



Instructional Syllabus: Laboratory

Course Title:	Microbiology Laboratory
Course Number:	BI-251LH
Credits:	1
Prerequisites:	BA or BS degree completed
Lecture Instructor:	Eulandria Biddle, Ph. D.
Dept / Division:	Biology / Natural Sciences, Mathematics, and Technology
Start / End Dates:	March 3 – April 28, 2020

Course Description:

This is a 100% online Microbiology lab course with seven online **proctored mini exams, which require a \$6 fee per exam (\$42 total)** and an internet connection, a webcam (internal or external), microphone, a Windows or Mac Operating System, and a government issued photo ID. This is a 100% online Microbiology laboratory course. In this course students will learn about techniques and procedures most commonly used in the introductory microbiology laboratory, such as viewing, staining, growing, and identifying unknown microorganisms. Students will also learn the importance of laboratory safety and its application to biosafety levels. They will demonstrate the knowledge of aseptic, sterilization and disinfection techniques, which are the basis for safe handling of human biological specimens and applying proper aseptic technique in the healthcare setting.

Course Outcomes:

By the end of the semester students will have the knowledge / ability to:

- Accurately interpret microbiological data and understand its limitations.
- Demonstrate proficient library, mathematical and computer skills as it applies to microbiological data gathering and analysis.
- Demonstrate the ability to effectively design and communicate the results of experiments.
- Demonstrate ethical applications of microbiology to environmental and societal issues.
- Demonstrate knowledge of how to apply microbiology techniques as they relate to the healthcare setting.

Abilities/Levels:

This course is designed to fill the needs of non-degree-seeking students, who may or may not transfer these credits into Alverno for a graduate program (e.g., the direct entry MSN). Accordingly, this course—while based on WDC College course of similar name and number—is not designed to validate particular ability levels.



Required Course Materials:

Required text:

There is no textbook required for this course

Computer requirements:

To complete this course, you will need regular access to a computer and use of the internet to access e-mail, the Moodle course site, perform online activities and take exams.

Recommended Software:

- [Adobe Acrobat](#) or [PDFescape](#)
- [Microsoft Word](#) or [GoogleDocs](#)

Grading and Evaluation

Evaluation includes a combination of discussion participation and assignments. When applicable, rubrics are provided for assignments. Teaching/learning methods may include (but are not limited to) reading assignments, exercises and problems, threaded discussion participation, audio/video clips, web searches and submissions, written assignments, and quizzes/exams.

A course schedule is provided and includes all due dates of exams and assignments. Instructions are described in detail for each individual assignment on the Moodle course site. E-mail your instructor if you have questions about any of the instructions as soon as possible before the due date.

Assignments, quizzes and exams will be given throughout the term with set due dates indicated in the course schedule. Any changes to due dates will be communicated to the class by the instructor. If you have an emergency resulting in a missed due date, contact your instructor as soon as possible. No late work will be accepted without consent. Please remember, due to the nature of an online course, it is the student's responsibility to have access to a functioning computer in order to complete the coursework.

Assignments must be submitted in a .doc or PDF format by the due date listed in the course schedule. This course is not self-paced. All work is to be completed before 11:59PM Central Time on the due date listed in the course schedule.

Keep a copy of all submissions. Be sure to save copies of everything you send your instructor – emails and assignments.



Homework Assignments and Discussions

Homework assignments covering specific topics are posted on Moodle and consist of a set of questions which may include but not limited to videos/animations questions, short essay, fill-in the blank, concept map, multiple choice and true/false questions, and interactive lessons. Homework assignments must be completed before 11:59 pm Central Time on their respective due date listed in the course schedule.

Participation in Discussions is a very important part of this class experience and cannot be made up after each module's discussion ends. Discussions are where we discuss the readings and benefit from each class member's contributions and questions. You will be also expected to respond to your classmates' postings. You will be expected to offer helpful comments as you can. You'll want to be sure you do so to receive all points for each particular discussion. You will have instructions to help you understand expectations for Discussions.

Exams

Exams are closed book, closed notes, no internet searches, and you may not get assistance from anyone. Exams can only be accessed once and must be submitted before the time limit expires for each.

- Each online proctored exam has a **time limit of 30 minutes**. At the end of each exam, you will be prompted to make a **\$6 payment** for proctoring.
- All exams are taken online and are required to be proctored. For instructions on how to take your exams online, visit [MonitorEDU](#). Instructions will also be posted on the Moodle course site for your reference. You can access Frequently Asked Questions, the Student Proctoring Guide, a link to test your equipment, etc. [HERE](#).
- There will be **seven scheduled exams**. The passing score on each exam is 70%. There is no average or cumulative score that students need to obtain throughout the semester as long as each exam is at least 70% or the total average of the four exams is 70%.
- Exams must be taken during the scheduled time. **There are no make-up exams and students will not be allowed to re-take exams.**

Stay Current With Course Work – Important!

It is the student's responsibility to check Moodle and the class schedule on a regular basis to stay current with scheduled homework, assignments, and exams. **It is not the instructor's responsibility to send reminders about deadlines for coursework.**

If the instructor announces a new deadline, then students are responsible for the new deadline. Announcements will be posted on the Moodle course site and sent to students via email. Failure to check the course site and/or your email is not a valid excuse for being unaware of announcements pertaining to changes in the course schedule.



Microbiology BI-251LH

Spring 2020 Cohort

Laboratory Schedule

Week	Dates	Lab Topic	Assignments/Exams
1	Mar 3 - 9	Unit 1: Biosafety, Ubiquity of Microbes, and Colony Morphology	Due March 9 by 11:59 pm • Worksheet 1
2	Mar 10 – 16	Unit 2: Aseptic Technique, Streak Plate / Pure Culture Techniques, Bacterial Growth Media	Due March 16 by 11:59 pm • Worksheet 2 • Exam 1 (Units 1 & 2)
3	Mar 17 - 23	Unit 3: Microscopy Basics, and Differential Staining Techniques	Due March 23 by 11:59 pm • Worksheet 3 • Exam 2 (Unit 3)
4	Mar 24 – 30	Unit 4: Isolation of DNA; Gel Electrophoresis	Due Mar 30 by 11:59 pm • Worksheet 4 • Exam 3 (Unit 4)
5	Mar 31 – Apr 6	Unit 5: Bacterial Transformation	Due April 6 by 11:59 pm • Worksheet 5 • Exam 4 (Unit 5)
6	Apr 7 – 13	Unit 6: Antimicrobial Susceptibility	Due April 13 by 11:59 pm • Worksheet 6 • Exam 5 (Unit 6)
7	Apr 14 - 20	Unit 7: Throat culture; Probiotics: Making Yogurt and Kombucha	Due April 20 by 11:59 pm • Worksheet 7 • Exam 6 (Unit 7)
8	Apr 21 - 28	Unit 8: Identification of an Unknown Bacterium	Due April 28 by 11:59 pm • Worksheet 8 • Exam 7 (Unit 8)



Course Evaluation Criteria:

A passing percentage is 70% or higher

Exam / Assignment	Points Available	Points Earned
Exam 1	30	
Exam 2	30	
Exam 3	30	
Exam 4	30	
Exam 5	30	
Exam 6	30	
Exam 7	30	
Worksheet 1	25	
Worksheet 2	25	
Worksheet 3	25	
Worksheet 4	25	
Worksheet 5	25	
Worksheet 6	25	
Worksheet 7	25	
Worksheet 8	25	
Total Points	410	

Calculate your grade: (Points available ÷ Points earned) x 100 = _____ %