Math 241 – Calculus III
Section AL1 at MWF 9:00-9:50 in 314 Altgeld Hall
Section CL1 at MWF 2:00-2:50 in 314 Altgeld Hall
Spring – 2011

Instructor: Tom Carty
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Office Hours: To Be Posted On Course Website

Website: I will be maintaining a website for this class that will contain general information about the class, announcements, and answers to FAQs. *You should always check the website before e-mailing me with questions.* If I don't respond to your email, it's probably because that information is available on the website: **www.math.uiuc.edu/∼carty/math241_spring11.html**.

Required Texts:

1. **your course notes**: I work very hard at making your course notes complete and readable. Course notes are meant to be read. Many will find it helpful to rewrite them and then ask questions. In the course notes (both those given in large lecture and those in discussion), I am telling you what I believe is important. Notes are my voice to you and I will not follow the exact outline of the required text. Be aware that I use colors to separate ideas on the board. You may find it useful to have different colors when taking notes.

2. Multivariable <u>Calculus</u> Early Transcendentals, 6th Edition by Stewart: This is the supporting text and where the majority of homework problems will be found.

Other Texts of Interest:

entry-level multivariable calculus texts:

- <u>Calculus – Early Transcendentals</u> by Briggs and Cochran (I like the differential calculus chapters of this text.)

- Calculus – Early Transcendentals by Rogawski (I like the integration chapters of this text.)

non-theoretical vector analysis texts:

1. Vector Calculus by Miroslav Lovric

2. Vector Calculus 3rd edition by Susan J. Colley

3. Vector Calculus by Jerrold Marsden and Anthony Tromba

4. div, grad, curl and all that by H.M. Schey

higher order optimization:

- The Mathematics of Nonlinear Programming by Peressini, Sullivan, and Uhl Jr.

theoretical vector analysis text:

- Elementary Classical Analysis by Jerrold Marsden and Michael Hoffman

Grading: The components of your grade are as follows:

Homework	10%
Hour Exams (3)	60%
Final	30%

Maximum cutoffs for letter grades will be at the traditional 90%, 80%, etc. with plus and minus grades given at the following intervals. Curves are possible but very rare.

96.67-100	A+
93.34-96.66	A
90-93.33	A-
86.67-90	B+
83.34-86.66	B
80-83.33	B-
76.67-80	C+
73.34-76.66	C
70-73.33	C-
66.67-70	D+
63.34-66.66	D
60-63.33	D-
below	F

Homework

There will be two different types of homework: daily practice problems and graded homework. Practice problems are taken from the problem banks in the text and will never be collected. Graded homework may be comprised of both questions from the textbook and additional questions supplied by me. Homework will be assigned and posted to the homework link on the course website.

The purpose of homework is to use the basic tools and examples that are provided in lecture to solve *new* problems and not simply to reproduce computations that were presented as examples during the lectures. Some homework problems will include new material not presented in lectures, so it is important that you read the problems carefully even if you can not solve them.

I expect that students will struggle with some of the homework problems. You are encouraged to work together and discuss homework problems with classmates. Make use of office hours and tutoring. It is your responsibility to ensure you understand the concepts and ideas reinforced or presented in homework. To that end, even if group work was used to solve homework problems, all students are required to compose and submit homework assignments individually.

A selection of problems from each homework assignment will be evaluated. Marks for each homework assignment will be awarded based on the correctness of the solutions of selected problems as well as:

- **completeness** A serious effort was made at providing solutions to all the assigned problems.

- **neatness** Solutions (and your name) are clearly and neatly written on loose-leaf paper (no spiral-bound paper) with generous use of whitespace and pages are stapled together.

- **solution addresses the problem** All that was asked for in the problem statement is provided in the solution. For problems that call for a specific computation or example (as opposed to an explanation) the answers are clearly written and boldly circled.

- **style** Problems that require an explanation or justification are answered with a clear and logical argument written in proper sentences. Additionally, mathematical terminology is used correctly

Graded homework will be due (approximately) every Thursday. You must turn homework in at the discussion section for which you are registered. All graded homework will be collected at the **start** of the class the day it is due. *Any homework handed in later than 10 minutes after the start of class will be considered late.* No late homework will be accepted under any circumstances.

As a result of the no late homework policy, to accommodate illness and absences, every students lowest homework grade will be dropped when calculating final grades.

Exams: There will be three exams given during the semester. You must bring an official picture ID (i-card, driver's license, passport, etc.) with a clear picture to all exams. Additionally, for each exam you will be required to identify the exact discussion section you are registered in. The exam times will always be during your normal lecture hours, but it is possible that the exam location(s) will not be our normal classroom. If so, a few days before each exam, a link will be posted on the website as to where you will attend the exam. It is important that you are in the properly assigned room. Attending the wrong room may result in your exam not being accepted.

