Ex 2 Media preparation Ex 3 Serial Dilutions & plating	Thu. 8/1 Ex 3 Serial Dilutions II Ex 1 Microscopy I Simple stain Isolation of a pure strain
Week 2	Tue. 8/6 Ex 4 Water quality analysis Ex 5 Food microbiology Isolation of a pure strain	Wed. 8/7 Ex 4 Water quality II Ex 9 <i>E. coli</i> source tracking	Thu. 8/8 Ex 4 Water quality III Ex 5 Food Microbiology II Ex 1 Microscopy II Gram stain
Week 3	Tue. 8/13 Ex 6 Antibiotic susceptibility testing Ex 1 Microscopy II Gram stain continued	Wed. 8/14 Ex 6 Antibiotic susceptibility testing II Ex 7 Growth Kinetics	Thu. 8/15 Ex 1 Microscopy III Phase contrast Ex 8 Pure strain (start O.N.)
Week 4	Tue. 8/20 Ex 9 <i>E. coli</i> Source Tracking Genomic DNA isolation Ex 8 Characterization of a pure strain	Wed. 8/21 Ex 9 <i>E. coli</i> Source Tracking Polymerase chain rxn. Ex 8 Characterization of a pure strain cont.	Thu. 8/22 Ex 9 <i>E. coli</i> Source Tracking Agarose gel electrophoresis Ex 8 Characterization of a pure strain cont. Ex 10 Bacteriophage
Week 5	Tue. 8/27 Ex 8 Sequencing (optional) Ex 10 Bacteriophage II	Wed. 8/28 Ex 10 Bacteriophage III	Thu. 8/29 Lab Practical Exam

Optional text: *Prescott's Microbiology*, (On reserve at the science library)
Recommended: A photographic Atlas for the Microbiology Laboratory

Grading: 10% Lab notebook
65% Laboratory reports/assignments
15% Lab practical exam
10% Attendance, class participation, & lab safety

Lab notebook

The importance of recording observations is stressed in this course, and a detailed record of class exercises and experiments is strongly encouraged. Notes should be in chronological order, and include written descriptions and drawings of microorganisms encountered, as well as raw data from experimental procedures. Occasionally, written descriptions and drawings will be turned in for grading. These assignments should be inserted or taped into laboratory notebooks upon return. Your notebook will be assessed periodically for content, and collected for grading at the end of the quarter.

Lab reports

The data collected from experiments conducted in class will be used to generate lab reports. Your reports should follow the format found in the journal *Applied & Environmental Microbiology*. All reports should be typed (double spaced) and include computer-generated graphs and tables as necessary. In some cases, only a partial report will be required depending upon the exercise. Please refer to specific assignment overviews provided.

Each full lab report should include:

- A well thought out title
- A "brief" introduction describing the experiment
- A materials & methods section
- The results of the experiment (text + supporting tables, graphs, & figures)
- A discussion of the results
- A references section

In addition to laboratory reports, there will also be in-class assignments (microscopy work, etc.), homework questions, and library assignments given during the quarter.

Exam

The lab practical will primarily test your understanding of the laboratory materials and methods utilized during the course. The exam will include short answer and multiple choice type questions. Use of laboratory equipment and techniques will be required to answer questions.

Attendance & class participation

The experiments conducted will require the coordinated efforts of at least two, sometimes four, and occasionally all of the students in the class. Some of the class assignments will require the entire time period scheduled to complete. It is therefore imperative that you arrive on time and prepared. Students will be evaluated individually on timeliness, preparation, and participation.

Lab safety

Proper use and disposal of hazardous reagents, live organisms, and equipment is mandatory. Instructions on how to safely handle the materials used in this class will be provided daily.

Final grade assignment: A = 90-100%; B = 80-89%; C = 70-79%; D = 60-69%; F < 60%

Late Assignments: All assignments will be collected at the beginning of lab meetings. Late assignments will be penalized 10% of their total point value for each class period they are late.

Note: The last day to drop the course is August 5th
The last day to withdraw from the course is August 16th

Additional Summer Session Information

Important 2019 Deadlines:

Session 1:

Drop: Monday, July 1

Request for "W": Friday, July 12

Session 2:

Drop: Monday, August 5

Request for "W": Friday, August 16

8-Week:

Drop: Monday, July 8

Request for “W”: Friday, July 26

10-Week:

Drop: Monday, July 8

Request for “W”: Friday, July 26

Neither Summer Session nor instructors drop students for non-attendance or non-payment. Students must drop themselves. Dropping results in full tuition reversal/refund. Withdraw posts a W for the grade and full tuition is charged (no refund).

For all dates and deadlines, including ‘change of grade option’ (P/NP) and grades due, here is the summer academic calendar: <https://summer.ucsc.edu/studentlife/index.html>

For questions about dropping, requesting a W grade for a course, or withdrawing from the summer quarter, email summer@ucsc.edu.

DRC Accommodations:

The Disability Resources Center reduces barriers to inclusion and full participation for students with disabilities by providing support to individually determine reasonable academic accommodations. If you have questions or concerns about exam accommodations or any other disability-related matter, please contact the DRC office, located in Hahn 125 or at 831-459-2089 or drc@ucsc.edu.

Academic Dishonesty

Academic integrity is the cornerstone of a university education. Academic dishonesty diminishes the university as an institution and all members of the university community. It tarnishes the value of a UCSC degree.

All members of the UCSC community have an explicit responsibility to foster an environment of trust, honesty, fairness, respect, and responsibility. All members of the university community are expected to present as their original work only that which is truly their own. All members of the community are expected to report observed instances of cheating, plagiarism, and other forms of academic dishonesty in order to ensure that the integrity of scholarship is valued and preserved at UCSC.

In the event a student is found in violation of the UCSC Academic Integrity policy, he or she may face both academic sanctions imposed by the instructor of record and disciplinary sanctions imposed either by the provost of his or her college or the Academic Tribunal convened to hear the case. Violations of the Academic Integrity policy can result in dismissal from the university and a permanent notation on a student’s transcript.

For the full policy and disciplinary procedures on academic dishonesty, students and instructors should refer to the [Academic Integrity page](#) at the Division of Undergraduate Education.

Title IX:

The university cherishes the free and open exchange of ideas and enlargement of knowledge. To maintain this freedom and openness requires objectivity, mutual trust, and confidence; it requires the absence of coercion, intimidation, or exploitation. The principal responsibility for maintaining these conditions must rest upon those members of the university community who exercise most authority and leadership: faculty, managers, and supervisors.

The university has therefore instituted a number of measures designed to protect its community from sex discrimination, sexual harassment, sexual violence, and other related prohibited conduct. [Information about the Title IX Office](#), the [online reporting link](#), applicable campus [resources](#), reporting responsibilities, the [UC Policy on Sexual Violence and Sexual Harassment](#) and the UC Santa Cruz Procedures for Reporting and Responding to Reports of Sexual Violence and Sexual Harassment can be found at titleix.ucsc.edu.

The Title IX/Sexual Harassment Office is located at 105 Kerr Hall. In addition to the [online reporting option](#), you can contact the Title IX Office by calling 831-459-2462.