Syllabus
Math 132 (Applied Calculus II)
University of Rhode Island, Spring 2012

Contact Information:

Instructor: Dr. Glenn Faubert	**Contact via SAKAI Messages**	**Office:** Lippitt Hall 202A
Email: *gfaubert@math.uri.edu* SAKAI messages greatly preferred.	**Office Hours:** See SAKAI	

Course Description

This is a second semester course in applied calculus. It is a continuation of MTH131 for students with majors requiring two semesters of calculus or for students who would just like take a second semester of calculus. Topic include methods of integration, probability density and distribution functions, functions of two variables, contour diagrams, partial derivatives, optimizing functions of two variables, modeling with differential equations, solving separable differential equations, and geometric series and some applications.

Prerequisite for this course is one semester of college calculus. (At URI: MTH131 or MTH141)

Evaluation/Grade

Description	**Percent of final grade**
3 in class 50 minute midterm tests	13% each, total 39%
1 final examination	total 26%
13 homework assignments	total 10%
4 Wiley-Plus assignments	total 10%
1 mini-test quiz on last day	total 5%
Unannounced quizzes and attendance checks.	total 10%

A (93% - 100%)	A- (90% - 92%)	B+ (87% - 89%)	B (82% - 86%)	B- (79% - 81%)
C+ (76% - 78%)	C (71% - 75%)	C- (68% - 70%)	D+ (65% - 67%)	D (60% - 64%)
F (0% - 59%)	Compute Grade by rounding to the nearest whole percent.			

Textbook

(The textbook is required. No special consideration will be given to students without texts by the first class.)

The required text for the class is <u>Applied Calculus</u>, 4th edition, by Hughes-Hallett et. al. Published by J. Wiley & Sons Inc. This text is available in the University Book Store. If you took MTH131 at URI last term, this is the same text. If you will be buying your text online you should order early. If you but the text used or from a third party you will also have to buy a subscription to WileyPlus. The subscription is included in all new texts purchased from the URI Bookstore.

The textbook is a math book and it should be read accordingly. Read it slowly for comprehension and with a pencil and paper at hand. Read it either shortly before or shortly after the lecture, or both. Some students make the mistake of going directly to the homework problems before reading the section. This might save time but the cost in comprehension and exam scores is prohibitive. Read the text!

Lecture

This class meets three time per week for 50 minutes. You are expected to be there three time per week for 50 minutes. Lecture time is at a premium, so it must be used efficiently. Expect lecture material to be covered at a fast pace. You are expected to come prepared to class as detailed below. You should complete all homework assignments on time. Before each lecture you should spend a few minutes reviewing the notes for the previous lecture. A few minutes at the start of each lecture will be allocated to student questions. Random attendance checks will be taken throughout the semester. Students who for good reason must arrive late, leave early, or miss class, must inform their instructor via SAKAI before class begins. Students failing to give such notice will get a zero for participation if a random attendance check is taken. Giving notice for being late or absent on a day that homework is due does not excuse the late or missing homework. Give the homework to a friend or submit it via the SAKAI Drop Box tool. Naturally, all students are expected to be respectful of each other and the instructor at all times. Any disruptive students will be removed from the classroom and the roster.

Exams

Three exams and one announced quiz will be given in class on the days noted below. They will fit into the class period and extra time will not be given to students beyond that time. Students will be penalized for not handing in tests immediately when called for. The typical penalty is 5% plus 5% per each additional minute the exam is late. All electronics must turned off, removed from your desk and out of sight. Cell phone must be unseen and unheard. After ONE warning over the entire term, a student will be penalized 5% for each cellphone interruption during an exam. A student seen handling a cell phone during an exam will be penalized 50%. If you must take a call during lecture, take it outside and out of hearing range. Students repeatedly disrupting the class with cellphones or otherwise will be removed from the room and the class roster. Exams are designed to accurately assess students' knowledge of the class material. Exam grades are NOT scaled. Exam problems will be very similar to homework problems. Calculator use will not be allowed on exams.

Homework

Homework assignments must be handed in at the beginning of the class, or submitted via the SAKAI Drop Box Tool by 11:00am on the date due. DO NOT SUBMIT ASSIGNMENTS VIA EMAIL ATTACHMENTS OR FAXES! They will not be graded. I suggest using a word processor (e.g. Microsoft Word or OpenOffice) for assignments you will submit via the Drop Box. Assignments handed in in class may be typed or neatly handwritten. All work must be shown to get credit for a problem. Some of the problems have answers in the back of the text for you to check. A naked answer from the back of the book with no supporting work or explanation is worth zero. Students may discuss homework problems with each other or with tutors but are expected to write up the final version independently. Late homework will not be corrected and will receive a grade of zero. Homework not on the instructor's desk by the start of the lecture will be considered late. All students get one homework pass that may be use to avoid penalty for missing or late homework. Being absent on a day that homework is due does not excuse you from homework penalties. Grades for homework may be scaled. Most of the learning is done in this class while working on homework assignments. You should be spending 3-6 hours per week reading the text and doing the homework. START HOMEWORK ASSIGNMENTS EARLY.

