



# Molecular and Cell Biology of Symbiosis

**Summer Course:  
July 17th to Aug 15th, 2026  
Woods Hole, Massachusetts**

**Draft Schedule, Subject to Shift**

## Welcome!

**Co-Directors:** Phil Cleves & Amelia Lindsey

### Friday, July 17th:

- Students arrive
- 11:30 pm - 1 pm Lunch
- 6-8 pm: Welcome Dinner (Location TBA)
- 8-9 pm Optional: [Friday Evening Lecture](#) (Cornelia Clapp Auditorium)

### Saturday, July 18th: Welcome and Training

- 7:30 am - 9:30 am Breakfast
- 9:30am - 11:30am **Welcome Orientation and Discussion** (Speck Auditorium)
- 11:30 am - 1 pm Lunch
- 1-3 pm Training and Onboarding
- 3-5 pm Explore Woods Hole
- 5-7 pm Dinner
- 7-9 pm Posters

## Module 1

**Instructor:** Travis Wiles (University of California Irvine)

**Instructor:** Siva Sankari (Stowers Institute for Medical Research)

**Instructor:** Phil Cleves (University of California Berkeley)

### Sunday, July 19th: M1, Day 1

- 7:30 am - 9:30 am Breakfast
- 9:30 am - 11:30 am Lecture & discussion time (Speck Auditorium)
  - 9:30 am - 9:40 am Welcome & Introductions
  - 9:40 am - 11:10 am Project presentations
  - 11:10 am - 11:30 am Team selection
- 11:30 pm - 1 pm Lunch
- 1 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner
- 7 pm - 10 pm Evening experiments (Loeb 108)

### Monday, July 20th: M1, Day 2

- 7:30 am - 9:00 am Breakfast
- 9:30 am - 11:30 am **Keynote: Patrick Keeling** (Speck Auditorium)
- 11:30 pm - 1 pm Lunch
- 1 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner
- 7 pm - 10 pm Evening experiments (Loeb 108)

### Tuesday, July 21st: M1, Day 3

- 7:30 am - 9:30 am Breakfast

- 9:30 am - 11:30 am **Lecture** (Speck Auditorium)
- 11:30 pm - 1 pm Lunch
- 1 - 1:45 pm Safety Training
- 1:45 - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner
- 7 pm - 10 pm Evening experiments (Loeb 108)

Wednesday, July 22nd: M1, Day 4

- 7:30 am - 9:30 am Breakfast
- 9:30 am - 11:30 am **Lecture** (Speck Auditorium)
- 11:30 pm - 1 pm Lunch
- 1 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner
- 7 pm - 10 pm Evening experiments (Loeb 108)

Thursday, July 23rd: M1, Day 5

- 7:30 am - 9:30 am Breakfast
- 9:30 am - 11:30 am **Lecture** (Speck Auditorium)
- 11:30 am - 1 pm Lunch
- 1 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner
- 7 pm - 10 pm Evening wrap-up experiments (Loeb 108)

Friday, July 24th: M1, Day 6

- 7:30 am - 9:00 am Breakfast
- 9 am - 12 pm Work on presentations
- 12 pm - 1 pm Lunch
- 1 pm - 3 pm End of module presentations (Bay Reading Room)
- 3 pm - 5 pm Tidy up the lab
- 5 pm - 7 pm Dinner
- 8-9 pm Optional: [Friday Evening Lecture](#) (Cornelia Clapp Auditorium)

Saturday, July 25th: Day Off

- 7:30 am - 9:30 am Breakfast
- 11:30 am - 1 pm Lunch
- 5 pm - 7 pm Dinner

**Module 2**

**Instructor:** Kerri Coon (University of Wisconsin Madison)

**Instructor:** Patrick Steinmetz (Michael Sars Centre, University of Bergen)

**Instructor:** Tom Richards (University of Oxford)

Sunday, July 26th: M2, Day 1

- 7:30 am - 9:30 am Breakfast

- 9:30 am - 11:30 am Lecture & discussion time (Speck Auditorium)
  - 9:30 am - 9:40 am Welcome & Introductions
  - 9:40 am - 11:10 am Project presentations
  - 11:10 am - 11:30 am Team selection
- 11:30 am - 1 pm Lunch
- 1 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner (\*pizza/posters)
- 7 pm - 10 pm Evening experiments (Loeb 108)

Monday, July 27th: M2, Day 2

- 7:30 am - 9:30 am Breakfast
- 9:30 am - 11:30 am **Keynote: Samantha Lewis** (Speck Auditorium)
- 11:30 am - 1 pm Lunch
- 1 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner
- 7 pm - 10 pm Evening experiments (Loeb 108)

Tuesday, July 28th: M2, Day 3

- 7:30 am - 9:30 am Breakfast
- 9:30 am - 11:30 am **Lecture** (Speck Auditorium)
- 11:30 am - 1 pm Lunch
- 1 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner
- 7 pm - 10 pm Evening experiments (Loeb 108)

Wednesday, July 29th: M2, Day 4

- 7:30 am - 9:30 am Breakfast
- 9:30 am - 11:30 am **Lecture** (Speck Auditorium)
- 11:30 am - 1 pm Lunch
- 1 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner
- 7 pm - 10 pm Evening experiments (Loeb 108)

Thursday, July 30th: M2, Day 5

- 7:30 am - 9:30 am Breakfast
- 9:30 am - 11:30 am **Lecture** (Speck Auditorium)
- 11:30 am - 1 pm Lunch
- 1 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner
- 7 pm - 10 pm Evening wrap-up experiments (Loeb 108)

