

# MICROBIOLOGY 101

## Summer Quarter 2009

**Textbook:** “Microbiology, An Evolving Science eBook” by Joan Slonczewski, John W. Foster.  
(Specific chapters to be purchased will be listed separately.)

**Instructors:** Dr. Beth Lazazzera, Office: MSB 4610B, Email: [bethl@em.ucla.edu](mailto:bethl@em.ucla.edu)

### SYLLABUS

<i>Week</i>	<i>Lecture</i>	<i>Date</i>	<i>Subject</i>
I	1	6/22	Introduction / Diversity and Phylogeny of Microbes
	2	6/24	Cultivation & Identification / Microscopy & General Organization of Microbial Cells
	3	6/26	Cell Wall & Surface Structures / Transport of Nutrients by Microbial Cells
II	4	6/29	Structure & Function of Microbial Motility
	5	7/1	Carbon & Nitrogen Cycles
	6	7/3	Energy Generation: Fermentation, Respiration & Photosynthesis
III	7	7/6	Replication of Viral Genomes
	8	7/8	Regulation of Viral Gene Expression
		7/10	<b>MIDTERM</b>
IV	9	7/13	mRNA Structure and Small RNA Control of Gene Expression
	10	7/15	Transcriptional Regulation: Sigma Factors & Two-component Regulatory Systems
	11	7/17	The Bacterial Genome and Horizontal Gene Transfer
V	12	7/19	Antibiotics and Resistance/ Quorum Sensing: How Microbes Talk to Each Other
	13	7/22	Development in Prokaryotic and Eukaryotic Microbes
	14	7/24	Invertebrate-Microbe & Plant-Microbe Symbioses
VI	15	7/27	The Human Microbiota: We Are Not Alone
	16	7/29	Human Bacterial & Eukaryotic Pathogens
		7/31	<b>FINAL EXAM</b>

### POINT DISTRIBUTION

This class is graded on a curve. A letter grade will be assigned to the mean score. The letter grade for the mean score will be decided based on the mean score, specifically, the better the mean score, the better the letter grade. We hope this gives you an incentive to work together to help all students in the class do well.

#### 50 points

2 homeworks (25 points each)

#### 100 points

##### **Midterm 1**

This exam will cover lectures 1-8.

#### 100 points

##### **Final Exam**

This exam will cover lecture 9-16.