Syllabus – Winter 2024 INT

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: Problem Solving

Credits: 3

Format: Online Instruction Asynchronous

Prerequisites: Recommended preparation: MATH 1010 or the equivalent. Not eligible for course credit by examination. Not open for credit to students who have passed any mathematics course other than MATH 1010, 1011, 1030, 1060 or 1070.

Instructor: Bianca Munteanu (feel free to call me Mrs. Munteanu, or just Bianca)

Pronouns: she/her/hers

Email: bianca.munteanu@uconn.edu

Office Hours/Availability: I'll be holding office hours online via WebEx Monday through Friday from 4:00 pm to 5:30 pm (except December 25 and January 2). The link for the WebEx room will be provided in HuskyCT.

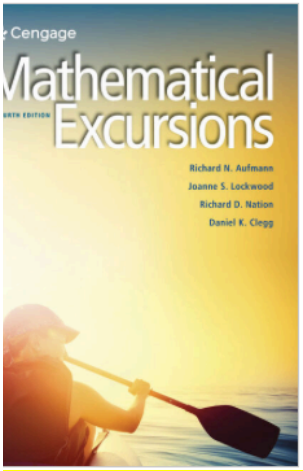
During office hours you can ask about the problems solved in the video recordings, I can offer hints to challenging homework assignments. If you want a private appointment, that's not a problem. Just ask.

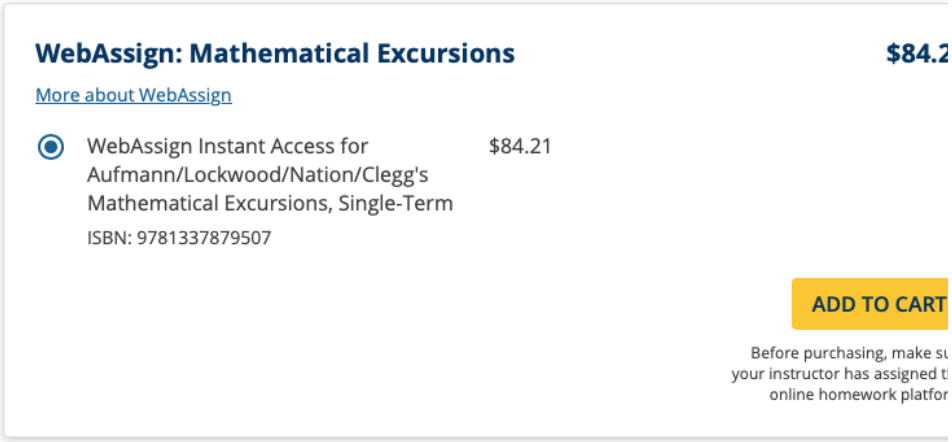
Course Materials

For this class you need to buy the bundle E-book - WebAssign code. You will need to create a Cengage account, if you don't have one already. The platform will be accessible through your class in HuskyCT, by clicking on the WebAssign tab in the left side menu. The first couple of days you have free access to the e-book and the homework platform, after that, if you decide to stay in Math1020Q and you opted in in Husky Book Bundle you don't need to do anything. If you opted out of the Husky Book Bundle, you will need to buy the access code in order to complete your homework and access the textbook. This code can be bought directly from your Cengage account.

Textbook(electronic format): Mathematical Excursions, 4th edition, by Aufmann, Lockwood, Nation and Clegg

Actual price might be different than the one in the picture below.





HuskyCT:
All course materials, as well as the link to our online course room, can be found at http://www.huskyct.uconn.edu

Software/Technical Requirements (with Accessibility and Privacy Information):
The software/technical requirements for this course include:

● HuskyCT/Blackboard (HuskyCT/ Blackboard Accessibility Statement , HuskyCT/Blackboard Privacy Policy)

- WebAssign(accessible through HuskyCT)
- Webcam and microphone
- Ability to scan handwritten work in as a single PDF (apps like CamScanner, AdobeScan, or GeniusScan are fine)
- Webex (for class and in case you'd like to meet by appointment privately I will send you an invitation with a link)
- Respondus Lockdown App download - see Course Content in HuskyCT.

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.

Assignments, course readings and media are available within HuskyCT, in the Course Content link.

Course Description

An introduction to the techniques used by mathematicians to solve problems. Skills such as Externalization (pictures and charts), Visualization (associated mental images), Simplification, Trial and Error, and Lateral Thinking learned through the study of mathematical problems. Problems will be drawn from combinatorics, probability, optimization, cryptology, graph theory, and fractals. Students will be encouraged to work cooperatively and to think independently.

Course Expectations

First, you are expected watch all the recordings and submit all WebAssign assignments. During a 3-week session, generally students should expect to spend around 25-30 hours a week working on this class. Problem solving, like most subjects, is learned by doing. Most of all, it is expected that you will get excited about what you are learning and take delight in your own, perhaps unexpected, ability to solve intriguing problems.

Course Objectives

This course will offer you strategies on how to solve challenging problems, in mathematics and any other endeavor. These strategies will be particularly useful when you can't decide where to begin in solving a problem.