Friday, July 31st: M2, Day 6

- 7:30 am - 9:00 am Breakfast
- 9 am - 12 pm Work on presentations

- 12 pm - 1 pm Lunch
- 1 pm - 3 pm End of module presentations (Bay Reading Room)
- 3 pm - 5 pm Tidy up the lab
- 5 pm - 7 pm Dinner
- 8-9 pm Optional: [Friday Evening Lecture](#) (Cornelia Clapp Auditorium)

Saturday, August 1st: Day Off

- 7:30 am - 9:30 am Breakfast
- 11:30 am - 1 pm Lunch
- 5 pm - 7 pm Dinner

**Module 3**

**Instructor:** Nicholas Shikuma (San Diego State University)

**Instructor:** Spencer Nyholm (University of Connecticut)

**Instructor:** Amelia Lindsey (University of Minnesota)

Sunday, August 2nd: M3, Day 1

- 7:30 am - 9:30 am Breakfast
- 9:30 am - 11:30 am Lecture & discussion time (Speck Auditorium)
  - 9:30 am - 9:40 am Welcome & Introductions
  - 9:40 am - 11:10 am Project presentations
  - 11:10 am - 11:30 am Team selection
- 11:30 am - 1 pm Lunch
- 1 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner (\*pizza/posters)
- 7 pm - 10 pm Evening experiments (Loeb 108)

Monday, August 3rd: M3, Day 2

- 7:30 am - 9:30 am Breakfast
- 9:30 am - 11:30 am **Lecture** (Speck Auditorium)
- 11:30 am - 1 pm Lunch
- 1 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner
- 7 pm - 10 pm Evening experiments (Loeb 108)

Tuesday, August 4th: M3, Day 3

- 7:30 am - 9:30 am Breakfast
- 9:30 am - 11:30 am **Keynote: Nancy Knowlton** (Speck Auditorium)
- 11:30 am - 1 pm Lunch
- 1 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner
- 7 pm - 10 pm Evening experiments (Loeb 108)

Wednesday, August 5th: M3, Day 4

- 7:30 am - 9:30 am Breakfast

- 9:30 am - 11:30 am **Keynote: Nancy Moran** (Speck Auditorium)
- 11:30 am - 1 pm Lunch
- 1:15 pm - 2:45 pm
- 3 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner
- 7 pm - 10 pm Evening experiments (Loeb 108)

Thursday, August 6th: M3, Day 5

- 7:30 am - 9:30 am Breakfast
- 9:30 am - 11:30 am **Lecture** (Speck Auditorium)
- 11:30 am - 1 pm Lunch
- 1 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner
- 7 pm - 10 pm Evening wrap-up experiments (Loeb 108)

Friday, August 7th: M3, Day 6

- 7:30 am - 9:00 am Breakfast
- 9 am - 12 pm Work on presentations
- 12 pm - 1 pm Lunch
- 1 pm - 3 pm End of module presentations (Bay Reading Room)
- 3 pm - 5 pm Tidy up the lab
- 5 pm - 7 pm Dinner
- 8-9 pm Optional: [Friday Evening Lecture](#) (Cornelia Clapp Auditorium)

Saturday, August 8th: Day Off

- 7:30 am - 9:30 am Breakfast
- 11:30 am - 1 pm Lunch
- 5 pm - 7 pm Dinner

**Module 4**

**Instructor:** Tera Levin (University of Pittsburgh)

**Instructor:** Scott Nichols (University of Denver)

**Instructor:** Arielle Woznica (University of Texas at Austin)

Sunday, August 9th: M4, Day 1

- 7:30 am - 9:30 am Breakfast
- 9:30 am - 11:30 am Lecture & discussion time (Speck Auditorium)
  - 9:30 am - 9:40 am Welcome & Introductions
  - 9:40 am - 11:10 am Project presentations
  - 11:10 am - 11:30 am Team selection
- 11:30 am - 1 pm Lunch
- 1 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner (\*pizza/posters)
- 7 pm - 10 pm Evening experiments (Loeb 108)

Monday, August 10th: M4, Day 2

- 7:30 am - 9:30 am Breakfast
- 9:30 am - 11:30 am **Lecture** (Speck Auditorium)
- 11:30 am - 1 pm Lunch
- 1 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner
- 7 pm - 10 pm Evening experiments (Loeb 108)

Tuesday, August 11th: M4, Day 3

- 7:30 am - 9:30 am Breakfast
- 9:30 am - 11:30 am - **Lecture** (Speck Auditorium)
- 11:30 am - 1 pm Lunch
- 1 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner
- 7 pm - 10 pm Evening experiments (Loeb 108)

Wednesday, August 12th: M4, Day 4

- 7:30 am - 9:30 am Breakfast
- 9:30 am - 11:30 am **Keynote: Irene Newton** (Loeb 263)
- 11:30 am - 1 pm Lunch
- 1:15 pm - 2:45 pm
- 3 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner
- 7 pm - 10 pm Evening experiments (Loeb 108)

Thursday, August 13th: M4, Day 5

- 7:30 am - 9:30 am Breakfast
- 9:30 am - 11:30 am **Lecture** (Loeb 263)
- 11:30 am - 1 pm Lunch
- 1 pm - 5 pm Afternoon experiments (Loeb 108)
- 5 pm - 7 pm Dinner
- 7 pm - 10 pm Evening wrap-up experiments (Loeb 108)

Friday, August 14th: M4, Day 6

- 7:30 am - 9:00 am Breakfast
- 9 am - 12 pm Work on presentations
- 12 pm - 1 pm Lunch
- 1 pm - 3 pm End of module presentations (Bay Reading Room)
- 3 pm - 6 pm Pack up the lab
- 6 pm - 8 pm Catered Dinner (Swope Upper Terrace)
- 8-9 pm Optional: [Friday Evening Lecture](#) (Cornelia Clapp Auditorium)

Saturday, Aug 15th: Students Leave