

**CHEN 5838 – System Analysis of Cells & Tissues**  
Course Syllabus – Spring 2021

**Instructors:** Kristi S. Anseth  
Email: kristi.anseth@colorado.edu

Stephanie J. Bryant  
Email: stephanie.bryant@colorado.edu

**Meeting Time:** Tuesday and Thursday 8:30-9:45 am

**Office Hours:** TBD or by appointment

**Meeting**

**Location:** Synchronous Hybrid In-Person & Remote. In-person exams required.  
In-Person: JSCBB A115  
Remote: Zoom  
<https://cuboulder.zoom.us/j/92134132331>  
Meeting ID: 921 3413 2331  
Passcode: 233343  
Zoom ID will be used for all remote meetings (class, office hours, etc.).  
Full Zoom information can be found on Canvas.

**Zoom Protocol:** Everyone is expected to keep their video on during the class and to remain muted unless asking a question or presenting. We will utilize the raise hand feature and the chat function for questions. Questions will be taken in the order received. Please utilize this feature throughout the lectures and at the end of the journal presentation and during the discussion period. During lectures, we may utilize the breakout rooms function for in-class small group assignments. The instructor will randomly assign a small number students per breakout group to work together on in-class assignments.

**Lecture**

**Recording:** The lectures will be recorded and uploaded onto Canvas and accessible only to those enrolled in the class.

**Course Website:** We will use Canvas.  
Log-on with your identikey username and password  
(will contain announcements, course material, etc.)

**Gradescope:** Assignments will be turned in and graded using Gradescope. All students rostered in the class by the first day of class will be added to Gradescope for this course.

**Email List:** Email will be used for general correspondence and all announcements. An email list will be generated from the class roster. Be sure to check your CU email account!

**Textbook:** There is no textbook for the class. Supplemental reading material will accompany the lectures and will be posted on Canvas.

**Course**

**Objective:** This course will provide a quantitative view of biological system analysis from cells to tissues to organs. The course will cover the mechanisms of how cells interact and communicate with other cells, interact with their surrounding extracellular matrix, and migrate through tissue to influence regeneration, repair, and disease progression. This course will cover the basics of stem cells and immune cells and their use in biological engineering. Finally, the course will apply quantitative principles to contemporary biological research problems in the literature from the cell to tissue to organ level.

**Grading:**

Homework Assignments	15%
Exam #1	15%
Exam #2	15%
Final Exam	25%
Final Project	30%

**Examinations:** Exams during the semester will be held in person during our regularly scheduled class time.

Exam	Date	Time	Location	Topics Covered
Exam #1	February 16, 2021	8:30-9:45 am	JSCBB A115	Lectures 1/14-2/11; Homework #1-#2
Exam #2	March 23, 2021	8:30-9:45 am	JSCBB A115	Lectures: 2/18-3/16; Homework #3-#6
Final Exam	May 1, 2021	7:30-10:00 pm	JSCBB A115	Comprehensive

**Homework Assignments:** Homework assignments will be posted on Canvas. Homework will be assigned approximately biweekly or weekly and generally due on Friday at 11:59pm, unless otherwise stated. Homework assignments will be turned in using [Gradescope](#).

**Final Project:** The final project is a group assignment that involves a presentation on a journal article with quantitative analysis of data, development of a homework assignment, solutions, and grading (includes holding office hours), and assessments (e.g., your experience summary, your team's assessment of your performance, peer feedback on your homework assignment, your assessment of peers' presentations). See Canvas for additional information.

Presentation	40%
Homework Development	40%
Assessments	20%
<i>Total</i>	<i>100%</i>

**Excuses:** We expect everyone to attend and participate during regularly scheduled class time. If you are sick and unable to attend class, you must inform the instructors as soon as possible, preferably within 24 hours. If you have received a confirmation that you are excused, our course policy is as follows. If you miss a homework assignment, the assignment will be dropped. If an exam is missed, the final exam grade will be prorated to determine the grade for the missed exam. In other words, the average and standard deviation for the missed exam and the final exam will be used to calculate your estimated performance on the missed exam. This policy is only valid for excused absences. Unexcused absences will receive a zero on any assignment missed. Please see procedures and policies in this syllabus for additional information.

