



**CAMOSUN COLLEGE**  
**School of Arts & Science**  
**Department of Biology**

**BIOL-160-X01**  
**Microbiology for Dental Hygiene**  
**Fall 2019**

## **COURSE OUTLINE**

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The course description is online @ <http://camosun.ca/learn/calendar/current/web/biol.html>

Ω Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.

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### **1. Instructor Information**

(a) Instructor	Thuy Nevado
(b) Office hours	Tues 1:30-2:20pm, Wed 9:30-10:20am and 3:30-4:20pm, F 9:30-11:30am
(c) Location	F248A
(d) Phone	250-370-3433
(e) E-mail	nevadot@camosun.bc.ca
(f) Website	<a href="http://online.camosun.ca">http://online.camosun.ca</a>

### **2. Intended Learning Outcomes**

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

1. Use aseptic techniques in the microbiology lab.
2. Summarize the role of microorganisms in oral health and disease processes.
3. Evaluate the role of dental hygienists in preventing the spread of infectious disease in the dental clinic.

### **3. Required Materials**

Lab Coat for use in Microbiology Lab only. Available for rent or purchase at Bookstore.

Lecture notes and Lab Manual will be posted on the course D2L website: <https://online.camosun.ca>

Recommended Text: Samaranayake (2018) **Essential Microbiology for Dentistry Fifth Edition**, Elsevier Ltd.

### **4. Course Content and Schedule**

Please refer to the last page of this document for a detailed course schedule.

## 5. Basis of Student Assessment (Weighting)

Pre-lab and pre-lecture assignments.....	10%
Assignments (3).....	20%
Quizzes (7) .....	20%
Midterm lecture exam.....	20%
Final exam .....	30%

### ACADEMIC MISCONDUCT

*Academic misconduct includes but is not limited to the following acts:*

1. Giving or receiving unauthorized information to or from another student during any examination or test.
2. Obtaining or providing, without authorization, questions or answers relating to any examination or test prior to the time of the examination or test.
3. Using unauthorized sources of information during any examination or test.
4. Asking or arranging for another person to take any examination or test in one's place.
5. Plagiarizing, that is, appropriating the work of another or parts or passages of another's writing, or the ideas or language of the same, and passing them off as the product of one's own mind or manual skill.

According to Camosun College policy, the consequence for academic misconduct is an 'F' grade for the work involved or for the course as a whole. If you would like further information, you can find the Academic Honesty Guidelines by going to the Camosun website and searching for "Arts and Science Academic Honesty Guidelines."

## 6. Grading System

Standard Grading System (GPA) see page 5 for details

Competency Based Grading System

## 7. Recommended Materials to Assist Students to Succeed Throughout the Course

You are encouraged to **consult your instructor if you require assistance or experience difficulty** with the course.

### LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services, or the College web site at [camosun.ca](http://camosun.ca).

## 8. College Supports, Services and Policies



### Immediate, Urgent, or Emergency Support

If you or someone you know requires immediate, urgent, or emergency support (e.g. illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts @ <http://camosun.ca/about/mental-health/emergency.html> or <http://camosun.ca/services/sexual-violence/get-support.html#urgent>

## College Services

Camosun offers a variety of health and academic support services, including counselling, dental, disability resource centre, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit the **STUDENT SERVICES** link on the College website at <http://camosun.ca/>

## College Policies

Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar with the content of College policies. Policies are available on the College website at <http://camosun.ca/about/policies/>. Education and academic policies include, but are not limited to, Academic Progress, Admission, Course Withdrawals, Standards for Awarding Credentials, Involuntary Health and Safety Leave of Absence, Prior Learning Assessment, Medical/Compassionate Withdrawal, Sexual Violence and Misconduct, Student Ancillary Fees, Student Appeals, Student Conduct, and Student Penalties and Fines.

### A. GRADING SYSTEMS <http://camosun.ca/about/policies/index.html>

The following two grading systems are used at Camosun College:

#### 1. Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-	A minimum grade of B- (70%) is required to continue in the dental hygiene program.	4
65-69	C+		3
60-64	C		2
50-59	D		1
0-49	F	Minimum level has not been achieved.	0

#### 2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes

Grade	Description
COM	The student has met the goals, criteria, or competencies established for this course, practicum or field placement.
DST	The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement.
NC	The student has not met the goals, criteria or competencies established for this course, practicum or field placement.

