

**Molecular Biology Course I**

**Fall 2025**

***MOL504A: Cellular Biochemistry & Biophysics***

*11AM to 12:20 PM in LTL118*

## Syllabus

SP: Sabine Petry, ZG: Zemer Gitai

Class	Date	Prof	Topic 2025
			<b><i>Module I: Cellular Biochemistry &amp; Biophysics</i></b>
1	9/2	SP	Macromolecules and their analysis: The biochemistry tool kit
2	9/4	SP	Self-assembly: Cytoskeleton
3	9/9	SP	Motion and Molecular motors
4	9/11	SP	Molecular Interactions
5	9/16	SP	Structural Biology
6	9/18	SP	Biomolecular phase transitions
7	9/23	ZG	Protein Localization Initiation: Symmetry-breaking
8	9/25	ZG	Protein Localization Maintenance
9	9/30	ZG	Intracellular Trafficking
10	10/2	ZG	Signal transduction: input-output relationships
11	10/7	ZG	Pathogenesis: subverting cell biology
12	10/9	SP & ZG	Final Exam: Proposal & Study Section
	10/13-10/17		<i>Fall recess</i>

## **Reading/Writing Assignments**

Approximately 2-5 scientific articles will be read and discussed each week. These readings will be assigned prior to class discussion.

## **Requirements/Grading**

- Final Exam: Research Proposal 30% and Panel Discussion 25%
- Quizzes - 20%
- Class/precept participation - 25%

## **Final Exam**

The Final Exam consists of writing a proposal as a Minigrant and their discussion in a Study Section. This is not only an opportunity to master the concepts acquired during this module, but also superb training for writing fellowship applications and your thesis proposal.

## **Other Requirements**

- MOL Graduate Students Only, unless approved otherwise.

## **Prerequisites and Restrictions**

N/A.

## **Other Information**

MOL seniors may enroll in this course with permission of the instructor.