

Biology 313WL-001L (45642): Laboratory in Microbiology

Course Syllabus, Fall 2020

COURSE INSTRUCTOR AND OFFICE HOURS

Margaret Kincaid, PhD
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Office: 505C
Office Hours: By appointment to accommodate schedules
(via ZOOM)

COURSE INFORMATION

Meeting Information: TR, 11:30 am - 2:20 pm
Credit hours: 3
Prerequisite and/or Corequisite: BIOL 313 and
LS-BIOC 441
Course Attributes, Format and Teaching Mode:
Undergraduate, Laboratory Online
Synchronous Instruction

GRADUATE TEACHING ASSISTANTS

Section 001: Anastasia Luna (avdwy@mail.umkc.edu)
Section 002: Rituparna Goswami (rgrvv@mail.umkc.edu)
Section 003: Carl Fisher (cf4g2@mail.umkc.edu)
Cole McMullin (cpmrhb@mail.umkc.edu)
Section 004: Carl Fisher (cf4g2@mail.umkc.edu)
Cole McMullin (cpmrhb@mail.umkc.edu)

UNDERGRADUATE LEARNING ASSISTANTS

Holden Joynes
Brandon Merrill
Christopher Ryan

COURSE DESCRIPTION AND LEARNING OBJECTIVES

General microbiological procedures plus advanced work in the areas of microbial physiology and genetics, pathogenic microbiology, virology, applied microbiology and biotechnology.

Upon completion of this course, the student will be able to:

1. Apply laboratory safety procedures and maintain aseptic technique when handling and transferring bacterial cultures.
2. Understand the proper use of microbiology laboratory instruments and equipment.
3. Estimate the number of bacteria in a sample.
4. Successfully use microscopy in the study of microorganisms.
5. Design experimental procedures to isolate and identify pure cultures of bacteria using a variety of selective and/or differential media.

MINIMUM TECHNOLOGY REQUIREMENTS

SOFTWARE

1. Current version(s) of either Firefox and/or Chrome web browsers for Windows and/or Apple computers
2. Google Chrome is **REQUIRED** for some help features in VUMIE.
3. VUMIE software (free download for Windows and/or Apple computers) and purchased serial number.
4. Current version of Oracle/Java: Download Java
5. Current version of Adobe Reader: Download Adobe Reader
6. Current version of word processing software: Download Office 365
7. Popup blocking disabled

HARDWARE

1. A webcam is **REQUIRED**.
2. A headset with microphone is preferred, a microphone is required.
3. Broadband internet connection is preferred. Examples of broadband internet connection are high-speed DSL or a Cable modem. High-speed internet is available for students at [Campus Computer labs](#).

REQUIRED MATERIALS

BOOKS: *Benson's Microbiological Applications* 14th Edition*
Alfred E. Brown and Heidi R. Smith
ISBN: 978-126098-354-8

Outbreak: Cases in Real-World Microbiology 2nd Edition*
Rodney P. Anderson
ISBN: 978-168367-355-2

SOFTWARE: VUMIE software and purchased serial number (<https://vumicro.com/for-students/>)

This course is part of our AutoAccess program designed to reduce the cost of course materials for students. You will be able to access the digital content for this course through Canvas on the first day of class automatically. Your student account will be charged for the cost of the digital course material. We have helped save students over \$29 million by providing digital content over the last 6 years. The lowest cost content has been sourced. If you choose to opt out of the content please do so by **September 8, 2020** to receive a refund. You will be sent an AutoAccess Welcome Email that will provide charge amounts, the opt-out process and any additional information needed for your AutoAccess course(s) beginning August 10, 2020. Your AutoAccess course may have a Print Upgrade available as an additional purchase. This is a low-cost version of the printed text made available by the publisher at a reduced cost. It is the publisher's requirement that in order to purchase the additional print, you must be opted in for the AutoAccess digital required material. If you have questions about Print Upgrades and opting out, please contact us at autoaccess.umkchbookstore.com or autoaccess.umkc-hsbookstore.com.