## B. Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at <http://camosun.ca/about/policies/index.html> for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	<i>In progress:</i> A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.

## 9. Course Policies

### Student Safety

Nothing is more important to the instructor than students enjoying a safe class and lab environment. Two-thirds of our class time will be spent in the F222 lab, which is a **Risk Group 2 Containment Zone** licensed under and **regulated by the Federal Government of Canada**. Risk Group 2 microorganisms are those considered to be of moderate risk to the individual and low risk to public health. Consider the following issues:

<b>Lab footwear</b>	<ul style="list-style-type: none"><li>For safety reasons <b>federal law</b> (CBS 4.6.3) and <b>WorkSafeBC</b> mandates that students are <b>required</b> to wear closed shoes in all lab times. Flip flops, sandals or shoes with holes are not acceptable. Students will not be allowed to enter the lab without proper footwear.</li></ul>
<b>Lab Coats</b>	<ul style="list-style-type: none"><li>For regulatory, safety, and professional reasons, it is mandatory to wear a lab coat during all sessions in the lab (F222). Cloth coats are preferable and are more comfortable but disposable ones are acceptable. Cloth coats may be rented for the semester for \$6 (cost of professional cleaning). Failure to wear proper lab attire will result in the inability to enter the lab and the subsequent loss of credit for that lab, including any lab assessment credit.</li><li>While in the lab the lab coat must be completely buttoned.</li><li>The lab coat must <b>never</b> be worn outside of the lab. If you must leave the lab for any reason you must remove your lab coat. Lab coats will remain in the lab between sessions and are not to be taken home.</li></ul>
<b>Eating &amp; drinking</b>	<ul style="list-style-type: none"><li>Eating or drinking anything in the lab is a violation of federal regulations, so absolutely <b>nothing</b> may be ingested while in the lab. Chewing gum and applying makeup or lip balm are similarly prohibited. <b>No exceptions</b> will be made, even for medications or water.</li><li>If something must be consumed, then it may be taken out of the lab.</li></ul>
<b>Hair</b>	<ul style="list-style-type: none"><li>It is recommended that long hair be tied securely to prevent it from being exposed to lab equipment.</li></ul>
<b>Handwashing</b>	<ul style="list-style-type: none"><li>Hands should be thoroughly washed <b>after</b> removing lab coats and <b>before</b> leaving the lab.</li></ul>

## Laboratory Attendance

Lab work is critical to the course objectives and much effort has been expended to ensure the lab experience is interesting and educational, both from academic and practical points of view. Therefore, attendance throughout the entire laboratory session is mandatory and will be noted. Labs will start promptly because information necessary for performing the laboratory correctly and safely is given at the beginning of the lab. Lateness in arriving, failure to attend the lab or leaving the lab before its scheduled finish time will result in forfeiting credit for that lab, including any written assignments or quizzes. If a lab session is missed, another student's data **may not** be used to complete a lab assignment for credit. Exceptions can be made **at the instructor's discretion** in legitimate cases of emergency (e.g. illness); in such cases the instructor must receive **advance notification** and **documented evidence** of the situation (e.g. medical certificate) and grant approval for any accommodation. In cases when a lab is done over two weeks, missing one of the weeks without instructor approval will result in a 50% reduction in the grade for any assignment associated with that lab.

## Missed Exams

**Without exception**, all exams must be written at the scheduled times. However, it is understood that emergency circumstances occur (e.g. illness or emergency in the immediate family); for such circumstances accommodation may be offered at the discretion of the instructor, provided the student: (a) notifies the instructor **in advance** of the exam (not after), and (b) provides documented evidence of the circumstance (i.e. medical certificate).

**\* HOLIDAYS OR SCHEDULED FLIGHTS ARE NOT CONSIDERED TO BE EMERGENCIES \***

Be sure not to make travel plans for the end of semester until the final exam schedules are finalized and posted. Please ask any family members who might make travel plans on your behalf to consult you before booking tickets.

## Written Work

Lecture and lab assignments may be assigned at the instructor's discretion. It is the student's responsibility to be informed of any work expected and the dates the work is due. Assignments may be intended to be completed as individuals or as groups. The instructor will make clear which is which. Work intended to be submitted by an individual must be completed independently, keeping in mind student conduct requirements. Work intended for completion by a group **must not** be completed by an individual. Each person in a group will receive the same mark on any group work.

