UCONN | UNIVERSITY OF CONNECTICUT

Math Courses

Math 1131Q — Calculus I (Spring 2020)

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COVID-19 Addendum:

- **Online course delivery**: Effective March 14, all content delivery, participation, worksheet submission, quizzes, exams, office hours, Supplemental Instruction, and Q Center hours will be held online/remotely. Please see the corresponding sections below for more information and monitor this page, course HuskyCT announcements, and your UConn email regularly for updates related to the online delivery of MATH 1131Q.
- **Exams:** Exam 3 and the Final Exam will be administered online via HuskyCT. Notes, books, and calculators will be allowed; however, any collaboration with others will be considered academic misconduct.

Description: This course is an introduction to differential and integral calculus, which is the mathematical language used in any science concerned with dynamically changing quantities. The main topics it covers are limits, derivatives, integrals, the Fundamental Theorem of Calculus, and some basic applications of these ideas.

Prerequisites: A qualifying score of 22 on the mathematics placement exam (MPE). Students who fail to achieve this minimum score are required to spend time on the preparatory and learning modules before re-taking the MPE, or to register for a lower level Mathematics course. Not open for credit to students who have passed MATH 1132Q or 1152Q.

Text:

The textbook for the course is *Calculus Early Transcendentals, Single Variable* by James Stewart (8th Edition), which is bundled with a *WebAssign* code for doing online homework. **You only need to buy ONE of the three textbook/WebAssign bundles listed at the bookstore**; your choice will depend on what math classes you plan to take in the future. Below is a PDF detailing your different options for buying the textbook at the bookstore:

Math 1131 Textbook Purchasing Instructions .pdf

Calculators: The use of calculators **IS NOT allowed** on quizzes or exams.

Course Objectives:

Successful completion of this course will require you to learn to:

1. Apply fundamental algebra skills to calculus problems.
2. Use common techniques to evaluate limits, and connect limits to derivatives.
3. Understand derivatives as rates of change.
4. Combine ideas from algebra and trigonometry with knowledge of limits and derivatives to sketch the graph of a function.
5. Use derivatives to describe the features of a function and its graph, including maximum and minimum values and where they occur.
6. Identify applications of differential and integral calculus, and explain how calculus can be used in these applications.
7. Apply the Fundamental Theorem of Calculus and the substitution rule to evaluate definite and indefinite integrals.
8. Demonstrate how integrals are connected to the area under the graph of a function.

i>clicker Registration:

Clickers will be used in the lectures. If you do not have an i>Clicker, you will need to purchase one as listed at the bookstore. You will only need to purchase one i>clicker remote, even if multiple classes require them. To receive credit for using your clicker, **you must register your i>clicker** by visiting the link through your lecture section in HuskyCT. **We do not use mobile apps for clickers.**

The first two weeks of classes will not require clickers. You should make sure that you have a physical clicker in every lecture starting on **Monday, February 3** to earn participation points **– no exceptions.** One week's worth of clicker participation will be dropped at the end of the semester.

Piazza: Effective March 23, you will be required to have a free piazza.com account, where you will be expected to participate regularly in collaborations with your peers and in asking questions when you need guidance. Your participation grade for the weeks affected by COVID-19 campus closure will be based on a minimum requirement of 2 contributions per week in Piazza. A contribution consists of any course-related post, reply, comment, follow-up, or edit to a reply.

Homework and WebAssign:

Homework: To access the online homework you will have to go through HuskyCT. In your discussion section's HuskyCT page, you will find a link to do your homework using WebAssign. There will be homework assignments for each section of the text. Each assignment will be made available on WebAssign before the section is covered in class. The due date for each assignment will be set by your instructor. **You will get five attempts for each question that is not multiple choice and fewer than five attempts for each multiple choice question; the exact number of attempts will depend on the number of choices.** After each attempt, you will be told whether your answer is correct or not. If you are not able to get the correct answer after your initial attempts, we recommend that you seek help from your instructor, your TA, the Q-Center, a tutor, or another student before attempting to answer the problem again.

