

2025 OMIBS Schedule

This is a draft schedule and will likely be updated.

Time	Location	Event	Lecturer
DAY 1 - Tuesday, August 12, 2025			
4:00 PM- 5:00 PM	Swope	Walk around Woods Hole (optional; meet in front of Swope)	Course Staff
5:00 PM- 6:00 PM	Speck	Welcome and orientation	Michelle Itano, Wes Legant
6:00 PM- 7:30 PM	Swope Terrace	Pizza Party	
7:30 PM- 8:30 PM	Speck	Lecture: Grand overview of the course	Michelle Itano, Wes Legant
DAY 2 - Wednesday, August 13, 2025			
8:15 AM- 9:30 AM	Speck	Lecture: Foundations of microscopy 1 - geometrical optics	Wes Legant
9:30 AM- 9:45 AM		Break	
9:45 AM- 10:45 AM	Speck	Lecture: Foundations of microscopy 2 - lenses and optical systems	Wes Legant
10:45 AM- 11:00 AM	Speck	Break	
11:00 AM- 12:00 PM	Loeb 2nd floor	Lab: Build basic Microscopes	Wes Legant, Course Staff
12:00 PM- 1:00 PM	Swope	Lunch	
1:00 PM- 2:30 PM	Loeb 2nd floor	Lab: Build basic microscopes	Wes Legant, Course Staff
2:30 PM- 3:00 PM	Break		

Time	Location	Event	Lecturer
3:00 PM- 6:00 PM	Loeb 2nd floor	Lab: Practice with commercial microscope stands	Michelle Itano, Course Staff
6:00 PM- 7:00 PM	Swope	Dinner (meeting for vendors: last 15 min of dinner)	
7:00 PM- 8:30 PM	Speck	Lecture: Foundations of microscopy 3 - wave optics	Wes Legant
8:30 PM- 9:30 PM	Loeb 2nd floor	Demonstration: Abbe diffraction apparatus (Thor Labs Kit)	Wes Legant
DAY 3 - Thursday, August 14, 2025			
8:15 AM- 9:30 AM	Speck	Lecture: Transmitted light 1	Sharon King
9:30 AM- 9:45 AM		Break	
9:45 AM- 11:15 AM	Speck	Lecture: Cameras	Stephanie Fullerton
11:15 AM- 12:15 PM	Loeb 2nd floor	Lab: Phase contrast microscopy	Sharon King, Course Staff
12:15 PM- 1:15 PM	Swope	Lunch	
1:15 PM- 2:15 PM	Loeb 2nd floor	Lab: ImageJ basics and saving/reporting images	Michelle Itano
2:15 PM- 3:15 PM	Loeb 2nd floor	Lab: Use of cameras	Stephanie Fullerton, Jim Sims, Course Staff
3:15 AM- 3:45 PM	Break		
3:45 PM- 5:00 PM	Speck	Lecture: Transmitted light 2	Sharon King

Time	Location	Event	Lecturer
5:00 PM- 6:00 PM	Loeb 2nd floor	Lab: DIC and polarization (part 1, Fixed)	Sharon King, Course Staff
6:00 PM- 7:00 PM	Swope	Dinner (meeting for vendors: last 15 min of dinner)	
7:00 PM - 9:30 PM	Loeb 2nd floor	Lab: DIC and polarization (part 2, Sample mounting and live imaging)	Sharon King, Course Staff
9:30 PM- 11:00 PM	Loeb 2nd floor	Commercial faculty appreciation event	
DAY 4 - Friday, August 15, 2025			
8:15 AM- 9:00 AM	Speck	Discussion of lab exercises	Sharon King
9:00 AM- 9:45 AM	Speck	Lecture: Photophysics of fluorescence and dye chemistry	Luke Lavis
9:45 AM- 10:45 AM	Speck	Lecture: Introduction to the fluorescence microscope	Michelle Itano
10:45 AM- 11:00 AM		Break	
11:00 AM- 12:30 PM	Loeb 2nd floor	Lab: Fluorescence microscopy (part 1)	Michelle Itano, Course Staff
12:30 PM- 1:30 PM	Swope	Lunch	
1:30 PM- 2:00 PM	Speck	Lecture: Chemical tags for functional imaging	Luke Lavis
2:00 PM- 3:00 PM	Speck	Lecture: Sample preparation techniques	Michelle Itano
3:00 PM- 3:30 PM	Break		

