

Microbial Life 16:682:501 - Fall 2021

Monday and Wednesday 4th Period @ 3:00-4:20 pm

CDL 103. Some classes will be remote.

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Reading: *The Prokaryotes* (on Canvas), any recent microbiology textbook (e.g., Brock Biology of Microorganisms; Staley, Gunsalus, Lory & Perry: Microbial Life; or Prescott, Harley & Klein: Microbiology) **and assigned articles.**

Course web site: Canvas

Lecture	Date	Topic	Lecturer
1	Wed Sept 1	Introduction to microbial life and course structure	MH LK
2	Wed Sept 8	Microbial life on early earth	LK
3	Mon Sept 13	Cell structure and function	LK
4	Wed Sept 15	Making a living – Microbial growth and metabolism	MH
5	Mon Sept 20	Microbial genetics	Gerben Zylstra
6	Wed Sept 22	Boundaries of microbial life	MH
7	Mon Sept 27	Biogeochemical cycles Pt 1	LK
8	Wed Sept 29	Biogeochemical cycles Pt 2	LK
9	Mon Oct 4	The sunny side of life: Photosynthesis	LK
10	Wed Oct 6	The dark side of life: Chemosynthesis	LK
11	Mon Oct 11	Microbial taxonomy and the concept of a species	MH
12	Wed Oct 13	The Tree of Life: Molecules and evolution	LK
13	Mon Oct 18	Viruses: The edge of life?	Siobain Duffy
14	Wed Oct 20	Raiders of the lost Archaea	LK
15	Mon Oct 25	Exam I (covers lectures 1-14)	
16	Wed Oct 27	Symbiotic relationships	Debashish Bhattacharya
17	Mon Nov 1	Bio-Warfare	Ray Sullivan
18	Wed Nov 3	Fungi: more than just fuzzy eukaryotes	Ning Zhang
19	Mon Nov 8	How to get there: Moving around or staying in place	MH
20	Wed Nov 10	Genomes and “omics” in microbiology	Debashish Bhattacharya
21	Mon Nov 15	Domestication of microbes: Industrial applications	MH
22	Wed Nov 17	Bioenergy	MH
23	Mon Nov 22	Microbes and Climate change	MH
	Wed Nov 24	No Class--Thanksgiving	
24	Mon Nov 29	Life strategies of pathogenic microbes	Jeff Boyd
25	Wed Dec 1	Microbiomes	Liping Zhao
26	Mon Dec 8	My favorite microbes	Class
27	Wed Dec 10	More of my favorite microbes	Class
28	Mon Dec 13	Living in the microbial world	MH&LK
	Fri Dec 17	Exam II (covers Lectures 1-27, with main focus on 16-28)	

Examinations: I. Covering lectures 1-14; **II.** Comprehensive exam.

Grading: Exam I 30%, Exam II 30%, Quizzes and Assignments 20%, Term paper and presentation 20%.