

**MICR 200A**  
**Introductory Microbiology I**  
**Fall 2023**  
**CRN 12307**

**Instructor:**

Dr. Doug Briant (he/him)  
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**Territorial Acknowledgement:**

We acknowledge and respect the I kwéon peoples on whose traditional territory the university stands and the Songhees, Esquimalt and WSÁNE peoples whose historical relationships with the land continue to this day.

**Inclusivity Statement:**

We consider our classroom and office hours to be a place where you will be treated with respect, and we welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability- and other visible and non-visible differences. All members of this class are expected to a respectful, welcoming and inclusive environment for every other member of the class. We will gladly honour your request to address you by an alternate name or gender pronoun. Please advise us of this early in the semester, if applicable to you, so that we may make appropriate changes to our records.

**Lecture time and location:**

Monday and Thursday, 8:30 – 9:50, ECS 123

**Office Hours and Extra Help:** I will **NOT** be holding face-to-face meetings in my office. I will be available online via Zoom (link on Brightspace) on Mondays from 10:30am – 12:00pm and on Thursdays from 2pm – 3:30pm. Outside of these times I can be reached via email.

**Course Delivery:** the course will be delivered face-to-face.

**Brightspace site:** a Brightspace site will be maintained for this course. Some, but not all, lecture notes will be made available. It contains the following sections:

**General Information and Zoom Links:** course outline, course timeline, discussion forum, contact information and other course administration material. You will also find the office hours Zoom link here.

**Lecture Materials:** this section has everything you will need for the lecture component of the course.

**Lecture notes:** here you will find the pdf notes to use during lectures

**Lecture Recordings:** audio recordings will be available for most lectures

**Quizzes and Exams:** this will be split into sections for the Academic Integrity Quiz, , participation quizzes, midterms and final exam. Online quizzes and midterms will be located here. Midterm and final exam sections will also include practice problems.

**Laboratory:** Laboratory manuals are available to order and pick-up or ship from the bookstore.

**Note:** Laboratory sessions start during the week of September 11th. See the schedule in the Lab manual or the Lab Brightspace page for more information. Attendance is mandatory, and a passing mark in the laboratory portion is required in order to obtain credit for the course. Additionally, students that have missed more than two laboratory sessions will not be able to complete the course and will receive a grade of "N".

**Textbook:** Brock's Biology of Microorganisms (16th Edition), M. T. Madigan, K. S. Bender, D. H. Buckley, W. M. Sattley and D. A. Stahl. 2021, Pearson Education Inc.

**Topic Schedule:**

<b>topic</b>	<b>textbook chapters</b>
1) <b>Introduction</b> <b>-history</b> <b>-visualization</b> <b>-structure</b>	1 – 2
2) <b>Metabolism</b>	3, 7, 14
3) <b>Nutrition and Growth</b> <b>-general intro to growth</b> <b>-culture media</b> <b>-morphology and replication</b> <b>-controlling microbial growth</b>	3, 4, 8, 29
4) <b>Diversity of Microbes</b> <b>-phylogeny</b> <b>-microbe classification</b> <b>-historical impacts of tuberculosis on Canadian Indigenous Communities</b>	13, 15 – 18
5) <b>Microbes and Industry</b>	TBA

**MICR200A LEARNING OBJECTIVES**

Students will gain insight into historical events that initially identified microbes.

Processes used to establish the role of microbes in important processes such as disease will also be examined and students will be able to compare these methods to modern techniques utilized in the field of microbiology.

The major structural components of bacteria, archae and eukaryotes will be described. Utilizing this information, students will be able to compare the structures between these organisms, and rationalize why they have evolved specific adaptations.

Conditions for growth of microbes, both in natural and laboratory settings will be examined. Students will demonstrate the ability to apply this knowledge to both identify and classify microbes. Additionally, students will learn to categorize microbes based on a variety of phenotypic and genotypic traits.

Metabolic pathways will be described in the context of microbes, and compared to more complex systems, particularly humans. The suitability of using bacteria as a model organism for higher order eukaryotic organisms will be appraised.

The laboratory component of the course will introduce basic microbiology techniques. By completion of the course, students will be capable of performing aseptic technique, as well as isolating, visualizing and identifying microbes.

### **Important dates and evaluation:**

#### **Academic Integrity Quiz:**

You must score 100% on this quiz before you can complete any subsequent quizzes. You can make multiple attempts.

