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## Instructional Syllabus: Lecture

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

### Course Description:

This is a 100% online Microbiology course with four online **proctored exams, which require a \$10 fee per exam (\$40 total)** and an internet connection, a webcam (internal or external), microphone, a Windows or Mac Operating System, and a government issued photo ID. Microbiology focuses on the “Micro-world”, which comprises microscopic organisms not visible to the naked eye. The course covers microbial genetics, metabolism, microbial growth, and microbe-host interaction. It also emphasizes the role of microbes in advancing fundamental knowledge in biology and reflects on the impact of microbes on our daily life. Studies in Microbiology contribute to the advances in the fields of molecular biology, genetics, immunology, ecology, bioremediation, and agriculture, therefore contributing to our planet’s stability as a whole.

### Course Outcomes:

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

- Demonstrate proficient knowledge of historical events and concepts that contributed to the development of Microbiology.
- Demonstrate proficient knowledge of prokaryotic and eukaryotic cell structure and function.
- Successfully interpret quantitative language in numerical and graph/chart format.
- Successfully predict the responses of microbes to various physical, chemical, or antibacterial agents.
- Demonstrate knowledge of microbial growth, control and metabolism.
- Demonstrate ability to discover the causative agents of disease and decay, and methods to successfully identify them.
- Demonstrate understanding of microbial genetics, host immunity and microbial ecology.

### 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:**

Microbiology from OpenStax, Print ISBN 1938168143, Digital ISBN 1947172239

<http://www.openstax.org/details/microbiology>

The textbook for this course is free of charge and available online in web view and PDF format. You can also purchase a printed version, if you prefer, from OpenStax on Amazon.com.

You may use either format. Web view is recommended -- the responsive design works seamlessly on any device. If you buy on Amazon, make sure to use the link on the textbook page on openstax.org to get the official OpenStax printed version. (Simple printouts sold by third parties on Amazon are not verifiable and not as high-quality.)

### **Computer requirements:**

To complete this course, you will need regular access to a computer and use of the internet to access e-mail, 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 chapters are posted in 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'll find discussions within each module. 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 the week. You will have instructions to help you understand expectations for Discussions.

### **Quizzes / Exams**

**Quizzes** are not timed, and you can take them as many times as you would like. It is suggested that you **do not** use notes the first time to evaluate how much information you have retained before repeating the quiz.

**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.

- Each online proctored exam has a **time limit of 60 minutes**. At the end of each exam, you will be prompted to make a **\$10 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 **four 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-251H

Spring 2020 Cohort

Lecture Schedule

Week	Dates	Lecture Topic	Assignments/Exams
1	Mar 3 - 9	Themes of Microbiology Text: Ch. 1	<b>Due March 9 by 11:59 pm</b> <ul style="list-style-type: none"> <li>• Assignment</li> <li>• Ch. 1 Quiz</li> </ul>
2	Mar 10 – 16	Fundamentals of Biochemistry Text: Ch. 7	<b>Due March 16 by 11:59 pm</b> <ul style="list-style-type: none"> <li>• Ch. 7 Quiz</li> <li>• Exam 1 (Ch. 1 and 7)</li> </ul>
3	Mar 17 - 23	Microbial Morphology and Physiology Text: Ch. 3, 6	<b>Due March 17 by 11:59 pm</b> <ul style="list-style-type: none"> <li>• Assignment</li> <li>• Ch. 3, 6 Quiz</li> </ul>
4	Mar 24 – 30	Microbial Metabolism Text: Ch. 8	<b>Due Mar 30 by 11:59 pm</b> <ul style="list-style-type: none"> <li>• Ch. 8 Quiz</li> <li>• Exam 2 (Ch. 3, 6, 8)</li> </ul>
5	Mar 31 – Apr 6	Microbial Genetics and Biotechnology Text: Ch. 10, 11	<b>Due April 6 by 11:59 pm</b> <ul style="list-style-type: none"> <li>• Assignment</li> <li>• Ch. 10-11 Quiz</li> </ul>
6	Apr 7 – 13	Growth and Control of Microorganisms Text: Ch. 13, 14	<b>Due April 13 by 11:59 pm</b> <ul style="list-style-type: none"> <li>• Ch. 13-14 Quiz</li> <li>• Exam 3 (Ch. 10, 11, 13-14)</li> </ul>
7	Apr 14 - 20	Host-Microbe Interactions & The Process of Infection Text: Ch.15, 16	<b>Due April 20 by 11:59 pm</b> <ul style="list-style-type: none"> <li>• Assignment</li> <li>• Ch. 15, 16 Quiz</li> </ul>
8	Apr 21 - 28	Host Immune Response Text: Ch. 17, 18	<b>Due April 28 by 11:59 pm</b> <ul style="list-style-type: none"> <li>• Ch. 17-18 Quiz</li> <li>• Exam 4 (Ch. 15-18)</li> </ul>



**Course Evaluation Criteria:**

A passing percentage is 70% or higher

<b>Exam / Assignment</b>	<b>Points Available</b>	<b>Points Earned</b>
Exam 1	100	
Exam 2	100	
Exam 3	100	
Exam 4	100	
Assignment 1	25	
Assignment 2	25	
Assignment 3	25	
Assignment 4	25	
<b>Total Points</b>	<b>500</b>	

**Calculate your grade:** (Points available ÷ Points earned) x 100 = \_\_\_\_\_ %