

# BOSTON COLLEGE

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## S U M M E R S E S S I O N

### **BIOL 2210 Microbiology for Health Professionals Laboratory, 1 Credit**

**Boston College Summer Session 2019**

**Summer 2, June 24<sup>th</sup>-July 11<sup>th</sup>, M, T, W, TH 12-2pm**

**Instructor: Claudia S. Kale, PhD BCE -mail: kalec@bc.edu**

**Office: Higgins 425 or Higgins 380 Office Hours: M, T, W, TH 10 -11am**

#### **Boston College Mission Statement**

Strengthened by more than a century and a half of dedication to academic excellence, Boston College commits itself to the highest standards of teaching and research in undergraduate, graduate and professional programs and to the pursuit of a just society through its own accomplishments, the work of its faculty and staff, and the achievements of its graduates. It seeks both to advance its place among the nation's finest universities and to bring to the company of its distinguished peers and to contemporary society the richness of the Catholic intellectual ideal of a mutually illuminating relationship between religious faith and free intellectual inquiry.

Boston College draws inspiration for its academic societal mission from its distinctive religious tradition. As a Catholic and Jesuit university, it is rooted in a world view that encounters God in all creation and through all human activity, especially in the search for truth in every discipline, in the desire to learn, and in the call to live justly together. In this spirit, the University regards the contribution of different religious traditions and value systems as essential to the fullness of its intellectual life and to the continuous development of its distinctive intellectual heritage.

#### **Course Description**

Exercises in this laboratory course deal with aseptic techniques, microbial cultivation and growth characteristics, staining and bacterial isolation techniques, differential biochemical tests, identification of unknown bacterial species, and testing effectiveness of antimicrobial agents.

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#### **Textbooks & Readings**

**Text:** The Manual of Microbiology, Boston College, 2017 (course pack)

**Other:** Long-sleeved lab coat (provided for you in lab)

## Canvas

The Canvas site for this course contains the course syllabus and schedule. You will also find a lot of important lab-specific information that you should look at each week prior to coming into lab. Pre-lab quizzes will also be accessed through Canvas.

## Course Objectives

Students taking this course will:

- Improve critical thinking and decision-making skills in a laboratory setting through the application of course materials
- Develop skills, competencies, and points of view required by professionals in the field through hands-on activities similar to those found in hospital settings
- Demonstrate knowledge of and learn the impact of culture, gender, and age on microbiology and infectious diseases through case studies and epidemiology activities
- Demonstrate ethical competency pertaining to microbiology through case studies pertaining to the cause, treatment, and symptoms of common infectious diseases

## Grading

• Lab Practical (20 points x 1)	20 points
• Pre-Lab On-Line Quizzes (2 points each x 8)	16 points
• MIE Report (10 points x 1)	14 points
• <u>Data Sheets (5 points x 10)</u>	<u>50 points</u>
• Total Points	100 points

### Grade Scale:

• A = 94-100	B+ = 87-89	C+ = 77-79	D+ = 67-69	F = <60
• A- = 90-93	B = 84-86	C = 74-76	D = 64-66	
•	B- = 80-83	C- = 70-73	D- = 60-63	

## Deadlines and Late Work

Please refer to the class schedule for all due dates. Quizzes are due at 9:30am on the date listed. Other assignments (lab reports, data sheets) are due at the BEGINNING of lab on the date listed (if the instructor/TA have formally begun the lab, the assignment is considered late). Late assignments will be penalized at 10% for each day that they are late, including weekend days. They will not be accepted after 1 week late.

## Course Assignments

Please come prepared to each lab period. This includes having done the pre-lab quiz, having looked over all provided materials from Canvas and the manual, being dressed properly, and having any other items needed for the lab (pens, pencils, data sheets etc.). Students may expect to spend an average of 3 hours per week outside of lab on class assignments, exercises, and preparing for lab.

