Math 5000
Mathematical Pedagogy
Department of Mathematics

Syllabus -- Fall 2026

Excluding materials for purchase, syllabus information may be subject to change. The most up-to-date syllabus is located within the course in HuskyCT.

Course and Instructor Information

Course Title: Mathematical Pedagogy
Credits: 1
Format: In-person
Prerequisites: N/A
Course Meetings: Fridays, 11:15-12:05, MONT 113
Co-Instructor: Katie Hall **Email:** katie.hall@uconn.edu
Pronouns: (she/her/hers.)

Office Hours/Availability: You are welcome to set up appointments with me if you'd like to meet.

Course Materials

No course materials are required.

Course Description

From the Course Catalog: The theory and practice of teaching mathematics at the college level. Basic skills, grading methods, cooperative learning, active learning, use of technology, classroom problems, history of learning theory, reflective practice. Open to graduate students in Mathematics, others with consent of instructor. May not be used to satisfy degree requirements in mathematics.

Additional description: Through just-in-time resource support and case studies, we will work to form a good understanding of best practices in teaching mathematics. We will work to ensure that graduate students teaching for the first time have the tools necessary to be successful in the classroom. We will also help graduate students better understand how teaching fits into their larger role as graduate students in mathematics while introducing the ideas of research backed pedagogical techniques.

Course Objectives

By the end of the semester, you should:

1. **Nuts and Bolts:** Have a good understanding of the general policies related to teaching and be familiar with using technology to support student learning.
2. **Troubleshooting:** Know how to handle various situations that might arise in teaching and know who to contact when you don't know how to handle a situation that arises.
3. **Constructive Feedback:** Give and receive constructive feedback on teaching by being observed and observing more experienced instructors to identify actionable changes to improve teaching practice.
4. **Diving Deeper:** Have exposure to various pedagogical approaches and evaluate what works best for different classrooms and learning environments.

Tentative Course Calendar

Week 1	**HuskyCT/StudentAdmin**	**Case Study**
Week 2	**Intro to Group Work**	

Week 3	Grading	Case Study
Week 4	Gradescope	Case Study
Week 5	Intro to Observations	Case Study
Week 6	No Class: Do Observations	
Week 7	Observation Follow-up/Mid-Semester Feedback	Case Study
Week 8	Introduce Presentations, Policies on Mandatory Reporting, etc.	Case Study
Week 9	Facilitating Group Work	Case Study
Week 10	Student Thinking	
Week 11	Creating Activities, Bloom's Taxonomy	
Week 12	Pedagogy Presentations	
Week 13	Pedagogy Presentations	
	THANKSGIVING BREAK	
Week 14	Pedagogy Presentations	

Course Requirements and Grading

Summary of Course Grading:

Course Components	Weight
Actively Participate in Weekly Meetings	50%
Co-Lead a Case Study	15%
Present a Pedagogy Paper	15%
Observations	10%
Mid-Semester Feedback Assignment	10%

Actively Participate in Weekly Meetings

We meet each Friday (except Week 6(observations)). During our class meetings, you are expected to attend, ask questions and actively participate in group discussions. You can miss one class meeting, no questions asked. If you have an extenuating circumstance making it impossible for you to attend class, you will be excused. Otherwise, your final grade will be reduced by 5% for each unexcused absence, after the first.

Co-Lead a Case Study Discussion

Each week for the first several weeks of the semester, we will discuss different "Case Studies" in class. You are asked to sign up to lead/co-lead these discussions. As a discussion leader, you will present a case study, give other TAs time to discuss among themselves, then lead a discussion with the entire group. You should ensure everyone gets a chance to share their thoughts, and each person's opinion is respected.

Present a Pedagogy Paper

Starting week 12, we will have presentations in class of various pedagogical topics from peer reviewed research papers. Each TA should pair up (one group of 3?) and pick one paper and give a 15-minute presentation of the pedagogical methods outlined in the paper and research results. Many options are available online, or you may

choose your own topic with approval.

Each TA will be asked to evaluate their peers during the presentations. These evaluations will be shared with the presenters.