If you have questions please contact:

UMKC Bookstore 816-235-2665 autoaccess.umkchbookstore.com

Email autoaccess@umkc.edu

SUPPLIES

Students are required to access the course Canvas site, complete Activities in VUMIE, and to have materials from McGraw-Hill Education which include the textbook content and Connect (which includes Virtual labs, LearnSmart Labs, and LearnSmart, an adaptive online study tool, and SmartBook, the adaptive ebook), therefore access to a desktop or laptop computer and the internet is required. Class materials and assignments, including Reading Assignments, Homework Assignments, weekly Lectures, and Supplemental Readings, will be posted on Canvas.

Students are required to purchase a serial number for access to VUMIE. VUMIE requires a desktop or laptop computer. VUMIE simulations will not run on a tablet, iPad, or smartphone. Answers to frequently asked questions can be found here: <https://vumicro.com/support/faqs/>. Please register and connect to the appropriate course section. Your course section is the section that you are register in and can be found in **Pathway (not Canvas)**. Please check your Pathway schedule prior to registration so that you are connected to the appropriate section. Additional information about VUMIE, software installation, and assignments will be discussed in class. More information can be found at <https://vumicro.com/for-students/>.

COMMUNICATION:

All UMKC students are issued a University email account. This account is used by the University to communicate course, grade, financial aid, enrolment and other important college information. It is your responsibility to check your UMKC email account regularly for important information. **Use your UMKC e-mail account for correspondence with instructor or graduate teaching assistant. Be sure to include the word "Microbiology 313 Laboratory" in your subject line.**

GENERAL COURSE REQUIREMENTS AND EXPECTATIONS

Each week, students are expected to read the assigned readings, complete assignments by the weekly deadlines (which include Connect Assignments, VUMIE Activities, group projects, etc.), review lecture notes, participate in the Discussion Boards on Canvas, attend all scheduled ZOOM meetings in accordance with the schedule and deadlines listed in the Tentative Course Schedule and within Canvas. In addition, attendance and participation in ZOOM classes every Tuesday and Thursday is expected. During the weekly ZOOM classes, students will participate in activities, which will include group activities, case presentations, the Final Project Presentation, etc. Activities and assignments have been designed for the ~6 hours of laboratory work expected in a 3 credit hour lab course. Additional time outside of class, which may include independent research and literature review, will be required to achieve a comprehensive understanding of the course material and completion of course expectations and assignments.

CONNECT ASSIGNMENTS:

Assignments have been created in Connect (which includes Virtual labs, LearnSmart Labs, and LearnSmart, an adaptive online study tool, and the ebook). Additional information regarding the due dates for Connect Assignments can be found in the Course Schedule and Canvas.

WEEKLY DISCUSSIONS:

Students are expected to participate in discussions conducted in Canvas. Discussions will demonstrate your mastery and application of the techniques discussed in the course. The questions will be designed to assess your understanding of the core concepts of scientific experimentation, hypotheses, microscopy, media, biochemical tests, and techniques used in microbiology laboratories and your ability to think critically about issues and topics in microbiology. Discussion questions will be drawn from all supplementary, laboratory, and reading material. Initial responses to the Discussion Board questions will be due by Wednesday and responses to classmates will be due by Friday each week. Additional information, including grading rubrics, for discussions can be found in Canvas.

ZOOM ACTIVITIES:

ZOOM Activities have been designed to enhance understanding of techniques and application of course material. ZOOM Activities include both individual and collaborative, or group, work. Additional information regarding the descriptions and due dates for ZOOM Activities can be found in the Course Schedule and Canvas.

VUMIE ACTIVITIES AND LAB REPORTS:

Additional information regarding VUMIE Activities, including the VUMIE Lab Manual and due dates, can be found in the Course Schedule and Canvas.

CASE PRESENTATIONS:

Students will be assigned a group to work collaboratively on Case Presentations assigned from *Outbreak: Cases in Real-World Microbiology*. Presentations will be assessed on depth of understanding, presentation of relevant facts and testing, and case conclusions, in addition to participation in discussion and an assessment of contribution by peers. Additional information regarding the group Case Study Presentations, including case assignments and the due dates, can be found in the Course Schedule and Canvas.