## Course Schedule

<b>Lab</b>	<b>Date</b>	<b>Topic/Readings</b>	<b>Data Observed</b>	<b>Due</b>
1	6/24	Intro/Syllabus/Safety Aseptic Technique (LM2) Microbes in the Environment		
2	6/25	Microbes in the Environment con't Microscopy (LM1) Simple Staining (LM3)	MIE Aseptic Technique Microscopy Simple Staining	
3	6/26	Gram Staining (LM4) Simple Staining con't	MIE Aseptic Technique Gram Staining Simple Staining	Microscopy DS Aseptic Tech. DS
4	6/27	Acid-Fast, Endospore, and Capsule Staining (LM5) Gram Staining con't	Other Staining Methods Gram Staining	Simple Staining DS
5	7/1	Biochemical Tests I (LM6-LM9) (FTG, Motility, MSA, EMB) Morbidity & Mortality Weekly Report (MMWR)		Gram Staining DS Other Staining DS
6	7/2	Biochemical Tests II (LM11-13, 16) (IMViC: Indole, MR-VP, Citrate, Blood)	BC Tests I	
7	7/3	Biochemical Tests III (LM10,14-15) (Catalase/Oxidase; Urea; TSI)	BC Tests II	BC Tests I DS
8	7/8	Food Microbiology (LM19) Hand-Washing (LM17)	BC Tests III	BC Tests II DS MMWR DS
9	7/9	Kirby Bauer Disk Diffusion (LM18) Epidemiology (LM20)	Hand-Washing Food Micro Epidemiology	BC Tests III DS
10	7/10	Lab Practical Review	Kirby-Bauer	Hand-Washing DS Food Micro DS Epidemiology DS
11	7/11	Lab Practical		Kirby-Bauer DS

- The instructor reserves the right to change the schedule
- Labs/Data sheets not found in the Lab Manual will be provided to you either in hard copy or through Canvas, as will specific instructions and pre-lab material. Please check the course Canvas site regularly

## **Written Work**

Summer Session students are expected to prepare professional, polished written work. Written materials must be typed and submitted in the format required by your instructor. Strive for a thorough yet concise style. Cite literature appropriately, using APA, MLA or CLA style per your instructor's requirements. Develop your thoughts fully, clearly, logically and specifically. Proofread all materials to ensure the use of proper grammar, punctuation and spelling. For writing support, please contact the [Connors Family Learning Center](#).

## **Attendance**

Attending class is an important component of learning. Students are expected to attend all class sessions. When circumstances prevent a student from attending class, the student is responsible for contacting the instructor before the class meets. Students who miss class are still expected to complete all assignments and meet all deadlines. Many instructors grade for participation; if you miss class, you cannot make up participation points associated with that class. Makeup work may be assigned at the discretion of the instructor. If circumstances necessitate excessive absence from class, the student should consider withdrawing from the class.

Students are expected to attend all lab sessions and to arrive for the beginning (labs will start promptly at the listed start time) and stay for the entire lab period. Missing lab/being late/leaving early will negatively impact the grade for the course. It is the student's responsibility alone to contact the instructor in case of an absence. Make-up lab work is done at the discretion of the instructor. If circumstances arise that necessitate excessive absence from class, the student should strongly consider withdrawing from the class. In all cases, students are expected to accept the decision of the instructor regarding attendance policies.

Consistent with BC's commitment to creating a learning environment that is respectful of persons of differing backgrounds, we believe that every reasonable effort should be made to allow members of the university community to observe their religious holidays without jeopardizing their academic status. Students are responsible for reviewing course syllabi as soon as possible, and for communicating with the instructor promptly regarding any possible conflicts with observed religious holidays. Students are responsible for completing all class requirements for days missed due to conflicts with religious holidays.

## Accommodation and Accessibility

Boston College is committed to providing accommodations to students, faculty, staff and visitors with disabilities.

Specific documentation from the appropriate office is required for students seeking accommodation in Summer Session courses. Advanced notice and formal registration with the appropriate office is required to facilitate this process. There are two separate offices at BC that coordinate services for students with disabilities:

- **The Connors Family Learning Center (CFLC)** coordinates services for students with LD and ADHD.
- **The Disabilities Services Office (DSO)** coordinates services for all other disabilities. Find out more about BC's commitment to accessibility at [www.bc.edu/sites/accessibility](http://www.bc.edu/sites/accessibility). **Scholarship and Academic Integrity** Students in Summer Session courses must produce original work and cite references appropriately. Failure to cite references is plagiarism. Academic dishonesty includes, but is not necessarily limited to, plagiarism, fabrication, facilitating academic dishonesty, cheating on exams or assignments, or submitting the same material or substantially similar material to meet the requirements of more than one course without seeking permission of all instructors concerned. Scholastic misconduct may also involve, but is not necessarily limited to, acts that violate the rights of other students, such as depriving another student of course materials or interfering with another student's work. Please see the [Boston College policy on academic integrity](#) for more information.