Warning: When accessing your online homework, use **Firefox or Chrome as your browser**; there are problems that can occur if you use Internet Explorer or Safari**. Please use this WebAssign Tips .pdf document for help with accessing WebAssign and entering your answers correctly.**

Discussion and Worksheets

Discussion sections provide an opportunity to ask questions about content from lectures and WebAssign, and explore examples that provide different perspectives and more depth. There will be a worksheet each week that you will normally begin working on in discussion, then finish outside of class and turn in at the beginning of a later discussion section. You can access the worksheets at the **Learning Activities** tab at the top of this page. The worksheets are designed to reinforce and strengthen your knowledge and understanding, and provide practice with writing coherent, well-reasoned answers to questions.
The majority of the grade for these worksheets will be based on completion of the exercises, and parts of exercises on each worksheet will be graded in detail for correctness.

The **due dates** for the worksheets will be announced by your TA, who should be contacted if you have questions.

Effective March 23, worksheets will be collected online via HuskyCT. You should use a scanner or image-to-PDF scanner application such as Tiny Scanner, Cam Scanner, Notes, or Dropbox to convert your worksheets to PDF files for uploading within the HuskyCT learning Modules associated with each week.

Quizzes

- **There will be a quiz each week**, aside from exam weeks, **in your second discussion class (Wednesday)**. These quizzes will be for 15 minutes.
- The quiz in the first week is on precalculus. Each subsequent quiz will test students on material that was taught in the previous week.
- **The use of calculators IS NOT allowed on quizzes.**
- Effective March 23, quizzes will be adminstered online via WebAssign. Quizzes in WebAssign are from a pool of problems that have been given to you in your online homework. These are 15-minute timed assignments. It is extremely important that you do not start the quiz if you are not ready to sit down and give dedicated time for the quiz. **The system warns you that you are about to start a quiz and only when you say yes it begins to administer the quiz.** Please don't ask to reset the quiz with an excuse that you did not realize what you were doing. This will not be honored as a request to reset the quiz.
- **Quiz make-up policy:** a student is allowed to make up a quiz only if there is a personal/family/medical emergency with justification. You must contact your lecture instructor ASAP if you know that you will miss a quiz. Athletes who travel on behalf of the university must provide a letter/email from their athletic advisor in order to be allowed to take a make-up quiz.
- **Summary quizzes**: During the week of each midterm exam, students will have the option to resubmit solutions to the "block" of quizzes given before that midterm (e.g., during week 4, you will resubmit solutions to quizzes 1, 2, and 3). Here are the guidelines on submission and grading of these summary quizzes.
    - In each summary quiz, a solution to every problem from that quiz block should be included, even those for which the student made no mistake.
    - Each summary quiz will be graded for completeness only, so **providing solutions to all problems earns 100%**.
    - Summary quizzes are not required; for a student who doesn't submit a summary quiz, the student's average score for that "block" will be used as the summary quiz score.
    - The due dates for summary quizzes will be announced by your TA, who should be contacted if you have questions.
    - Summary Quizzes 2 and 3 will be collected online via HuskyCT. You should use a scanner or image-to-PDF scanner application such as Tiny Scanner, Cam Scanner, Notes, or Dropbox to convert your solutions to a PDF file for uploading the assignment to HuskyCT.
- **We will drop your lowest quiz score from your final grade.**

Exam information

There will be three multiple-choice midterm exams, all taken in your discussion section. They will be in the second discussion section meeting (Wednesday) of the 4th, 8th, and 12th weeks of the semester. Please put these dates in your calendar – you are expected to be in attendance.

Exam 3 and the Final Exam will be administered online via HuskyCT. Notes, books, and calculators will be allowed; however, any collaboration with others will be considered academic misconduct.

The final exam is cumulative and will be a mix of multiple choice and free response questions.

The use of calculators IS NOT allowed on exams 1 and 2.

Grading

Homework (online)	WebAssign	8%
Quizzes (in discussion)	Discussion	20% (see below for Honors sections)
Worksheets (written)	Discussion	8%
Participation (Clickers/Piazza)	Lecture/Piazza	4%
Exam 1: 2nd Discussion Meeting, Week 4	Discussion	12%
Exam 2: 2nd Discussion Meeting, Week 8	Discussion	12%
Exam 3: 2nd Discussion Meeting, Week 13	Discussion	12%
Final Exam	Common (2 hours)	24%

Grading Scale:

Final Percentage	Letter Grade
93 -100	A
90.00-92.99	A-
87.00-89.99	B+
83.00-86.99	B
80.00-82.99	B-
77.00-79.99	C+
73.00-76.99	C
70.00-72.99	C-
67.00-69.99	D+
63.00-66.99	D
60.00-62.99	D-
<60	F

Makeup Policy: In general, you will not be allowed to make up an exam, quizzes, homework or worksheet. In circumstances where you have a medical, family or personal emergency which prevents you from submitting your work on time, a proof in the form of doctors' note excusing you from work (because of medical emergency), or an email from your parent (about family/personal emergency) will need to be provided. If you are an athlete who will miss class time, quizzes, homework, worksheets or exams, you will need to ask your athletic advisor to send an email to your instructor and TA stating the circumstances for the absence.