#### **Participation Quizzes:**

There will be six participation quizzes, worth 0.5% each. Since these are participation quizzes, any learner getting at least one correct answer will receive the full 0.5%. Quizzes will be open from Monday at 8am until the Due date (Friday) at 4pm. The six quiz due dates are as follows:

Quiz 1 - Friday, Sept. 15

Quiz 2 - Friday, Oct. 06

Quiz 3 - Friday, Oct. 20

Quiz 4 - Friday, Nov. 03

Quiz 5 - Friday, Nov. 10

Quiz 6 - Friday, Nov. 24

#### **Midterms:**

There are two online midterms, each worth 10% of your final grade. They will be held on Thursday, September 28 and Thursday October 26. Exams can be started between 6:00am – 11:59pm. Once you start you will have 50 minutes to complete the exam. Midterm exams are non-cumulative. There are no deferred exams, and if an exam is missed the weight will be moved to the final exam. You may use materials posted on the course Brightspace site, your textbook and your notes. You may NOT work with other students or use additional resources, including internet resources.

#### **Final Exam:**

The final will be held in person. It is a cumulative exam. You will be allowed to bring a two-sided templated reference sheet (template will be provided prior to the exam). The date and time of the exam will

<b>EVALUATION</b>	<b>Date</b>
10% midterm exam 1	<b><i>Online via Brightspace. Thurs., September 28. There will be no lecture on this date. See midterm details above.</i></b>
10% midterm exam 2	<b><i>Online via Brightspace. Thurs., October 26. There will be no lecture on this date. See midterm details above.</i></b>
37% final exam	<b><i>2 hours, in person cumulative exam, date and time TBD by the Registrar</i></b>
40% laboratory	<b><i>based on laboratory components (summaries, quizzes, laboratory exam etc.). See lab manual for grading details</i></b>
3% participation mark for online quizzes	<b><i>new quizzes will be posted approximately biweekly. Due dates are listed above.</i></b>

## **DEPARTMENT INFORMATION AND POLICIES**

1. The Department of Biochemistry and Microbiology upholds and enforces the University's policies on academic integrity. These policies are described in the current University Calendar. All students are advised to read this section.
2. Cell phones, computers, and other electronic devices must be turned off at all times during live class sessions unless being used for the purpose of connecting and engaging with the class.
3. No recordings of live lectures are permitted without permission of the instructor. However, many courses will be recorded by the instructor for accessibility for students unable to attend. If you do not wish to be recorded, contact your instructor to determine if alternative arrangements can be made. Attendance and engagement in the classroom is an integral part of the learning process and cannot be substituted with recordings. It is at the instructor's sole discretion whether they provide a recording or give permission to students to record a lecture. There is no obligation to do so nor is there any expectations about the quality of the recordings. Nor should students assume a lecture will be recorded as instructors may withdraw access to recordings or permission to record. It is the responsibility of students who miss lectures to catch up in the material through extra readings, and obtaining notes from fellow students. Students who miss several lectures due to illness should contact their instructors to discuss options.
4. Students and instructors are expected to assess their health daily and avoid campus if they are ill.
5. Course materials, such as notes, problem sheets, quizzes, examinations, example sheets, or review sheets, may not be redistributed without the explicit written permission of the instructor.
6. Students are expected to be available for all midterm exams. If you are unable to write a midterm, the grade weight will be automatically shifted on to the final exam. Information about deferral of the final exam is listed below in section 8.
7. The Department of Biochemistry and Microbiology considers it a breach of academic integrity for a student taking a deferred examination to discuss the exam with classmates. Similarly, students who reveal the contents of an examination to students taking an examination are considered to be in violation of the University of Victoria policy on academic integrity (see current University Calendar). Students must abide by UVic academic regulations and observe standards of scholarly integrity (no plagiarism or cheating). Online exams must be taken individually and not with a friend, classmate, or group, nor can you access notes, course materials, the internet, or other resources without the permission of the instructor. You are prohibited from sharing any information about the exam with others. Use of unauthorized electronic devices and accessing the internet and class material during exams is prohibited unless permission is granted by the instructor. Instructors may use Browser Lockdown Software to block access during classes and exams.
8. **Deferral of a final exam** must be requested with an Academic Concession form and submitted directly to Undergraduate Records. Deferred final exams for fall term courses will be arranged by the instructor. Deferred final exams or spring term courses will be arranged

through Undergraduate Records and must be written before the end of the summer term as stipulated in the University Calendar.