BIOL2321-01, Microbiology
Introduces morphological, ecological, and biochemical consideration of representative groups of bacteria. Introduces virology and microbial genetics; host-parasite relationships, prokaryotes of medical significance; and physical and chemical controls of microbial growth.

Tuesday and Friday in Hurtig Hall 130, 9:50-11:30 am
Anthony D'Onofrio, PhD. Office in 321 MU; tel x4712, a.donofrio@neu.edu, Office Hours: Friday 1-3 pm

Textbook: Microbiology: A Human Perspective, 7th Edition. Nester, Anderson and Roberts. McGraw Hill.

Class	Date	Textbook Chapter	Topic
1	01/08		Introduction
2	01/11	1	Humans and the Microbial World
3	01/15	3	Microscopy and Cell Structure
4	01/18	4	Dynamics of Microbial Growth
5	01/22	5	Control of Microbial Growth
6	01/25	7	The Blueprint of Life
7	01/29	8	Bacterial Genetics
8	02/01		**Exam 1**
9	02/05	9	Biotechnology
10	02/08	-	CRISPR
11	02/12	10	Identifying and Classifying Microorganisms
12	02/15	11	The Diversity of Bacteria and Archaea
13	02/19	13	Viruses
14	02/22	-	The Human Microbiome
15	02/26		Review
16	03/01		**Exam 2**
	03/05		Spring Break
	03/08		Spring Break
17	03/12	20	Antimicrobial Medications
18	03/15	20	Antimicrobial Medications
19	03/19	21	Respiratory System Infections
20	03/22	22	Skin Infections
21	03/26	23	Wound Infections
21	03/29	24	Digestive System Infections
22	04/02		**Exam 3**
23	04/05	25	Blood and Lymphatic Infections
24	04/09	26	Nervous System Infections
25	04/12	27	Genitourinary Tract Infections
26	04/16		Review
	TBD		**Final Exam**

Course Grading:	
3 Exams (20% Each)	60%
Final Exam (cumulative)	30%
Top Hat Questions	10%

Northeastern University is committed to the principles of intellectual honesty and integrity. All members of the Northeastern community are expected to maintain complete honesty in all academic work, presenting only that which is their own work in tests and assignments. If you have any questions regarding proper attribution of the work of others, contact your professor prior to submitting the work for evaluation.
93-100 A ; 90-92.5 A-; 87-89 B+; 84-86 B; 80-83 B-; 77-79 C+; 74-76 C; 70-73 C-; 67-69 D+; 64-66 D; 60-63 D-; <=59 F

Learning Outcomes:
By the end of the term, students should be able to:

- Identify the main components of living cells and explain the mechanism by which they account for the metabolism, function and replication of cells.
- Compare and contrast the differences between bacteria, archaea, fungi and viruses.
- Identify a wide diversity of bacterial species and elaborate on characteristics and common habitats of each.
- Explain the various methods of identifying bacteria including classic techniques as well as modern DNA sequencing-based approaches.
- Explain the genetics of bacteria and genetic engineering techniques that have been adapted for research.
- Explain the mechanism by which antimicrobial agents inhibit the growth of bacteria and how resistance to antibiotics is selected.
- Identify the causative agent of the most common human infectious diseases.
- Identify bacterial species of the human microbiome and which body site they are most commonly found.

Class response questions: During most lectures you will be asked to answer questions or solve problems related to concepts covered in that lecture using a remote response system. You will receive 3/4 of a point for answering each question and another 1/4 of a point for answering correctly. There is no make-up work for class response questions missed due to non-emergency absences. Do not use another student's response account (see "Cheating Policy" below). See additional information on Blackboard to learn about the Top Hat System.

Exam format: Each test will include standard content/concept multiple choice drawn from the lecture material and assigned reading. The final exam will be cumulative.

Missed Exams Policy: There will be no make-ups for missed exams. Please make every effort not to miss exams. If you know you are going to have a conflict please let me know ASAP! If you have an emergency, or a documented excuse, you can substitute your final exam grade for the exam you miss.

Honor Code: Please familiarize yourself with Northeastern University's Student Handbook. https://issuu.com/northeasternuniversity/docs/studenthandbook2015

Cheating Policy: Honesty, integrity, and ethical behavior are of utmost importance in science. Anyone caught cheating (for example, copying or sharing answers during tests) will receive a zero on that test, and be referred to the Office of Student Conduct and Conflict Resolution. Don't give someone else access to your class response account! Don't access someone else's class response account! This is cheating! Operating more than one system will result in loss of ALL class response points for both students! Please make sure you have read and understand the student code of conduct: http://issuu.com/northeasternuniversity/docs/code_of_conduct_5-29?e=2831976/13566121%20

Attendance policy: Attendance at lectures is strongly recommended. Answering class response questions will keep you on track with the material, test your comprehension, and earn you points. Also, lectures will usually include material not covered in the book. Although they will be available on blackboard, my power point slides tend not to have a lot of text on them, so you will need to take notes. Please try to arrive on time for lecture. If the room is large, please sit towards the front. If you do have to be late, please try to come in unobtrusively.

Cell Phones: Please silence cell phones during lecture. If you have some emergency situation for which you must answer your cell phone on during class time, please come and discuss this with me before the class period. Absolutely no phones/tablets/laptops/etc. during tests.

Schedule of Lectures and Exams The schedule may change slightly during the course of the class, as certain sections may progress at different rates.