Observations

The observation component of this course has two parts. What these parts are is dependent on which class you are assigned.

Those teaching or TAing in-person: e.g. 1131Q, 1132Q, 1071Q

1. I will observe you will be asked to meet with me after the observation.
2. You should pick someone in the department (peer, more experienced TA, instructor) and observe their class.

You will be asked to fill out and submit an observation assignment based on these observations.

1030Q/1070Q/RAs (Those leading office hours, grading or serving as an RA)

1. Observe a TA leading a discussion section (1131Q, 1132Q, 2110Q)
2. Observe a graduate student teaching their own class. (1060Q, 1071Q, 2210Q, 2410Q)

You will be asked to fill out and submit an observation assignment based on these observations.

Grading Scale:

Grade	Letter Grade	GPA
93-100	A	4.0
90-92	A-	3.7
87-89	B+	3.3
83-86	B	3.0
80-82	B-	2.7
77-79	C+	2.3
73-76	C	2.0
70-72	C-	1.7
67-69	D+	1.3
63-66	D	1.0
60-62	D-	0.7
<60	F	0.0

Due Dates and Late Policy

All course due dates are identified in HuskyCT. Deadlines are based on Eastern Time unless otherwise specified. *The instructor reserves the right to change dates accordingly as the semester progresses. All changes will be communicated in an appropriate manner.*

You are responsible for signing up for a time to do your Case Study, Observation and Presentation. You are expected to attend on the day you signed up for or find someone to switch dates with you.

Feedback and Grades

I will make every effort to provide feedback and grades in HuskyCT. To keep track of your performance in the course, refer to My Grades in HuskyCT.

Weekly Time Commitment

You should expect to dedicate 3-4 hours a week to this course. This expectation is based on the various course activities, assignments, and assessments and the University of Connecticut's policy regarding credit hours. (More information related to hours per week per credit can be accessed at the Online Student website).

Course Outline

Throughout the semester, we will cover topics like:

- HuskyCT Basics
- StudentAdmin tips
- Grading
- Best Practices for Observations
- Getting Mid-Semester Feedback
- WebEx
- Slido, Kahoot, Mentimeter, Gradescope, Campuswire and other web based teaching tools
- Diversity, Equity and Inclusion
- Accessibility
- FERPA
- Academic Integrity
- Creating Syllabi
- Office Hours
- Exam Writing

How to Succeed in this Course

All students can succeed in this course, and we are here to help you along the way. Please do not hesitate to ask questions. All questions are important here. Success in this course program depends heavily on your personal health and well-being. Recognize that stress is an expected part of the college experience, and it often can be compounded by unexpected setbacks or life changes outside the classroom. We strongly encourage you to reframe challenges as an unavoidable pathway to success. Reflect on your role in taking care of yourself throughout the semester, before the demands of exams and projects reach their peak. Please feel free to reach out to us about any difficulty you may be having that may impact your performance in your courses or campus life as soon as it occurs and before it becomes too overwhelming. In addition to your academic advisor, we strongly encourage you to contact the many other support services on campus that stand ready to assist you.

Here are some links to additional resources: Dean of Students Office, Academic Achievement Center, Writing Center, Quantitative Learning Center, Center for Students with Disabilities, Title IX Office, Student Health and Wellness -- Mental Health

Resources for Students Experiencing Distress

The University of Connecticut is committed to supporting students in their mental health, their psychological and social well-being, and their connection to their academic experience and overall wellness. The university believes that academic, personal, and professional development can flourish only when each member of our community is assured equitable access to mental health services. The university aims to make access to mental health attainable while fostering a community reflecting equity and diversity and understands that good mental health may lead to personal and professional growth, greater self-awareness, increased social engagement, enhanced academic success, and campus and community involvement.

Students who feel they may benefit from speaking with a mental health professional can find support and resources through the **Student Health and Wellness-Mental Health** (SHaW-MH) office. Through SHaW-MH, students can make an appointment with a mental health professional and engage in confidential conversations or seek recommendations or referrals for any mental health or psychological concern.

