Weekly Lecture Schedule – Microbiology (BIOL 2321)

Meeting Time: Tuesday & Thursday, 12:30–1:45 PM (Online – Blackboard)
Course Start: Tuesday, January 20, 2026
Spring Break: March 9–13

Week	Dates (Tue / Thu)	Lecture Topics (OpenStax)	Weekly Learning Objective
1	Jan 20 / Jan 22	**Ch 1 – An Invisible World**	Explain what microorganisms are and why they are central to health, ecosystems, and disease.
2	Jan 27 / Jan 29	**Ch 3 – Cell Structure**	Compare prokaryotic and eukaryotic cell structures and relate structure to function.
3	Feb 3 / Feb 5	**Ch 4 – Prokaryotic Diversity**	Classify major bacterial and archaeal groups based on structural and metabolic traits.
4	Feb 10 / Feb 12	**Ch 5 – Eukaryotic Microbes**	Distinguish fungi, protozoa, helminths, and algae and their roles in disease.
		Exam 1 – Thu, Feb 12	*(Ch 1, 3, 4, 5)*
5	Feb 17 / Feb 19	**Ch 6 – Acellular Pathogens**	Describe viral structure, replication cycles, and mechanisms of acellular infection.
6	Feb 24 / Feb 26	**Ch 7 – Microbial Biochemistry**	Explain how enzymes and macromolecules support microbial metabolism and survival.
7	Mar 3 / Mar 5	**Ch 9 – Microbial Growth**	Relate microbial growth requirements to laboratory cultivation and infection dynamics.
		Midterm Oral Exam opens Mar 5–6	*(AI oral, group case study)*
—	Mar 9–13	**SPRING BREAK**	—

Spring 2026 **Dr. Ferhat Ozturk**

Week	Dates (Tue / Thu)	Lecture Topics (OpenStax)	Weekly Learning Objective
8	Mar 17 / Mar 19	**Ch 10 – Genome Structure**	Describe microbial genomes and the molecular basis of heredity.
9	Mar 24 / Mar 26	**Ch 11 – Gene Expression & Mutation**	Explain replication, transcription, translation, and how mutations generate diversity.
10	Mar 31 / Apr 2	**Ch 12 – Biotechnology Applications**	Apply genetic engineering concepts to medicine and research.
11	Apr 7 / Apr 9	**Ch 13 – Control of Microbial Growth**	Evaluate physical and chemical methods used to control microorganisms.
		Exam 3 – Thu, Apr 9	*(Ch 10–14)*
12	Apr 14 / Apr 16	**Ch 14 – Antimicrobials + Immunity Basics**	Explain antimicrobial mechanisms and foundational immune defenses.
13	Apr 21 / Apr 23	**Ch 15 – Microbial Pathogenicity**	Analyze virulence factors and mechanisms of microbial disease.
14	Apr 28 (Tue)	**Ch 21–26 – Infectious Diseases (Systems Overview)**	Integrate infectious diseases across body systems using clinical reasoning.
Final	May 1–May 4	**Final Oral Exam (AI)**	Defend a systems-based infectious disease case using microbiological principles.