M408Ls Integral Calculus and Series Summer 2012
92312 & 92313

LECTURE: MWF 8:30 to 10:30 in PAI 2.48

DISCUSSION:

92312 TTh 8:30 to 10:30 in CPE 2.212
92313 TTh 10:30 to 12:30 in CPE 2.212

INSTRUCTOR: Dr. Gary Berg

Office: RLM 13.164 phone: 471-6410 email: gberg@math.utexas.edu
Office Hours: MWF 10:45 to 11:30 or by appointment.

TA:

92312 Yoonsang Lee Office: RLM 9.124 phone: 475 9134
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Office Hours: TTh 1 to 3

92313 Giovanni Franklin Office: RLM 11.112 phone: 475 9521
email: gfranklin@math.utexas.edu
Office Hours: MW 1 to 3

TEXT: Stewart, *Calculus*, 7th Edition

PREREQUISITE: A grade of C or better in M408K, M408N, or an equivalent course.

WEBSITE: Blackboard will be used to post course documents and announcements. Quest will be used for the homework and to post exam grades.

HOMEWORK: There will be a homework assignment twice each week (due Tuesday and Thursday at 11pm) covering one or more sections from the book to be submitted online through Quest. A score of 0 to 100 (percent) will be given to each assignment.

Quest is mostly multiple-choice for which there is no partial credit, though retries are usually allowed. A correct answer on a first retry will give you some of the credit, but be aware that too many incorrect retries can give you a negative score. Numeric answers for Quest must be accurate to one percent.

Two homework grades will be dropped.

ATTENDENCE: You are expected to attend class, although it is not part of your grade.

TESTS: There will be three tests and one comprehensive final exam. If you miss a test, contact me as soon as possible. The test dates are (tentatively) set for:

Test 1… Tue. July 17; Test 2… Thur. July 26; Test 3… Tue. Aug. 7

Makeup exams are given only for serious reasons such as illness or emergency and must be verified.

FINAL EXAM: The final exam is comprehensive (with some emphasis on material not yet tested) and mandatory and will be given Saturday August 11 from 7 to 10 pm.

GRADES: The homework will contribute 20% of your grade. The three tests will each contribute 20% of your course grade. The Final Exam will count for 20% of your grade and may also be substituted for the lowest regular test grade (making the final worth 40% if it is to your advantage). Letter grades for the course will be assigned based on these percentages:

92 or better is an A; 90 or better is an A–; 88 or better is a B+; 82 or better is a B; 80 or better is a B–; 78 or better is a C+; 72 or better is a C; 70 or better is a C–; 68 or better is a D+; 62 or better is a D; and 60 or better is a D–.

There will be no extra credit or special deals at the end of the semester. If not making a good grade in this course will have a dire effect on your career, then either drop the course, or work really hard. Doing calculus efficiently is heavily dependent on developing certain skills, and these can usually only be developed through lots of practice.

SYLLABUS: A syllabus for this course can be found at the mathematics homepage. A schedule is included at the end of this handout.

HELP: The Learning Skills Center in Jester offers help of many kinds, including printed material, videotapes, and free or inexpensive tutoring.

The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, (471-4641 TTY).

HONESTY: I encourage people to work together on homework and help each other. Do not fall into the trap of thinking that because you think you understand a solution presented by someone else, you know how to solve the problem. You must struggle with this material on your own to develop the necessary skills. Cheating on an exam will likely get you ejected from the course, and possibly from the University.

QUEST: *This course makes use of the web-based Quest content delivery and homework server system maintained by the College of Natural Sciences. This homework service will require a $22charge per student for its use, which goes toward the maintenance and operation of the resource. Please go tohttp://quest.cns.utexas.edu to log in to the Quest system for this class. After the 12th day of class, when you log into Quest you will be asked to pay via credit card on a secure payment site. You have the option to wait up to 30 days to pay while still continuing to use Quest for your assignments. If you are taking more than one course using Quest, you will not be charged more than $50/semester. Quest provides mandatory instructional material for this course, just as is your textbook, etc. For payment questions, email quest.fees@cns.utexas.edu.*

SCHEDULE:

Ch. 5 Integrals (4 hours)	
5.3 The Fundamental Theorem of Calculus (review)	7/9
5.4 Indefinite Integrals and the Net Change Theorem	7/11
5.5 The Substitution Rule	7/11
Ch. 6 Applications of Integration (2 hours)	
6.1 Areas between Curves	7/13
6.2 Volumes	7/13
6.3 Volumes by Cylindrical Shells (optional)	
Ch. 7 Techniques of Integration (9 hours)	
7.1 Integration by Parts	7/16
7.2 Trigonometric Integrals (light)	7/16
7.3 Trigonometric Substitution	7/18
7.4 Integration of Rational Functions by Partial Fractions	7/20
7.5 Strategy for Integration	7/20
7.7 Approximate Integration (optional)	
7.8 Improper Integrals	7/23
Ch. 11 Infinite Sequences and Series (16 hours)	
11.1 Sequences	7/25
11.2 Series	7/25
11.3 The Integral Test and Estimates of Sums	7/27
11.4 The Comparison Tests	7/27
11.5 Alternating Series	7/30
11.6 Absolute Convergence and the Ratio and Root Tests	7/30
11.7 Strategy for Testing Series	8/1
11.8 Power Series	8/1
11.9 Representations of Functions as Power Series	8/3
11.10 Taylor and Maclaurin Series	8/3
11.11 Applications of Taylor Polynomials (optional)	
Ch. 14 Partial Derivatives (1 hour)	
14.3 Partial Derivatives	8/6
Ch. 15 Multiple Integrals (4 hours)	
15.1 Double Integrals over Rectangles	8/6
15.2 Iterated Integrals	8/8
15.3 Double Integrals over General Regions	8/10