Time	Location	Event	Lecturer
3:30 PM- 4:00 PM	Loeb 2nd Floor	Lab: Cleaning optical filters	Mark Lessard
4:00 PM- 6:00 PM	Loeb 2nd Floor	Lab: Fluorescence microscopy (part 2) c	
6:00 PM- 7:00 PM	Swope	Dinner (meeting for vendors: last 15 min of dinner)	
7:00 PM- 10:00 PM	Loeb 2nd floor	Lab: Build widefield fluorescence microscope	Wes Legant, Course Staff
DAY 5 - Saturday, August 16, 2025			
8:15 AM- 8:30 AM	Speck	Discussion of lab exercises	Michelle Itano, Wes Legant
8:30 AM- 9:30 AM	Speck	Lecture: Fluorescent proteins	Mathew Tantama
9:30 AM- 10:00 AM		Break	
10:00 AM- 11:00 AM	Speck	Lecture: Imaging dynamics (incl. FRET, FLIM, FCS)	Mathew Tantama
11:00 AM- 12:00 PM	Speck	Lecture: Biosensors	Mathew Tantama
12:00 PM- 1:00 PM	Swope	Lunch (meeting for vendors: last 15 min of lunch)	
1:00 PM- 3:15 PM	Loeb 2nd floor	Lab: FRET & FLIM	Mathew Tantama, Course Staff
3:15 PM- 4:00 PM	Speck	Discussion of FRET & FLIM lab exercises	Mathew Tantama, Course Staff
4:00 PM- 5:00 PM	Speck	Lecture: Tissue Clearing	Doug Richardson

Time	Location	Event	Lecturer
5:00 PM- 5:15 PM		Break	
5:15 PM- 6:00 PM	Speck	Lecture: Principles of digital imaging 1	Kasia Kedziora
6:00 PM- 7:00 PM	Swope	Dinner	
7:00 PM- 8:00 PM	Speck	Lecture: Principles of digital imaging 2	Kasia Kedziora
8:00 PM - 9:30 PM	Loeb 2 nd Floor	Lab: Digital imaging	Kasia Kedziora, Course Staff
DAY 6 - Sunday, August 17, 2025			
FALMOUTH ROAD RACE - EXPECT ROAD CLOSURES!			
8:15 AM- 9:15 AM	Speck	Lecture: Evaluating optical performance using PSFs	Lynne Turnbull
9:15 AM- 9:30 AM		Break	
9:30 AM- 10:30 AM	Speck	Lecture: Deconvolution	Wes Legant
10:30 AM- 10:45 AM		Break	
10:45 AM- 12:00 PM	Speck	Lecture: Confocal Microscopy	Sid Shaw
12:00 PM- 1:00 PM	Loeb 2 nd floor	Lunch (meeting for vendors: last 15 min of lunch)	
1:00 PM- 1:30 PM	Loeb courtyard	Group Photo	Mark Lessard
1:30 PM- 3:00 PM	Loeb 2 nd floor	Lab: Resolution measurements	Wes Legant, Course Staff

Time	Location	Event	Lecturer
3:00 PM-9:00 PM		Afternoon off	
DAY 7 - Monday, August 18, 2025			
8:15 AM-9:15 AM	Speck	Lecture: Multiphoton microscopy	Cristina Rodriguez
9:15 AM-12:15 PM	Loeb 2nd floor	Lab: Deconvolution, confocal, multiphoton (part 1)	Sid Shaw, Doug Richardson, Cristina Rodriguez, Course Staff
12:15 PM-1:15 PM	Swope	Lunch	
1:15 PM-4:15 PM	Loeb 2nd floor	Lab: Deconvolution, confocal, multiphoton (part 2)	Sid Shaw, Doug Richardson, Cristina Rodriguez, Course Staff
4:15 PM-4:45 PM		Break	
4:45 PM-5:45 PM	Speck	Lab: Quantification & analysis (part 1)	Sid Shaw, Kasia Kedziora
5:45 PM-6:45 PM	Swope	Dinner (meeting for vendors: last 15 min of dinner)	
6:45 PM-8:15 PM	Speck	Lab: Quantification & analysis (part 2)	Sid Shaw, Kasia Kedziora
8:15 PM-9:30 PM	Speck	Discussion of Lab Exercises	Sid Shaw, Kasia Kedziora
DAY 8 - Tuesday, August 19, 2025			
8:30 AM-1:00 AM	Speck	Lecture: Instrumentation for live-cell imaging	Michelle Itano
10:00 AM-10:15 AM		Break	
10:15-11:15 AM	Speck	Lecture: Light sheet microscopy	Wes Legant

