

2017 MBL Microbial Diversity Course Schedule

Note Bene: International Staff In: Sat 7-1. Domestic Staff In: Sun 7-2. All Hands Set Up: Mon 7-3 at 9AM.

Staff Departure: no earlier than 3PM Thu 8-24, no later than housing checkout AM of Fri 8-25.

	Date		Lecture 1 9:00 – 10:15 AM Candle House 104-105	Lecture 2 10:30 – 11:30 AM Candle House 104-105	Afternoon	Evening
0	8-Jul	Sa	Staff have been setting up since Mon 7-3 @9am			
0	9-Jul	Su			Staff Collect Samples	Opening Mixer: 7:30 PM
1	10-Jul	M	<i>Education Dept Introduction</i> Jared Leadbetter <i>Where We've Been</i>	Dianne Newman <i>Where We're Going</i>	Heterotrophs	Volta Flame
	11-Jul	T	Dianne Newman <i>Intro to Metabolic Diversity</i>	Field Trip & Box Lunch	Chemo & phototrophic anaerobes	Chalk Talks I & basic m'scopes
	12-Jul	W	Dianne Newman <i>Metabolic Diversity Cont'd</i>	Amy Vollmer ^{WF} <i>Key Pathways</i>	Micro electrodes & Enrichments	<i>630 Kyle Fermentation</i> <i>7p Vollmer</i>
	13-Jul	R	Kurt Hanselmann <i>Intro to Thermo</i>	Kurt Hanselmann S-Cycling I: Sulfate Reduction	DIONEX Culturing	Chalk Talks II & Thermodyn Groups 3&4
	14-Jul	F	Jared Leadbetter <i>Acetogenesis</i>	Jared Leadbetter <i>Methanogenesis</i>	MRC Tour CH104, Lab work	Friday Night Lecture
	15-Jul	S	<i>Lab: Growth Curves & Enrichments</i>	<i>Lab: Growth Curves, Enrichments, Discussion</i>	Flex/FREE	
	16-Jul	S	FREE			
	17-Jul	M	Kurt Hanselmann S-Cycling II: Anoxygenic Phototrophy	Kurt Hanselmann S-Cycling III: Sulfide Oxidation	Culturing; Colony PCR <i>Specs, Imaging</i>	Chalk Talks III & Thermodyn Groups 1&2
18-Jul	T	George O'Toole <i>Why Genetics</i>	Dianne Screens and stories from Woods Hole	Imaging facilities		
19-Jul	W	Dianne <i>The importance of changing color</i>	Graham Walker	Imaging facilities		
20-Jul	R	George	Mecky Pohlschroder	HPLC/GC		
21-Jul	F	Bill Metcalf 1. A practical approach for development of genetic tools in microbial systems	2. Genetic analysis of energy-conserving metabolism in <i>Methanosarcina</i>	Rare Books MBL Library Two groups	Friday Night Lecture	
22-Jul	S	Symposium I (Small Molecules): Roberto Kolter, Paula Welander, Michi Taga, Alison Butler, Emily Balskus			Symposium I <i>continued</i>	Course BBQ
23-Jul	S	FREE				