## **Policies and Procedures:**

### *CLASSROOM BEHAVIOR*

*Both students and faculty are responsible for maintaining an appropriate learning environment in all instructional settings, whether in person, remote or online. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. For more information, see the policies on [classroom behavior](#) and the [Student Code of Conduct](#).*

### *REQUIREMENTS FOR COVID-19*

*As a matter of public health and safety due to the pandemic, all members of the CU Boulder community and all visitors to campus must follow university, department and building requirements, and public health orders in place to reduce the risk of spreading infectious disease. Required safety measures at CU Boulder relevant to the classroom setting include:*

- *maintain 6-foot distancing when possible,*
- *wear a face covering in public indoor spaces and outdoors while on campus consistent with state and county health orders,*
- *clean local work area,*
- *practice hand hygiene,*
- *follow public health orders, and*
- *if sick and you live off campus, do not come onto campus (unless instructed by a CU Healthcare professional), or if you live on-campus, please alert [CU Boulder Medical Services](#).*

*Students who fail to adhere to these requirements will be asked to leave class, and students who do not leave class when asked or who refuse to comply with these requirements will be referred to [Student Conduct and Conflict Resolution](#). For more information, see the policies on [COVID-19 Health and Safety](#) and [classroom behavior](#) and the [Student Code of Conduct](#). If you require accommodation because a disability prevents you from fulfilling these safety measures, please see the “Accommodation for Disabilities” statement on this syllabus. All students who are new to campus must complete the [COVID-19 Student Health and Expectations Course](#). Before coming to campus each day, all students are required to complete the [Buff Pass](#).*

*Students who have tested positive for COVID-19, have symptoms of COVID-19, or have had close contact with someone who has tested positive for or had symptoms of COVID-19 must stay home. In this class, if you are sick or quarantined, it is your responsibility to let the instructors know as soon as possible preferably within 24 hours.*

### *ACCOMMODATION FOR DISABILITIES*

*If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the [Disability Services website](#). Contact Disability Services at 303-492-8671 or [dsinfo@colorado.edu](mailto:dsinfo@colorado.edu) for further assistance. If you have a temporary medical condition, see [Temporary Medical Conditions](#) on the Disability Services website.*

### *PREFERRED STUDENT NAMES AND PRONOUNS*

*CU Boulder recognizes that students' legal information doesn't always align with how they identify. Students may update their preferred names and pronouns via the student portal; those preferred names and pronouns are listed on instructors' class rosters. In the absence of such updates, the name that appears on the class roster is the student's legal name.*

### *HONOR CODE*

*All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat,*

unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code ([honor@colorado.edu](mailto:honor@colorado.edu)); 303-492-5550). Students found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code as well as academic sanctions from the faculty member. Additional information regarding the Honor Code academic integrity policy can be found at the [Honor Code Office website](#).

#### SEXUAL MISCONDUCT, DISCRIMINATION, HARASSMENT AND/OR RELATED RETALIATION

The University of Colorado Boulder (CU Boulder) is committed to fostering an inclusive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct (harassment, exploitation, and assault), intimate partner violence (dating or domestic violence), stalking, or protected-class discrimination or harassment by members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or [cureport@colorado.edu](mailto:cureport@colorado.edu). Information about the OIEC, university policies, [anonymous reporting](#), and the campus resources can be found on the [OIEC website](#).

Please know that faculty and instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, dating and domestic violence, stalking, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about options for reporting and support resources.

#### RELIGIOUS HOLIDAYS

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. **In this class, the student must notify the instructors within the first week of the semester of any conflicts with regard to exams or assigned presentation times.** See the [campus policy regarding religious observances](#) for full details.

See the [campus policy regarding religious observances](#) for full details.