



## Locations and Times (subject to change)

- Class sessions:
  - Time: MW 8:40AM - 9:55AM
  - Location: 209 Havemeyer Hall
- Office hours (starting Sept. 8):
  - Monday 5:15 - 7:15 PM, 343 Mudd
  - Tuesday 5:00 - 7:00 PM, 343 Mudd
  - Thursday 8:00 - 10:00 AM, Zoom: <https://columbiauniversity.zoom.us/j/9572893113>   
(<https://columbiauniversity.zoom.us/j/9572893113>)  
Zoom ID: 9572893113 (Let me know beforehand if possible)
  - Friday 10-11AM, ET363D, Lance Kam
    - Location: ET363D
    - Zoom: <https://columbiacuimc.zoom.us/j/95020308580>   
(<https://columbiacuimc.zoom.us/j/95020308580>)  
ID: 95020308580

## Contacts

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- TAs:
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  - Justin Yun ([jy3200@cumc.columbia.edu](mailto:jy3200@cumc.columbia.edu) (<mailto:jy3200@cumc.columbia.edu>))

## Course Content and Structure

Please see [Syllabus \(https://courseworks2.columbia.edu/courses/227382/assignments/syllabus\)](https://courseworks2.columbia.edu/courses/227382/assignments/syllabus) page

## Schedule (Tentative)

Dates	Topics/Event	Reading
Sept. 3 (week 0)	Course overview	
Sept. 8 (week 1)	01 – Chemical Kinetics	K&S Chap. 1 ( <a href="#">Coursepack</a> )
Sept. 10	02 – Enzymes part 1	K&S Chap. 1 ( <a href="#">Coursepack</a> ), B&B Chap. 58
Sept. 15 (week 2)	02 – Enzymes part 2	
Sept. 17	03 – O <sub>2</sub> transport part 1 – HW1 assigned	K&S Chap. 1 ( <a href="#">Coursepack</a> ), B&B Chap. 28/29
Sept. 22 (week 3)	03 – O <sub>2</sub> transport part 2	
Sept. 24	04 – Diffusion 1 – HW1 due	Nelson Chap. 4 ( <a href="#">Coursepack</a> )
Sept. 29 (week 4)	04 – Diffusion 2	
Oct. 1	04 – Diffusion 3 – HW2 assigned	
Oct. 6 (week 5)	04 – Diffusion 4	
Oct. 8	05 – Entropy – HW2 due	
Oct. 13 (week 6)	06 – Computational Modeling – HW3 assigned	K&S Chap. 1 ( <a href="#">Coursepack</a> ), MATLAB
Oct. 15	07 – Membranes and carriers	K&S Chap. 2 ( <a href="#">Coursepack</a> ), B&B Chap. 5
Oct. 20 (week 7)	Midterm Exam 1	
Oct. 22	08 – Bioelectricity and Nernst potential	Nelson Chap. 7 ( <a href="#">Coursepack</a> ), K&S Chap. 2 ( <a href="#">Coursepack</a> ), B&B Chap. 6
Oct. 27 (week 8)	09 – Resting potential	K&S Chap. 2 ( <a href="#">Coursepack</a> )
Oct. 29	10 – Excitable membranes – HW3 due, HW4 assigned	B&B Chap. 7
Nov. 3/4	Academic Holiday / Election Day	
Nov. 5 (week 9)	Cell culture	
Nov. 10 (week 10)	11 – Cell cytoskeleton	Boal, B&B Chap. 2
Nov. 12	12 – Motors and muscle 1 – HW4 due, HW5 assigned	B&B Chap. 9
Nov. 17 (week 11)	12 – Motors and muscle 2	
Nov. 19	Mechanobiology – HW5 due	
Nov. 24 (week 12)	Microscopy	
Nov. 26 – 28	Holiday / Thanksgiving break	
Dec. 1 (week 13)	Experiment analysis with computers	
Dec. 3	Midterm Exam 2	
Dec. 8 (week 14)	Microscale physiology	Last day of classes
Dec. 9 – 11	Study Days	
Dec. 12 – 19	Final Exam Week	