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3	24-Jul	M	<i>Jared Leadbetter</i> Endospores & Outer Membranes	<i>Jared Leadbetter</i> Motility & Behavior	Isolate colony PCR, filter FISH samples	FISH lecture, project brainstorming
	25-Jul	T	<i>Ethan Garner</i> <i>History of Microscopy at Woods Hole</i>	<i>Sean Crosson</i> <i>Building and organizing bacterial cells</i>	PCR gels, FISH	mono-FISH, PCR gels, Termite gut dissection
	26-Jul	W	<i>Bernhard Schink</i>	<i>Sean Crosson</i> <i>More on microbial cell motility and growth</i>	mono-FISH, shape and motility quantification	mono-FISH, shape and motility quantification
	27-Jul	R	<i>Bernhard Schink</i>	<i>Aretha Fiebig</i> <i>Comparative genetic analysis in Alphaproteobacteria.</i>	FISH imaging, dynamic tracking	FISH imaging, dynamic tracking
	28-Jul	F	<i>Georgia Squyres</i>	--leave open--	-- Mak Saito -- 16S rDNA ID and 2° Structures	MBL Fri Night Lecture
	29-Jul	S	Group Reports in Candle House			FREE
30-Jul	S	FREE (ad hoc Whale Watching, perhaps?)				
4	31-Jul	M	<i>Titus/Scott</i> <i>Intro to genomics/bioinformatics</i>	<i>Tracy/Scott</i> <i>Biostatistics basics</i>	Computing workflows/ reproducibility/responsible conduct	
	1-Aug	T	<i>Scott</i> <i>Genome assembly, annotation</i>	<i>Titus</i> <i>Genome analysis: How to and where to start</i>	Genome assembly, annotation, <u>GROUP PHOTO</u>	
	2-Aug	W	<i>Tracy</i> <i>Research using metagenomics & targeted sequencing</i>	<i>Titus</i> <i>Metagenome assembly and analysis</i>	Metagenome assembly & analysis tutorial	
	3-Aug	R	<i>Titus</i> <i>Expression analysis-transcriptomics and proteomics</i>	<i>Scott Dawson</i> <i>Expression analysis: analyzing & understanding mappings</i>	Pathway analyses & comparative genomics	
	4-Aug	F	<i>Tracy</i> <i>Modeling and network analyses</i>	<i>Titus, Scott and Tracy</i> <i>Q&A: What does the future hold</i>	MiniProjects, optional R lesson	MBL Fri Night Lecture
	5-Aug	S	Symposium II (Interactions between Microbes & Eukaryotes): Colleen Cavanaugh, Nicole King, Elizabeth Ottesen, John McCutcheon, Nicholas Shikuma			
6-Aug	S	FREE				

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5	7-Aug	M	<i>Wiebke Ziebis</i>	<i>Julie Huber</i>		Optional: R lesson
	8-Aug	T	<i>John Coates</i>	<i>Martin Polz</i>		Optional: command line & workflow automation
	9-Aug	W	<i>Arpita Bose</i>	<i>Otto Cordero</i>		
	10-Aug	R	<i>Victoria Orphan</i>	<i>Pete Girguis^{GL}</i>	MiniProjects	Julianna (science communication) 7 pm presentation
	11-Aug	F	<i>Shana Goffredi^{RM}</i>	<i>Lenny Tender</i>	MiniProjects	MBL Fri Night Lecture
	12-Aug	S				
13-Aug	S	FREE				

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6	14-Aug	M	<i>Avoid creep</i>	<i>Avoid creep</i>	MiniProjects	
	15-Aug	T	<i>Avoid creep</i>	MiniProjects		
	16-Aug	W	<i>Avoid creep</i>	MiniProjects		
	17-Aug	R	<i>Avoid creep</i>	MiniProjects & Sequencing Deadline		
	18-Aug	F	<i>Avoid creep</i>	MiniProjects & FISH Deadline	MBL Fri Night Lecture	
	19-Aug	S	MiniProjects	Pipettes Down at 3 PM – Clean Up Begins		
7	20-Aug	S	9 am – 12 pm Lab Clean-up (groups 1,4)	Project Reports – oral presentations (groups 2,3)	Lab Clean up/Writing	
	21-Aug	M	9 am – 12 pm Lab Clean-up (groups 2,3)	Project Reports – oral presentations (groups 1,4)	Lab Clean-up / Writing (all)	
	22-Aug	T	Final Lab Clean-up & Pack-up	Final Lab Clean-up & Pack-up Final Project Report files due by 10:30 AM to Gabriela	Graduation & Dinner!	
	23-Aug	W	Students Depart ☹			
	24-Aug	R				

We gratefully acknowledge the Simons Foundation, NSF, NASA, DOE, and Promega for support of the Microbial Diversity Course.

^{GL}Maynard and Suzanne Goldman Endowed Lecturer: *Peter Girguis, Harvard University*

^{RM}Roger Milkman Endowed Lecturer: *Shana Goffredi, Occidental College*

^{WF}Waksman Foundation-sponsored Eveleigh Lecturer: *Amy Vollmer, Swarthmore*