FINAL PROJECT:

Students will be assigned a group to work collaboratively on a final project, an original case study (**1250 word minimum** in addition to a PowerPoint presentation). Additional information can be found in Canvas.

WRITING INTENSIVE (WI) ASSIGNMENTS:

Students will submit **four** ~2-page (**500 word minimum**) article summaries during the semester. Additional information (articles, assignment description, due date, and grading rubric) can be found in Canvas.

EVALUATION AND GRADING

GENERAL EVALUATION/ASSESSMENT MEASURES

Connect Assignments	495 pts.
ZOOM Activities (10 @ 35 pts. each)	350 pts.
Canvas Discussions (12 @ 25 pts. each)	300 pts.
VUMIE Activities & Lab Reports (20 @ 25 pts. each)	500 pts.
Case Study Presentations (3 @ 50 pts. each)	150 pts.
Final Project (Original Case Paper 150 pts. & Presentation 100 pts.)	250 pts.
Participation (30 @ 12.5 pts. each)	375 pts.
WI Assignments (4 @ 50 pts. each)	200 pts.
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TOTAL	2620 pts.

GRADING SCALE*

A	93 -100%
A-	90 - 92%
B+	88 - 89%
B	83 - 87%
B-	80 - 82%
C+	78 - 79%
C	73 - 77%
C-	70 - 72%
D+	68 - 69%
D	63 - 67%
D-	60 - 62%
F	>60%

*Tentative grading scale. Assignment of final course letter grades will be determined by the instructor after the conclusion of all course work.

COURSE POLICIES

1) ATTENDANCE:

Regular attendance requires consistent participation in the weekly Discussion Boards, completion and submission of VUMIE Activities, participation in group work, attendance in all ZOOM class meetings, and timely submission of assignments. ZOOM class attendance is expected and roll will be taken at the beginning of each class ZOOM period. You must inform the Instructor via email if you will be late prior to the day of class. Students will be marked absent if more than 15 minutes late for class. Students who leave prior to the end of class will be marked with an absence. Unexcused absences will result in a loss of daily participation points. **A student must provide written documentation to the instructor if they are absent in order to be excused, and an excused absence is up to the discretion of the instructor.**

2) PREPARATION:

Students are expected to read the assigned reading material prior to participation in the weekly Discussion Board and ZOOM classes in addition to completing assignments by the posted deadlines. Additional independent research and literature review will be required to complete most assignments, including the weekly discussions.

3) PARTICIPATION:

Questions to the instructor regarding the material are welcome during class. Some additional time is required for this laboratory course outside scheduled class time. Participation will be assessed throughout the semester

through a variety of methods, including attendance in ZOOM meetings and participation in group projects. Group projects will include a peer assessment.

5) COMMUNICATIONS:

All class material will be made available on Canvas. Questions to the instructor regarding the material are welcome and encouraged. Please post questions that may be of value to all students within the course. Questions or concerns about personal issues or questions about course grades should be directed to the instructor via email. Emails received during the week will be responded to within 24 hours. Emails received on weekends will be responded to the following Monday by 5:00 pm.

Your UMKC email will be used by your instructor for contact. Check your email regularly.

5) ABSENCES AND LATE ASSIGNMENTS:

Generally, no late work will be accepted. Connect Assignments, VUMIE activities and lab reports, and Writing Intensive assignments will generally not be eligible for late submission as these assignments can be accessed throughout the semester and completed prior to planned, excused absences. Late discussion posts will also be ineligible for credit (except when documentation provided that a student cannot access Canvas for an extended period of time and misses posting deadlines, for example if hospitalized for an extended period).