In case of a missed exam please contact your instructor as soon as you know you will miss it, and no later than 24 hours after the exam.

Per University policy, all requests to reschedule or make up the final exam must be submitted to the Dean of Students for approval. Please note that vacations, previously purchased tickets or reservations, social events, misreading the exam schedule and over-sleeping are not viable 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. Thank you in advance for your cooperation.

Academic Integrity/Misconduct

This course expects all students to act in accordance with the Guidelines for Academic Integrity at the University of Connecticut. In mathematics, this means that all work that you turn in should be written up independently by you, in your own words, and should represent your honest understanding of the material. On exams and quizzes, it should be noted in particular that this means you must not consult any sources or materials: neighbors' papers, calculators, and any notes, books, or electronic devices are off-limits. If you have questions about academic integrity or intellectual property, you should consult with your instructor. Additionally, consult UConn's guidelines for academic integrity.

How to Succeed in this Course

1. Attend lecture and discussion class.
2. Read the explanations and examples in the textbook.
3. Watch videos (~~mathresources.uconn.edu/math1131~~). Each video lasts 8-15 minutes and covers some of the difficult and/or critical concepts.
4. Do online homework and discussion quizzes. Remember to follow these tips! WebAssign Tips .pdf
5. Check your understanding with Section Concept Guides (see Learning Activities Tab).
6. Revisit Concept Questions (~~mathresources.uconn.edu/math1131~~).
7. Review with Flash Cards (~~mathresources.uconn.edu/math1131~~).

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. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. 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/.

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Math 1131 Outline (Spring 2020)

Note: This schedule is subject to change as needed according to content coverage and unforseen events.

Week	Dates	Section	Topic
1	1/21-1/24		Administrative Information
		2.1	The Tangent and Velocity Problems
		2.2	The Limit of a Function
		2.3	Calculating Limits Using the Limit Laws
2	1/27-1/31	2.4	The Precise Definition of a Limit
		2.5	Continuity
		2.6	Limits at Infinity; Horizontal Asymptotes
3	2/3-2/7	2.7	Derivatives and Rates of Change
		2.8	The Derivative as a Function
		3.1	Derivatives of Polynomials and Exponential Functions
4	2/10-2/14	3.2	The Product and Quotient Rules
	Wed Discussion		**Midterm Exam 1 (2.1 – 2.3, 2.5 – 2.8, and 3.1)**
5	2/17-2/21	3.3	Derivatives of Trigonometric Functions
		3.4	The Chain Rule
		3.5	Implicit Differentiation
6	2/24-2/28	3.6	Derivatives of Logarithmic Functions
		3.8	Exponential Growth and Decay
7	3/2-3/6	3.9	Related Rates
		3.10	Linear Approximations and Differentials
		4.8	Newton's Method
8	3/9-3/13	4.1	Maximum and Minimum Values
	Wed Discussion		**Midterm Exam 2 (3.2 – 3.6, 3.8 – 3.10 and 4.8)**
Spring Break	**3/16-3/20**	**No Class**	**Spring Recess**
9	3/23-3/27	4.2	Mean Value Theorem
		4.3	How Derivatives Affect the Shape of a Graph

Week	Dates	Section	Topic
		4.4	Indeterminate Forms and l'Hospital's Rule
10	3/30-4/3	4.7	Optimization Problems
		4.9	Antiderivatives
11	4/6-4/10	5.1	Areas and Distances
		5.2	The Definite Integral
		5.3	The Fundamental Theorem of Calculus
12	4/13-4/17	5.4	Indefinite Integrals and the Net Change Theorem
	~~Wed Discussion~~ **Online**		**Midterm Exam 3 (4.1 – 4.4, 4.7, 4.9 and 5.1 – 5.3)**
13	4/20-4/24	5.5	The Substitution Rule
		6.1	Areas Between Curves
14	4/27-5/1	6.2	Volumes
			Review
Finals Week	**5/4-5/9**		**Finals Week: Final Exam is Cumulative**

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