Makeup Exams: In general, there will be no makeup exams. If an absence is deemed excused, your other exams may be averaged to account for the absence. If you are going to miss an hour exam you need to notify me **before** the exam by e-mail (or phone). You must present **official documentation** excusing your absence within ten business day of the exam date. It is completely *my discretion* whether or not your absence is deemed excused or if there will be a penalty assessed for your absence from the exam.

Final: The final will be cumulative. Locations for the final exams will be announced, both in class and on the website, later in the semester. The times of the final exams are

> Section AL1 at 9AM – 8:00 to 11:00 AM, Wednesday, May 11
> Section CL1 at 12PM – 7:00 to 10:00 PM, Tuesday, May 10

You are required to attend the final exam assigned to your lecture section.

Calculator Policy: A graphing calculator can be an invaluable learning tool. Some of the homework questions may become significantly more straight-forward if you have access to one. Since not all students have access

to the same level of technology (the really good calculators are quite expensive), calculators will not be allowed on any exam.

Cheating: The student's academic integrity code can be found in the Student Code - Article 1 Part 4. Cheating on exams will result in serious implications, including potentially a failing grade in the course. University policy dictates that any charge of cheating that results in a guilty decision, however small, MUST be documented both with the student's college and also the Senate Committee on Academic Discipline. Cheating instances will follow you and may influence decisions made about you in the future.

Accommodations: If you are entitled to accommodations sanctioned by DRES, I need to be notified with official documentation by no later than one week into the course.

In accordance with DRES examination procedures (the policies are found at http://www.disability.uiuc.edu/services/testing/), you are expected to sit for your hour exam concurrently with the large lecture section for which you are registered. If that is not possible due to other course lecture times, you are allowed to sit for the other large lecture's hour exam. Again, I expect that you will take the exam concurrently with the other lecture section. I need to be notified at least three business days in advance so that I can be sure that enough of the different versions of the exams are on hand at DRES.

Teaching Assistant Office Hours: In addition to my own office hours, every TA (there are 12 total for the class) will hold office hours every week. These office hours are open to anyone from the large lectures. Times and locations of the TA office hours will be posted to the course website.

Tutoring Room: There will be a free tutoring room available for Math 241 Monday through Thursday from 7 to 9PM. For specific information on tutoring, go to the course webpage. Select the link <u>TUTORING INFORMATION</u>. Finally, look at the information under "Course: Math 241". If you are interested in private tutoring (not free), the "Private Tutor List" is at the bottom of the same webpage.

Discussion Sections: I work extremely closely with the discussion section TAs. A typical discussion section will be comprised of a short lecture (delivered by the TAs) followed by working practice problems in small-groups.

Understand that I dictate the material that will be reviewed in discussion and that you are responsible for all of the topics covered in discussion. Discussion is not optional and it is not a place to work on homework problems. It is an integral part of your instruction.

Attendance:

- *Lectures*: It is your responsibility to attend class. I do not take attendance, so it is up to you to be in lecture. If you miss a class or are late to class, then you need to contact someone else in the class to get the lecture notes. Do not e-mail me (or the TA's) for lecture notes. Also, there will often be announcements made in class about the office hours, exams, room changes for exams, etc. Once again, if you miss class or arrive late, it is your responsibility to check the website or talk to someone else in the class about any important announcements.

- *Discussions*: Due the group work nature of the discussion sections, the discussion section TAs *will be* taking attendance. The purpose of this policy is strictly informational and any absence from discussion *will not* effect your grade. Again, if you miss discussion, you are responsible for all of the topics covered in discussion.

Classroom Decorum:

- *Lectures*: This is a very large lecture with many people. The classroom environment should be conducive to learning by all. Please keep chit-chat to a minimum, cell phones turned off, etc. If your behavior is disrespectful to your classmates, you will be asked to leave.

- *Discussion*: Again, you will be asked to work in groups of four to six. It is expected that you are able to interact with your fellow students in a respectful fashion. If the TA deems that your behavior is not respectful, you will be asked to leave discussion. Moreover, recall that there is only one TA per discussion section and it is impossible for them to aid 33 different students simultaneously. It is possible to move around the room and answer questions for 5 or 6 small groups. Note that the TAs are instructed NOT TO work with students who are not working within the group setting. If it is impossible for you to work within a group, feel free to bring your discussion section questions to office hours or tutoring where you may be able to get more direct one-on-one help.

Returned Work and Grade Disputes: Homework and exams will be returned in discussion. Any uncollected homework or exams will be disposed of exactly **one week after** the day they are passed back. If you are unable to pick up your work in class, you need to make arrangements to collect your homework from your discussion TA and your exams from me in office hours. Questions about the graded homework are to be directed to your TA. They will involve me if it is necessary.

Solutions to exams will be posted before they are returned to you. Again, you have exactly **one week after** the day they are passed back in class to discuss any grading issues. After this time, no changes will be made to your score. Questions about how an exam was graded need to be addressed to me. Come to office hours or make an appointment.

James Scholar - Honors Credit: This semester, I am *not* open to students using this course for honors credit.