Math 1131Q — Calculus I
Spring 2015

Text:

The textbook for the course is *Calculus Early Transcendentals, Single Variable* by James Stewart (7th Edition), which is bundled with a *WebAssign* code for doing online homework.

BUYING THE BOOK AND WEBASSIGN ACCESS CODE: you can buy the bundled version of Calculus Early Transcendentals, Single Variable by James Stewart either at the UConn Coop or online directly from the publisher. Both the text and the Webassign code are **required** for this course.
The unbundled version of the book (that is, the book without a WebAssign access code) can be obtained in many places, but the cost of buying the unbundled text and the WebAssign code separately may be significantly **greater**.
How can you decide which version of the text to buy?

- If you plan to take Math 1131 or take Math 1131 and 1132 then you should purchase the single-variable version of the textbook.
- If you plan to take Math 1131, 1132, *and* 2110 (multivariable calculus) then you should purchase the heavier book Calculus Early Transcendentals by Stewart that has chapters on multivariable calculus in the table of contents.

IMPORTANT!
There are three ways to purchase the text and the WebAssign access code:

- Get the text and WebAssign access code bundled together from the publisher's special website for either single variable (1131 and/or 1132) or multivariable (1131, 1132, and 2110) texts.
- Get the text and WebAssign access code bundled together at the UConn Co-op.
- Get the text separately from anywhere, and buy the WebAssign access code when you access your homework through HuskyCT. We do not recommend using the third option above, because if you buy the WebAssign access code separately then you will have to buy it for 95 dollars for one semester of calculus or 110 dollars for two or three semesters of calculus; by comparison, the cost of the book and WebAssign access code bundled together (from the publisher's website or from the UConn Co-op) is less than 95 dollars. The option to buy the text and WebAssign access code bundled together lets you use that access code for the life of the edition of the textbook.

Graphing calculators: TI 82, 83, 84, 84 plus, 85 or 86 are recommended. Models TI-89 and above (including TI-Nspire) are not permitted on the exams or quizzes.

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i>clicker Registration:

Clickers will be used in the lectures. You must register your i>clicker by visiting the link through the lecture section of your instructor in HuskyCT.

Homework and WebAssign:

Homework: To access the homework you will have to go through Huksy CT single sign-on. In your account 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 several days before the section is covered in class. The due date for each assignment will be set by your instructor and will generally be two or three days after the material is covered in class. **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, the Q-Center, a tutor, or another student.

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.

Quizzes: There will be a quiz on each homework assignment. These quizzes will be timed assignments on WebAssign and will generally be due one day after the homework assignment. There may be additional quizzes in the discussion sections.

WebAssign Registration: The homework for Math 1131 is assigned online using the WebAssign online homework system. To access your homework online you must go to Husky CT.

Grading:

Homework	WebAssign	5%
Quizzes	WebAssign	5%
Quizzes and Worksheets	Discussion	10%
Clicker response	Lecture class	5%
Exam 1: (Tuesday February 24, 6-8 PM or 9-11 PM)	Common evening exam	20%
Exam 2: (Tuesday April 14, 6-8 PM or 9-11 PM)	Common evening exam	20%
Final Exam: Friday May 8	Common (2 hours)	35%

The **common midterm exams** will be held on Tuesday (2/24/2014 and 4/14/2014) 6-8 PM or 9-11 PM in rooms that will be listed here later. The dates and times are listed in PeopleSoft, but not the rooms.

How to study for 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 last 8-15 minutes and covers some of the difficult and/or critical concepts.
4. Do online homeworks and quizzes.
5. Revisit Concept Questions (mathresources.uconn.edu/math1131).
6. Review using Flash Cards (mathresources.uconn.edu/math1131).

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Tentative Outline

(*Calculus, Early Transcendentals,* by James Stewart 7th Edition)

Week	Date	Section	Topic
1	1/20	1.1, 1.2	Four Ways to Represent a Function, and Mathematical Models
		1.3, 1.5	New Functions from Old Functions, and Exponential Functions
		1.6	Inverse Functions and Logarithms
2	1/26	2.1	The Tangent and Velocity problems
		2.2	The Limit of a Function
		2.3	Calculating Limits Using the Limit Laws
3	2/6	2.4	The Precise Definition of the Limit
		2.5	Continuity
		2.6	Limits at Infinity; Horizontal Asymptotes
4	2/9	2.7	Derivatives and Rates of Change
		2.8	The Derivative as a Function
		3.1	Derivatives of Polynomials and Exponential Functions
5	2/16	3.2	The Product and Quotient Rules
		3.3	Derivatives of Trigonometric Functions
		3.4	The Chain Rule
6	2/23	Review	
	2/24		Exam I, 8-6 PM, 9-11 PM
7	3/2	3.5	Implicit Differentiation
		3.6	Derivatives of Logarithmic Functions
8	3/9	3.8	Exponential Growth and Decay
		3.9	Related Rates
9	3/16		Spring Break
10	3/23	3.10	Linear Approximations and Differentials
		4.1, 4.2	Maximum and Minimum Values, and Mean Value Theorem
		4.3	How Derivatives Affect the Shape of a Graph
11	3/30	4.4	Indeterminate Forms and L'Hospital's Rule
		4.7	Optimization Problems
		4.9	Antiderivatives
12	4/6	5.1	Area and Distances and The Definite Integral
		5.2	The Definite Integral
13	4/13	Review	
	4/14		Exam 2, 8-6 PM, 9-11 PM
14	4/20	5.3	The Fundamental Theorem of Calculus
		5.4	Indefinite Integrals, and the Net Change Theorem
15	4/27	5.5	The Substitution Rule
	05/08		Final Exam **TBA** .