Mental health services are included as part of the university's student health insurance plan and also partially funded through university fees. If you do not have UConn's student health insurance plan, most major insurance plans are also accepted. Students can visit the **Student Health and Wellness-Mental Health located in Storrs on the main campus in the Arjona Building, 4th Floor,** or contact the office at **(860) 486-4705, or** **https://studenthealth.uconn.edu/** for services or questions**.**

Accommodations for Illness or Extended Absences

Please stay home if you are feeling ill and please go home if you are in class and start to feel ill. If illness prevents you from attending class, it is your responsibility to notify me as soon as possible. You do not need to disclose the nature

of your illness, however, you will need to work with me to determine how you will complete coursework during your absence.

If life circumstances are affecting your ability to focus on courses and your UConn experience, students can email the Dean of Students at dos@uconn.edu to request support. Regional campus students should email the Student Services staff at their home campus to request support and faculty notification.

COVID-19 Specific Information: People with COVID-19 have had a wide range of symptoms reported – ranging from mild symptoms to severe illness. These symptoms may appear 2-14 days after exposure to the virus and can include:

- Fever,
- Cough,
- Shortness of breath or difficulty breathing
- Chills
- Repeated shaking with chills
- Muscle pain
- Headache
- Sore throat
- New loss of taste or smell

Additional information including what to do if you test positive or you are informed through contract tracing that you were in contact with someone who tested positive, and answers to other important questions can be found here: https://studenthealth.uconn.edu/updates-events/coronavirus/

Student Responsibilities and Resources

As a member of the University of Connecticut student community, you are held to certain standards and academic policies. In addition, there are numerous resources available to help you succeed in your academic work. Review these important standards, policies and resources, which include:

- The Student Code
    - Academic Integrity
    - Resources on Avoiding Cheating and Plagiarism
- Copyrighted Materials
- Credit Hours and Workload
- Netiquette and Communication
- Adding or Dropping a Course
- Academic Calendar
- Policy Against Discrimination, Harassment and Inappropriate Romantic Relationships
- Sexual Assault Reporting Policy

Students with Disabilities

The University of Connecticut is committed to protecting the rights of individuals with disabilities and assuring that the learning environment is accessible. Students who require accommodations should contact the Center for Students with Disabilities, Wilbur Cross Building Room 204, (860) 486-2020 or http://csd.uconn.edu/.

Blackboard measures and evaluates accessibility using two sets of standards: the WCAG 2.0 standards issued by the World Wide Web Consortium (W3C) and Section 508 of the Rehabilitation Act issued in the United States federal government." (Retrieved March 24, 2013 from Blackboard's website)

Privacy Statement: For information on managing your privacy at the University of Connecticut, visit the University's Privacy page. NOTE: This course has NOT been designed for use with mobile devices.

Help

Technical and Academic Help provides a guide to technical and academic assistance.

This course uses the learning management platform, HuskyCT. If you have difficulty accessing HuskyCT, you have access to the in person/live person support options available during regular business hours through the Help Center. You also have 24x7 Course Support including access to live chat, phone, and support documents.

Student Technology Training

Student technology training is now available in a new HuskyCT short course created by students for students. It will prepare you to use the IT systems and services that you will use throughout your time at UConn, whether learning online or on-campus. It is available at https://lms.uconn.edu/ultra/courses/_80016_1/cl/outline .

Minimum Technical Skills

To be successful in this course, you will need the following technical skills:

- Use electronic mail with attachments.
- Save files in commonly used word processing program formats.
- Copy and paste text, graphics or hyperlinks.
- Work within two or more browser windows simultaneously.
- Open and access PDF files.

Evaluation of Course Experience

Students will be given an opportunity to provide feedback on their course experience and instruction using the University's standard procedures, which are administered by the Office of Institutional Research and Effectiveness (OIRE).

The University of Connecticut is dedicated to supporting and enhancing teaching effectiveness and student learning using a variety of methods. The Student Evaluation of Teaching (SET) is just one tool used to help faculty enhance their teaching. The SET is used for both formative (self-improvement) and summative (evaluation) purposes.

Additional informal formative surveys and other feedback instruments may be administered within the course.