Time	Location	Event	Lecturer
11:15 AM-11:30 AM		Break	
11:30 AM-12:30 PM	Speck	Lecture: Adaptive optics	Cristina Rodriguez
12:30 PM-1:30 PM	Swope	Lunch	
1:30-2:30 PM	Speck	Lecture: Super-resolution 1 - SIM methods	Alison North, Joerg Bewersdorf
2:30 PM-2:45 PM		Break	
2:45-3:45 PM	Speck	Lecture: Super-resolution 2 - Expansion Microscopy	Joerg Bewersdorf
3:45-5:45 PM	Loeb 2nd Floor	Lab: Light-sheet microscopes, SIM, iSIM (part 1)	Joerg Bewersdorf, Alison North, Course Staff
5:45 PM-6:45 PM	Swope	Dinner (meeting for vendors: last 15 min of dinner)	
6:45 PM-8:45 PM	Loeb 2nd Floor	Lab: Light-sheet microscopes, SIM, iSIM (part 2)	Joerg Bewersdorf, Alison North, Course Staff
8:45 PM-10:15PM	Speck	Tech Bites	Commercial Faculty
DAY 9 - Wednesday, August 20, 2025			
8:15 AM-9:15 AM	Speck	Lecture: Super-resolution 3 - STED	Flavie Lavoie-Cardinal
9:15 AM-9:30 AM		Break	
9:30 AM-10:30 AM	Speck	Lecture: Super-resolution 4 - Single-molecule localization techniques	Joerg Bewersdorf

Time	Location	Event	Lecturer
10:30 AM- 10:45 AM		Break	
10:45 AM- 12:00 PM	Loeb 2nd floor	Lab: STED & single-molecule localization (part 1)	Flavie Lavoie-Cardinal, Joerg Bewersdorf, Course Staff
12:00 PM- 1:00 PM	Swope	Lunch	
1:00 PM- 2:30 PM	Loeb 2nd Floor	Lab: STED & single-molecule localization (part 2)	Flavie Lavoie-Cardinal, Joerg Bewersdorf, Course Staff
2:30 PM- 2:45 PM		Break	
2:45 PM - 3:45 PM	Speck	Lecture: Picking the right microscope	Alison North
3:45 PM - 6:00 PM	Lb 2nd floor	Lab: Rotations on specialized instruments/demos	Commercial Faculty, Course Staff
6:00 PM- 7:00 PM	Swope	Dinner (NO vendor meeting)	
7:00-10:00 PM	Loeb 2nd Floor	Lab: Time on instruments / demos (part 1)	Commercial Faculty, Course Staff
DAY 10 - Thursday, August 21, 2025			
8:30 AM- 12:00 PM	Speck	Lab: Time on instruments / demos (part 2)	Commercial Faculty, Course Staff
12:00 PM- 1:00 PM	Swope	Lunch	
1:00 PM- 2:00 PM	Speck	Lecture: How do you teach microscopy?	Feather Ives
2:45 PM- 3:45 PM	Speck	Lecture: Ethics and good practices in microscopy	Alison North

Time	Location	Event	Lecturer
3:45 PM- 4:45 PM	Speck	Career Panel	Alison North, Joerg Bewersdorf
4:45 PM- 5:00 PM		Break	
5:00 PM- 6:00 PM	Speck	Horizons Lecture	Dan Fletcher
6:00 PM-6:30 PM		Break	
6:30 PM- 9:00 PM	Swope Terrace	Banquet	
DAY 11 - Friday, August 22, 2025			
Morning	Check-out after Breakfast		