Online Homework

Online homework assignments using Wiley-Plus will be assigned just as they were in calculus I. These assignments give you more practice over a wider range of problems than the homework handed in in class. The assignments will be due before each exam, and on the last day of class.

Sakai

Sakai is being used to teach this course. This means that, if you have not already, you must start becoming acquainted with Sakai. You can access Sakai at the following web address: https://sakai.uri.edu/portal/ Use your e-campus id and your URI email password (generally not your ecampus password). When you log into Sakai you will see a tab for each class that will be using SAKAI. Click on the tab for MTH132. If you have many tabs, you might need to click on "more" to show all your tabs . See the SAKAI Help Desk to learn how to remove previous semester tabs. More SAKAI Tools will become available during the first couple of weeks of class. You are expected to learn how to use all the tools listed in the left column on the MTH132 home page as they appear. Click on them. You will not break anything. If you get lost, click on Home. By week one you should be able to access the Syllabus, and read Announcements, and use Messages. By week two you should also know how to access your Grades, use the Drop Box and access Resources. Other Tools may later be required by your instructor or may be optional.

Mathematica

Mathematica is a very well-known software package for mathematics. A student license is typically about $140, but is available free to URI students. Go to the math department website for details about how to obtain your copy. Spending an hour or two learning how to use Mathematica with calculus early in the term save many hours checking homework solutions.

Calculators

Students are allowed (and encouraged) to use calculators to facilitate learning in MTH132. All students should have a graphing calculator. When using calculators on homework and exams students must still show all work to support their answers and may not refer to their calculator as the sole justification for answers.

Academic Integrity

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.* 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, http://www.uri.edu/facsen/8.20-8.27.html. A student caught cheating will get an F for the assignment, or an F for the course and/or face University disciplinary hearings resulting in possible dismissal.

Disability

Any student with a documented disability is welcome to contact me early in the semester so that we may work out reasonable accommodations to support your success in this course. Students should also contact Disability Services for Students, Office of Student Life, 330 Memorial Union, Kingston, 874-2098.

Semester Schedule

Class	Date	Text	Lecture Topics	Name	(H)omework Due 11am (W)iley Due 11pm
#1	Jan 23	7.1, 7.3	Antiderivatives, Fundamental Theorem		
#2	25	7.2	Integration by substitution		
#3	27	7.2	"		
#4	30	7.4	Integration by Parts	H01	p304#22 p311#18 p307#4,32
#5	Feb 1	7.4	"	W1	Wiley ch7
#6	3	8.1	Probability density functions		
#7	6	8.1	"	H02	p315#6,14 p331#2
#8	8	8.2	Cumulative distribution function		
#9	10	8.2	"		
#10	13	8.3	Median and Mean	H03	p331#10 p337#2,6
#11	15	9.1	Functions of two variables	W2	Wiley ch8
#12	**17**	**Exam 1**	**covers ch7, ch8**		
X	20	no class			
#13	22	9.2	Contour diagrams	H04	p343#2,7 p353#10
#14	24	9.2			
#15	27	9.3	Partial derivatives		
#16	29	9.3		H05	p360#2,12 p369#8
#17	Mar 2	9.4	Computing partial derivatives		
#18	5	9.5	Critical points and optimization	H06	p369#4,12 p375#10
#19	7	9.5	"		
#20	9	9.6	Constrained optimization		
X	Spring	Break			
#21	19	9.6	Constrained optimization cont.	H07	p375#30 p380#12,14
#22	21	10.1	Differential Equations	W3	Wiley ch9
#23	**23**	**Exam 2**	**covers ch9**		
#24	26	10.2	Solutions of differential equations	H08	p387#6,18 p411#2
#25	28	10.2	"		
#26	30	10.3	Slope fields		
#27	Apr 2	10.4	Exponential growth and decay	H09	p411#1,22 p416#6
#28	4	10.4	"		
#29	6	10.5	Applications and modeling		
#30	9	10.5	"	H10	p422#2,8 p430#10
#31	11	10.6	Predator-Prey model		
#32	13	10.7	Modeling spread of disease		
#33	16	10.7	"	H11	p430#14 p435#4abc,18
#34	18	11.1	Geometric Series	W4	Wiley ch10
#35	**20**	**Exam 3**	**covers ch10**		
#36	23	11.2	Application: business	H12	p440#8,12 p458#2,14
#37	25	11.3	Application: natural science		
#38	27	11.3	"		
#39	**30**	**Quiz**	**covers ch11**	H13 W5	p462#4,9 p466#2,5 Wiley ch11