Make up assignments may be given only for excused absences with advance notice at the discretion of the course instructor or for absences due to circumstances beyond the student's control at the discretion of the course instructor (with advance written notification and/or evidence such as a hospital/doctor's note, jury duty, police report etc.). **Documentation must be received within 24 hours of return to campus activity.** Acceptable formats of documentation may include a note from a physician, with the exception that an immediate family member (parent, sibling, spouse, etc.) cannot ethically provide excused absence documentation. **The make-up assignment format, expectations, and deadlines will be set by the instructor (not the student) within 48 hours of receipt of appropriate documentation.** For example, an excused absence from a ZOOM class activity or group presentation may be made up by a 2500 word (~5 pages, single-spaced, APA formatted essay on topic chosen by instructor related to the missed activity).

STUDENT CONDUCT, CHEATING, AND PLAGIARISM POLICY:

All students are expected to be punctual, respectful, and attentive during all class sessions, both to the Instructor, Teaching Assistants, and other students. Tardiness is considered an absence and will be treated as such. Disruption/disrespect includes but is not limited to: any use of cell phones, electronic devices, alarms; speaking in class during instruction, quizzes, or exams unless asking or answering questions to the Instructor; tardiness; inappropriate comments or actions; performing work unrelated to BIOL 313L/WL during class.

All students are expected to be prepared, courteous, and respectful during all interactions in the Canvas course site, both to the instructor and other students. Remember that all interactions in an online classroom are in written form and students are expected to adhere to the general rules of "Netiquette" when communicating with classmates and your instructor. The following are general guidelines:

1. Remember that Discussion Boards are meant to be constructive exchanges of ideas.
2. Keep messages on topic and to the point.
3. Always check your grammar, punctuation, and composition. Take time in crafting posts and responses, as this demonstrates respect for your fellow classmates and readers.
4. Do not post messages in all capital letters, as this can come across as SHOUTING. Also, use **boldface** and *italics* sparingly, as this can be interpreted as sarcasm.
5. Be considerate. Avoid rude, inappropriate, or threatening language, inflammatory responses, and personal attacks.

All assignments will be submitted to TurnItIn. Please use this resource to check yourself for inadvertent plagiarism. Cheating or plagiarism on any written assignment, exam, or quiz will not be tolerated and will earn a zero grade on that assignment, exam, or quiz. The general University policy on student conduct may be found at: https://www.umsystem.edu/ums/rules/collected_rules/programs/ch200/200.010_standard_of_conduct

The Board of Curators of the University of Missouri recognizes that academic honesty is essential for the intellectual life of the University. Faculty members have a special obligation to expect high standards of academic honesty in all student work. Students have a special obligation to adhere to such standards. Academic dishonesty, including cheating, plagiarism or sabotage, is adjudicated through the University of Missouri Student Conduct Code and Rules of Procedures in Student Conduct Matters. Cheating or plagiarism on any coursework or written assignment will not be tolerated and will earn a zero grade on that exam/quiz/assignment. The UMKC policy may be found at: http://www.umkc.edu/catalog/Student_Conduct.html.

ACADEMIC INQUIRY, COURSE DISCUSSION, AND PRIVACY:

There will be **no photography or audio or video recording of lectures, laboratory, ZOOM meetings, material posted on Canvas or Connect, class sessions, etc. without the written consent of the instructor.** Students do not have permission to post any course material (content posted in Canvas, course discussions, quizzes, exams, etc.) to any third-party site. Posting of material to a third-party site is a violation of the student code of conduct and will be reported to the Academic Integrity Officer.

University of Missouri System Executive Order No. 38 lays out principles regarding the sanctity of classroom discussions at the university. The policy is described fully in [Section 200.015 of the Collected Rules and Regulations](#). In this class, students may not make any audio or video recordings of course activity (including those recordings prepared by an instructor), except students permitted to record as an accommodation under Section 240.040 of the Collected Rules. All other students who record and/or distribute audio or video recordings of class activity are subject to discipline in accordance with provisions of Section 200.020 of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.

Those students who have written permission from the course instructor to record are not permitted to redistribute any audio or video recordings of statements or comments from the course to individuals who are not students in the course without the express permission of the faculty member and of any students who are recorded, including those recordings prepared by an instructor. Students found to have violated this policy are subject to discipline in accordance with provisions of Section 200.020 of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.