## Late Penalties

All assignments must be handed in by the **time indicated on the assignment**. Be sure to submit all assignments on time to avoid deductions. Late assignments will be graded but marks equivalent to 10% of the total value of the assignment will be deducted for each day past the deadline.

## Study Habits

Good (and regular!!) study habits are required to do well in this course. You should plan on a minimum of 6 hours outside of scheduled class time for the completion of assignments and for general studying. Joining a study group can help make this more fun.

Lecture presentations will be uploaded to the course website. These should be used as a study guide, not as your sole source of information! You will need to write down additional key words for examples and explanations given during lecture. It is also recommended practice to transcribe these notes into a study-friendly format after each lecture, incorporating additional information from your textbook. Study these notes before the next class to prepare yourself for new material, which will often build on previously covered material.

Please take advantage of office hours if you need extra clarification and help, or simply would like to discuss a topic a little further.

## Summary of Student Responsibilities

1. Attending classes and actively engaging in lecture times are optimal for learning and therefore are in the best interests of student success. Should it be necessary to miss a lecture, however, it is the student's responsibility to catch up on anything that may have been missed (e.g. important announcement or assignments).
2. Students must hand in required assignments on time or be subject to penalty.
3. Evaluation of written or oral work will not be given if a student is not present.
4. Students must work independently, except when a group effort is required.
5. Students must know and follow all Safety Rules and Procedures. Students must sign the Safety Contract before participating in any laboratory activity.
6. All safety measures must be followed, with **NO EXCEPTIONS**.
7. The use of cell phones is prohibited in the lab.
8. All laboratories start punctually.



**Biology Department**  
**Biology 160 Microbiology for Dental Hygiene**  
**Fall 2019**  
**COURSE SCHEDULE**

The following is a **tentative** schedule of lectures and labs. Changes may be announced in class.

<b>Week</b>	<b>Dates</b>	<b>Lab Topics</b> (approximate schedule)	<b>Lecture topics</b>
1	Sept 2 Sept 4	<b>LABOUR DAY (College closed)</b>	Introduction Why study Microbiology?
2	Sept 9 & 11	Lab safety and procedures Bacterial structure and taxonomy Diagnostic tests	Antibacterial agents Introduction to infection control
3	Sept 16 & 18	<b>Quiz</b> <b>LAB 1:</b> Infection control: sterilization, disinfection, antisepsis	Bacterial metabolism, growth and reproduction
4	Sept 23 & 25	<b>Quiz</b> <b>LAB 1:</b> Analyze results Diagnostic tests	Viral structure, replication and pathogenesis
5	Sept 30 & Oct 2	<b>Quiz</b> Innate immunity	Adaptive immunity
6	Oct 7 & 9	<b>Quiz</b> Oral defense mechanisms Disorders of the immune system	Immunizations <b>Immune Assignment due</b>
7	Oct 14 Oct 16	<b>THANKSGIVING DAY (College closed)</b>	<b>MIDTERM</b>
8	Oct 21 & 23	Pathogenesis of bacterial disease	Oral ecosystem Plaque biofilm
9	Oct 28 & 30	<b>Quiz</b> <b>LAB 2:</b> Fermentable carbohydrates and plaque biofilm	Oral microbiota Microbiology of dental caries
10	Nov 4 & 6	<b>Quiz</b> <b>LAB 2:</b> Analyze results <b>LAB 3:</b> Caries susceptibility tests	Microbiology of periodontal disease
11	Nov 11 (Mon) Nov 13	<b>REMEMBRANCE DAY (College closed)</b>	Bacterial infections relevant to dentistry
12	Nov 18 & 20	<b>LAB 3:</b> Analyze results Bacterial infections relevant to dentistry <b>Bacteria Assignment due</b>	Viral infections relevant to dentistry
13	Nov 25 & 27	<b>Quiz</b> Viral infections relevant to dentistry <b>Virus Assignment due</b>	Fungal infections relevant to dentistry
14	Dec 2 & 4	Prevention of transmission Hand washing and immunizations	Infection control in dental office
	Dec 9-17	<b>FINAL EXAM</b> <b>(date and time scheduled by registrar)</b>	