MTH 141 Calculus I Summer session II - 2012

Instructor: Orlando Merino, merino@math.uri.edu, 101C Lippitt Hall, 8744442
Textbook: Calculus: Single Variable, by Huges-Hallet et al, 5th ed., Wiley.
        Also needed: access code to WileyPlus (included in new books)
Calculator: Not required, and not allowed in tests.
Meets: MTuWTh, 10-12:30, Gilbreth Hall 118.
Office Hrs: MTuWTh, 1:30-3:30 or by appointment. Location: Lippitt Hall, #101
Prerequisite   Precalculus MTH111 or equivalent

About the course The language of science is mathematics, and calculus is an indispensable part of everyday calculations used in science, technology, engineering, mathematics, and other fields. MTH 141 is the first calculus course for students in these areas. This course will make precise and deepen your understanding of fundamental concepts such as *change*, *limit*, and *rate*. You will apply derivative calculus to problems in the physical and biological sciences involving *optimization*, *motion*, and *growth*. You will also receive an introduction to integral calculus which will be further developed in subsequent courses.

Objectives At the end of the session you will be able to calculate with and apply
    differential calculus concepts and methods, including limits, continuity, derivatives, optimization,
    integration as a limit of sums, and with the Fundamental Theorem of calculus,
    mathematical modeling concepts and deal with numerical issues.

Expectations You are expected to attend every lecture, and to submit your work on time -- no late work will be accepted (exceptions allowed for medical reasons).

Evaluation

Four exams @ 10% each	= 40	%	(Monday July 2, 9, 16, and 23)
Sakai Homework	= 15	%	
Mathematica Homework	= 10	%	
Language of Mathematics	= 5	%	
Final exam	= 30	%	(Thursday, July 26)
TOTAL	= 100	%	

Assignments We will have three types of assignments
  WileyPlus assignments: WileyPlus is a computer homework system. W+ hwk. will be assigned daily.
  Mathematica assignments: Mathematica is a computer algebra system. URI students can download
  and install the Mathematica software on their personal computers. It is also available on campus labs.
  Language of Mathematics assignments will require using *Mathematica notebook* documents.
All homework assignments are to be submitted electronically, by using either the Assignment tool in SAKAI or the WileyPlus website.

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In class Please ask questions at any time. I will make an effort to clarify difficult concepts, or to explore any interesting ideas you may offer. Class participation has a positive impact on the student's learning, and I encourage it.

Outside of class To keep up with the rapid pace of the class requires that you spend several hours every day doing homework, reviewing notes, reading the book, and working out extra problems, all in addition to the time spent in class.

Disability   Any student with a documented disability is welcome to contact me as early in the semester as possible so that we may arrange reasonable accommodations (contact Disability Services for Students Office at 330 Memorial Union 401-874-2098).

Academic Honesty Cheating is defined in the University Manual section 8.27.10 as *the claiming of credit for work not done independently without giving credit for aid received, or any unauthorized communication during examinations* (of course, this includes use of the "internet"). Students are expected to be honest in all academic work. The resolution of any charge of cheating or plagiarism will follow the guidelines set forth in the University Manual 8.27.10 - 8.27.20.

Civility If you must come in late or leave early, let me know and please do not disrupt the class. Please turn off all cell phones, ipads, ipods, etc. No "texting" is allowed.

Incomplete Grade I follow to the letter the URI regulations concerning incomplete grades, namely the following paragraphs taken from the university manual:

8.53.20. A student shall receive a report of "Incomplete" in any course in which the *course work has been passing* up until the time of a *documented* precipitating incident or condition, but has not been completed because of illness or another reason which in the opinion of the instructor justifies the report. An instructor who issues a grade of "Incomplete" shall forward a written explanation to the student's academic dean. 8.53.21. The student receiving "Incomplete" shall make necessary arrangement with the instructor or, in the instructor's absence, with the instructor's chairperson to remove the deficiency. This arrangement shall be made prior to the following mid-semester for the undergraduate student and within one calendar year for the graduate student.

Solutions to Problems: It is your responsibility to communicate clearly in writing up solutions for homework, quizzes, and exams. Your results must display your understanding well and be written in a correct, complete, coherent, and well organized fashion. The rules of language still apply in mathematics, and apply even when symbols are used in formulas, equations, etc. Neatness counts!

Tutoring help   Tutoring takes place in Lippitt 205, on a walk-in basis:

SS2 (June 25 – July 27)

	Monday	Tuesday	Wednesday	Thursday
9AM-10AM	Erin, Caitlin*	Erica, Caitlin*	Erin, Caitlin*	Erica, Caitlin*
10AM-12PM	Erin	Erica	Erin	Erica
12PM-2PM	Erin, Diana*	Dan, Diana*	Erin, Diana*	Dan, Diana*
6PM-8PM	Bill	Manos	Diana	N/A

WileyPlus:

WileyPlus will be used for some of your homework assignments. If you took MTH 141 at URI last semester your Wiley-plus registration should continue this semester. If not, you will need to register with Wiley-plus using the license key that came with your textbook. If you ARE already registered for WileyPlus from MTH141 last term then you should go to http://edugen.wiley.com/ and log in with the same user name and password.
If you are NOT registered from last semester then you can either buy a new textbook which comes with an access code for WileyPlus and follow the instruction that come with the textbook OR you can go to www.wileyplus.com/buy and purchase a WileyPlus registration which comes with an online texbook.

If you need help registering go to http://www.wiley.com/college/twomin/stu/register.html WileyPlus assignments will be given every week. Due dates for WileyPlus assignments are firm, however students may submit late WileyPlus homework at a 50% penalty.

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Date	Topics	Section	Practice Problems
6/25	Functions and change, exponential functions, Function composition	1.1, 1.2, 1.3	TBA
6/26	Log Functions, Trig Functions Polynomial & Rational Functions	1.4, 1.5, 1.6	
6/27	Continuity & Limits	1.7, 1.8	
6/28	Measuring Speed The Derivative at a Point	2.1, 2.2	
7/2	**Exam 1**, The Derivative Function	2.3	
7/3	Interpretations of the Derivative The second derivative	2.4, 2.5	
7/5	Derivatives of Polynomials Derivatives of Exponential Functions	3.1, 3.2	
7/6	Product & Quotient Rules, Chain Rule	3.3, 3.4	
7/9	**Exam 2**, Derivatives of Trig Functions Chain Rule and Inverse Functions	3.5, 3.6	
7/10	Implicit Functions Hyperbolic Functions	3.7, 3.8	
7/11	Linear Approximations Some Theorems about Derivatives	3.9, 3.10	
7/12	Using 1st and 2nd Derivs., Optimization	4.1, 4.2	
7/16	**Exam 3**, More Optimization & Geometry	4.4	
7/17	Related Rates , L'Hopital's Rule, Growth	4.6, 4.7	
7/18	Parametric Eqns, Left and Right Sums	4.8, 5.1	
7/19	Definite Integrals, General Riemann Sums, Fundamental Thm of Calculus	5.2, 5.3	
7/23	**Exam 4**, Thms about Definite Integrals	5.4	
7/24	Antiderivatives: Graphically & Numerically Antiderivatives: Analytically	6.1, 6.2	
7/25	Differential Equations The Second Fundamental Theorem	6.3, 6.4	
7/26	**Cumulative Final Exam**		