OUTLINE

Day of	Content
Dec 26	1.1 Inductive and Deductive Reasoning 1.2 Problem Solving with Patterns
Dec 27	1.3 Problem-Solving Strategies 2.4 Applications of Sets
Dec 28	5.1 Graphs and Euler Circuits 5.4 Graph Coloring
Dec 29	6.3 Different Base Systems Project 1 (1.3) due
Jan 1	**Observed Holiday; No classes**
Jan 2	7.3 Perimeter and Area of Plane Figures 7.5 Volume and Surface Area
Jan 3	9.1 First-Degree Equations and Formulas 9.2 Rate, Ratio, and Proportion Project 2 (5.4) due
Jan 4	9.3 Percent 11.1 Simple Interest 11.2 Compound Interest
Jan 5	11.3 Credit Cards and Consumer Loans
Jan 8	12.1 Counting Principle 12.2 Permutations ad Combinations Project 3 (9.3)due
Jan 9	12.3 Probability and Odds
Jan 10	12.6 Expectation
Jan 11	Review Project 4 (11.3)due
Jan 12	**Final Exam, January 12, 2024 (using Responds LockDown Browser)**

Course Requirements and Grading

Summary of Course Grading:

Course Components	Weight
Homework	30%
Projects(4)	30% (7.5% each)
Labs	15%(7.5% each)
Final Exam	25%

For additional information on undergraduate grading policies see here: https://registrar.uconn.edu/grades/

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

Assignment Descriptions:

Homework:
Homework will be assigned on WebAssign and will be based on the material learned from video lectures. The assignment will be due by the end of the week(or last day of winter session). It is your responsibility to get help if you can't complete an assignment. You can use my office hours, work with other students, send me email.

Labs:
Towards the end of the session you will work on two labs. These are two multistep problems based on Chapters 9 and 12. The Labs will be administered via WebAssign.

Projects:
You will complete 4 projects, based on subjects discussed in lectures. More details in HuskyCT.

Final Exam:
Students are required to be available for their exam during the stated time. If you have a conflict with this time, you must contact the Dean of Students Office to discuss the possibility of rescheduling this exam.

Please note that vacations, previously purchased tickets or reservations, social events, misreading the exam schedule are not acceptable excuses for missing a final exam. If you think that your situation warrants permission to reschedule, please contact the Dean of Students Office with any questions. I cannot reschedule your final exam without approval from the Dean of Students office. Thank you in advance for your cooperation.

How to Succeed in this Course

The way to ace this class is to take all its components seriously. Due to the extremely short period of instruction time it is vital that you complete every assignment on time. Don't wait until the last minute to start the homework or the projects, they take time to complete. If you find yourself falling behind, take advantage of the office hours and ask for help.

Student Authentication and Verification

The University of Connecticut is required to verify the identity of students who participate in online and distance learning courses and to establish that students who register in an online or distance learning course are the same students who participate in and complete the course activities and assessments and receive academic credit. Verification and authentication of student identity in this course will include:

1. Secure access to the learning management system using your unique UConn NetID and password.

2. ID check when taking the final exam, using Lockdown Browser.

Students who do not complete the above required authentication steps may be denied access to the course and given an incomplete. Students could lose credit if the identity of the enrolled student competing course activities and assessments cannot be confirmed.

Copyright

My lectures, notes, handouts, and displays are protected by state common law and federal copyright law. They are my own original expression and I've recorded them prior or during my lecture in order to ensure that I obtain copyright protection. Students are authorized to take notes in my class; however, this authorization extends only to making one set of notes for your own personal use and no other use. I will inform you as to whether you are authorized to record my lectures at the beginning of each semester. If you are so authorized to record my lectures, you may not copy this recording or any other material, provide copies of either to anyone else, or make a commercial use of them without prior permission from me.

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)

Academic Honesty

This course expects all students to act in accordance with the Guidelines for Academic Integrity at the University of Connecticut. Because questions of intellectual property are important to the field of this course, we will discuss academic honesty as a topic and not just a policy. If you have questions about academic integrity or intellectual property, you should consult with your instructor. Additionally, consult UConn's guidelines for academic integrity. Note that cheating or plagiarizing on an assignment may result in a zero for that assignment and/or failure in the course.

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
- Academic, Scholarly, and Professional Integrity and Misconduct (ASPIM)
- 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

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 your instructor as soon as possible. You do not need to disclose the nature of your illness, however, you will need to work with your instructor 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.

Help

This course is facilitated online using the learning management platform, HuskyCT. The IT Knowledge Base provides students with support, troubleshooting, and how-to information about HuskyCT. The IT Knowledge Base includes a video tour of HuskyCT.

For technical help with HuskyCT, you have access to the in-person/live person support options available during regular business hours through the Technology Support Center. You also have 24x7 Course Support outside of business hours, including access to live chat, phone, and support documents.

Technical and Academic Help provides a guide to frequently asked questions for online students.

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

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

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