

Course Syllabus

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BioE 104: Biological Mass Transport Phenomena

Department of Bioengineering, UC Berkeley

"Essentially, all models are wrong, but some are useful." - *George Box*



Instructor: [Terry Johnson](#)

GSI: [Juan Hurtado](#), [Jenna Wen](#)

Texts:

- [Course slides, notes, and lab protocols](#) (required)
- Truskey, Yuan and Katz, *Transport Phenomena in Biological Systems*, 2nd edition (a good reference, but not required)
- [Paul's Online Math Notes - Differential Equations](#) (free online reference)

Office hours:

- Terry: 3-4:30PM Mondays in via Zoom (check bCourses announcements for the invites)
- Juan: 2-4PM Tuesdays via Zoom
- Jenna: 1-2PM Mondays and 12-1PM Wednesdays via Zoom

GSI-supported labs (students may attend any lab section, but only the sections below will have a GSI available for questions):

- Juan: 4-7PM Th
- Jinghua: W 1-4PM

Important dates:

- Midterm exam: CANCELLED

COVID-19 adjustments to the class

- **Your health and safety are paramount.** If your participation in the course would risk either in some way unforeseen by the instructor, act according to your best judgment and communicate your situation to the instructor by email.
- We will not have any in-person meetings March 11 - April 1
- Lectures will be delivered by Zoom
- Office hours will be delivered by Zoom
- GSI supported labs are TBD












All details will be communicated via bCourses announcements

All details will be communicated via pCourse announcements.

Course Description

The transport of mass, momentum, and energy are critical to the function of living systems and the design of medical devices. Biological transport phenomena are present at a wide range of length scales: molecular, cellular,

Course Summary:

Date	Details
Fri Jan 31, 2020	 Homework 1 (https://bcourses.berkeley.edu/courses/1489375/assignments/8055620) due by 5pm
Fri Feb 7, 2020	 Homework 2 (https://bcourses.berkeley.edu/courses/1489375/assignments/8055687) due by 5pm
Fri Feb 14, 2020	 Homework 3 (https://bcourses.berkeley.edu/courses/1489375/assignments/8057517) due by 5pm
Fri Feb 21, 2020	 Homework 4 (https://bcourses.berkeley.edu/courses/1489375/assignments/8057540) due by 5pm
Fri Feb 28, 2020	 Homework 5 (https://bcourses.berkeley.edu/courses/1489375/assignments/8068207) due by 5pm
Fri Mar 6, 2020	 Homework 6 (https://bcourses.berkeley.edu/courses/1489375/assignments/8068226) due by 5pm
Tue Mar 17, 2020	 Homework 7 (https://bcourses.berkeley.edu/courses/1489375/assignments/8074625) due by 5pm
Fri Apr 3, 2020	 Homework 8 (https://bcourses.berkeley.edu/courses/1489375/assignments/8075420) due by 5pm
Fri Apr 10, 2020	 Homework 9 (https://bcourses.berkeley.edu/courses/1489375/assignments/8085131) due by 5pm
Fri May 8, 2020	 Final project paper (https://bcourses.berkeley.edu/courses/1489375/assignments/8052974) due by 5pm
	 Final (https://bcourses.berkeley.edu/courses/1489375/assignments/8052972)