

Fall 2017 - Microbial Ecology and Diversity
(11:680:491; 16:681:572)

- Location:** Tues. – Foran 138B
Thur. – Cook/Douglas Lecture Hall 103
- Time:** Tuesday and Thursday, 5:35 – 6:55 PM
- Lecturer:** Dr. Tamar Barkay (barkay@aesop.rutgers.edu; 848 932 5664)
- Proctor:** Dr. Andrew Marinucci (andrew.marinucci@Verizon.net)
- Guest lectures:** Ashley Grosche, Dr. Ning Zhang, Dr. Orly Levitn
- Course Sakai site:** <https://sakai.rutgers.edu/portal/site/aa2077a6-c0ad-4870-b08f-88b9f6a5f3ff>
- Texts:** (on reserve at Chang library):
Madigan, Bender, Buckley, Sattley, and Stahl, Brock Biology of Microorganisms, 15th Edition, Pearson, NJ
Maier, Pepper, and Gerba, Environmental Microbiology, 2nd edition 2009, Academic Press, San Diego.

Grading

First midterm exam	20%
Second midterm exam	25%
Third midterm exam	30%
Undergrad students: A term paper	20%
Class participation	5%
Total	100%

	Lecturer	Date	Topic	Paper	
Introduction and microbial diversity	TB	9/5	Introduction and historical perspectives	Discussion	
	TB	9/7	Origins of life		
	TB	9/12	Microbial evolution		
	TB	9/14	Methods in microbial ecology		
	TB	9/19	The prokaryotes (Bacteria and Archaea)		
	TB	9/21	Microbial Eukaryotes (end of material for 1st midterm)	Title due	
	AG	9/26	Hydrothermal vent microbiology		
	NZ	9/28	Fungal Ecology and Diversity		
	OL	10/3	Diatoms		
			10/5	1st midterm	
Metabolic diversity	TB	10/10	Modes of microbial metabolism in the environment	Abstract due	
	TB	10/12	Anaerobic metabolism in the environment and introduction to element cycles		
	TB	10/17	The carbon cycle		
	TB	10/19	The nitrogen and sulfur cycles		
	TB	10/24	Microbe-metal interactions		
	TB	10/26	Element cycles “gone wrong” (end of material for 2nd midterm)	Returned	
	TB	10/31	Bioremediation		
			11/2	2nd midterm exam	
Microbial interactions and ecosystems	TB	11/7	Microbial interactions		
	TB	11/9	Viruses		
	TB	11/14	Microbe-plant interactions		
	TB	11/16	Microbe-animal interaction		
	TB	11/21	Microbial communities and ecosystems	First draft due	
			11/23	Thanksgiving recess	
	TB	11/28	Terrestrial environments		
	TB	11/30	Aquatic environments	First draft returned	
			12/5	Abiotic factors	
			12/7	Life in extreme environments	
			12/12	Final exam	Final due