GRADE DISPUTES:

Questions regarding grading must be submitted to the course instructor, **in writing**, within 3 days from when the assignment was graded. When submitting grade disputes, please be sure to include the following:

1. Name (first and last) of student submitting the grade dispute.
2. The original assignment with the disputed criteria highlighted or prominently circled.
3. A written/typed description specifically describing why your assignment needs to be re-evaluated (i.e. "...points for assignment were miscalculated," "additional points for criteria XX in the rubric should be awarded because..." etc.).

Grade disputes not following the above guidelines will not be evaluated.

SBC GRADE APPEAL POLICY

Students are responsible for meeting the standards of academic performance established for each course in which they are enrolled. The establishment of the criteria for grades and the evaluation of student academic performance are the responsibilities of the instructor. The grade appeal procedure is available only for review of allegedly capricious grading and not for review of the instructor's evaluation of the student's academic performance.

Capricious grading, as that term is used here, comprises any of the following:

- The assignment of a grade to a particular student on some basis other than the performance in the course.
- The assignment of a grade to a particular student according to more exacting or demanding standards than were applied to other students in the course; (Note: Additional or different grading criteria may be applied to graduate students enrolled for graduate credit in 300- and 400-level courses.)
- The assignment of a grade by a substantial departure from the instructor's previously announced standards.
- If a student wishes to appeal their grade, the student should first discuss the issue fully with the instructor of the course. If the issue is not resolved with informal discussion, the student may appeal the grade to the course coordinator by the submission of a [SBC Grade Appeal Form](#). This must be done after the instructor submits grades to the Registrar and before the end of the sixth week in the succeeding regular academic semester. If the matter is not resolved satisfactorily for the student, further review is through the Division Head for Cell & Molecular Biology & Biochemistry, Dr. Anthony Persechini, persechinia@umkc.edu, BSB 501. Following the Division review, the student may appeal to the Dean of the SBS. Following the Dean's review, the student may appeal to the Provost, or their designee. The decision of the Provost Office is final. The [UMKC grade appeal policy](#) is available at the Provosts web site.

COVID-19 ACADEMIC ACCOMMODATIONS

If you are diagnosed with COVID-19, are required to self-isolate because you may have come in contact with someone who has COVID-19, or are at high-risk of severe illness from COVID-19, you should seek academic accommodations. Those at high-risk of severe illness from COVID-19 are people: aged 65 years and older, or living in a nursing home or long-term care facility, or with chronic lung disease or moderate to severe asthma, or who have serious heart conditions, or who are immunocompromised, or with severe obesity (body mass index [BMI] ≥ 40), or with diabetes, or with chronic kidney disease undergoing dialysis or people with liver disease. It is especially important to seek accommodations if any of these conditions are not well controlled. Student Disability Services requires medical documentation of the condition and recommendations for accommodations from a qualified medical professional. Once you have the documentation please contact Scott Laurent at (816) 235-5696 or by email at laurentr@umkc.edu. We will then schedule a Zoom meeting to complete the accommodation plan.

ADDITIONAL RESOURCES AND POLICIES

Important UMKC Resources and Policies are applicable to every course and every student at UMKC. These are located in the Canvas site for this course under the "Support & Policies" tab. As a UMKC student, you are expected to review and abide by these policies. If you have any questions, please contact your instructor for clarification. This course follows the "Faculty not allowing recording" option of the Academic Inquiry, Course Discussion and Privacy policy.

Additional University Resources and Policies can be accessed under the "UMKC Policies" tab within Canvas:

1. UMKC Connect
2. Academic Calendar
3. Academic Honesty
4. Academic Inquiry, Course Discussion and Privacy
5. Attendance Policy
6. Campus Safety
7. Counseling and Health Services Available at UMKC
8. Disability Support Services
9. English Proficiency Statement
10. Grade Appeal Policy

11. Discrimination Grievance Procedures for Students
12. Privacy and Accessibility Policies
13. Statement of Human Rights
14. Title IX