Course Description

Calculus is a premiere computational tool used routinely in the sciences and engineering. This class introduces all the major ideas underpinning it. We have two principal goals: first to develop the theory behind the tools of differentiation and integration, and second to learn to use them in applications. You can expect to see an emphasis in this course on deductive reasoning and problem solving skills as well as basic exercises in computation.

Specific topics to be covered include: limits and continuity, tangent lines and differentiation, applications of differentiation (modelling, optimization, curve sketching, root finding, etc.), definite and indefinite integration, the Fundamental Theorem of Calculus, and applications of the integral to volume and work problems.

Essential Information

Professor	David Maxwell	Teaching Assistant	Rob Luz
Office	Chapman 308C	Office	Chapman 301e
Phone	474-1196	Phone	474-5427
Email	`ffdam@uaf.edu`	Email	ftral2@uaf.edu
Web	`http://www.math.uaf.edu/~maxwell`		
Text	**Calculus: Early Transcendentals**, 5th Edition, *James Stuart*, Brooks/Cole		

Prerequisites:

The course prerequisites are a grade of 'C' or better in M107 and M108, or entrance via a placement test. It is frustrating to try to learn calculus before you are ready for it. To help you judge your level of preparation, there will be a short test on Friday, September 10 covering background material for the class. The test will not count toward your grade. Students who do poorly on the test (D or F) will be asked to make an appointment with me by September 16.

Class Time

There will be four one-hour lecture classes each week. Although I'll be doing a lot of the talking during lectures, you are strongly encouraged to stop me at any point to ask questions. Lectures are more interesting and also more relevant when you get involved.

Additionally, there will be a one-hour recitation section each Thursday lead by TA Rob Luz. The focus of recitation sections will be on doing examples and solving problems.

Lecture Times	
MWF	1:00-2:00 Gruening 208
T	2:00-3:00 Gruening 208

Thursday Recitations		
Section F01	11:30-12:30	Chapman 104
Section F02	2:00-3:00	Chapman 104
Section F03	3:40-4:40	Chapman 104

Office Hours

I have tentatively scheduled four office hours. These will be changed if they are inconvenient for my students. The finalized office hours will be posted on my web site. You are welcome to schedule an appointment outside the regular office hours; please send me an email.

Monday	2:10-3:10
Tuesday	3:10-4:10
Wednesday	2:10-3:10
Friday	9:00-10:00

Math Lab

The Math Lab in Chapman 305 has tutors available at scheduled times throughout the week. This is a great place to get help with your homework or while studying. The hours for the Math Lab are posted on its door.

Homework

Mathematics is only learned by doing. This explains the strong emphasis in this class on homework. There is an assignment due every week at the start of Friday's class. The specific homework problems to be solved will appear on my web site at the latest one week before the homework is due. A representative selection of the problems on each assignment will be graded.

Midterms

There will be three in-class midterm exams. Each midterms will only cover material seen since the previous midterm (i.e. they will not be cumulative).

Monday October 11
Monday November 1
Monday November 22

Final Exam

There will be a final exam held on Saturday, December 18 from 10:15 a.m. to 12:15 p.m. at a location to be announced in class. The final will be comprehensive with an emphasis on material learned after the last midterm.

Evaluation

Course grades will be determined as follows:

Homework	20%
Midterm 1	15%
Midterm 2	15%
Midterm 3	15%
Final	35%

Letter grades will be assigned according to the following scale. This scale is a guarantee; I also reserve the right to lower the thresholds.

A	90–100%
B	80–89%
C	70–79%
D	60–69%
F	0–59%

Tentative Schedule

Week	Topics and Events
9/6–9/10	Chapter 1 Monday: Holiday Friday: Skills Test
9/13–9/17	Sections 2.1, 2.2, 2.3 Friday: Last day for withdrawal without a 'W'
9/20–9/24	Sections 2.4, 2.5, 2.6, 2.7
9/27–10/1	Sections 2.7, 2.8, 2.9, 3.1
10/4–10/8	Sections 3.2, 3.3, 3.4
10/11–10/15	Sections 3.5, 3.6, 3.8 Monday: Midterm 1
10/18–10/22	Sections 3.10, 3.11
10/25–10/29	Sections 4.1, 4.2, 4.3 Friday: Last day for withdrawal with a 'W'

Week	Topics and Events
11/1–11/5	Sections 4.4, 4.5, 4.7 Monday: Midterm 2
11/8–11/12	Sections 4.7, 4.9, 4.10, 5.1
11/15–11/19	Sections 5.2, 5.3
11/22–11/26	Sections 5.4, 5.5, 5.6 Monday: Midterm 3 Thursday, Friday: Holiday
11/29 –12/3	Sections 6.1, 6.2, 6.3
12/6 –12/10	Sections 6.3, 6.4, 6.5
12/13 –12/18	Review Saturday: Final

Rules and Policies

Attendance Attend every class. Attend every recitation. Although attendance is not directly part of your grade, it is very easy in a math class to fall behind after skipping even one class.

Collaboration You are encouraged to work together in solving homework problems. But each student must write up their solutions independently. Cloning (copying another student's homework) is not permitted and is a form of Academic Dishonesty (see below). If you receive significant help solving a problem, it is customary to make a note in your homework to give the person who helped you credit.

Late Homework Late homework will never be accepted. Ever. To compensate for this policy, your two lowest homework scores will be dropped.

Exam Aids Exams will be written without any aids. No notes, books or calculators will be allowed.

Makeup Exams You can make up an exam if certain extenuating circumstances prevent you from taking it and if you inform me in advance. Contact me as soon as possible if you are going to miss an exam.

Disabilities Services I will work with the Office of Disabilities Services (203 Whitaker, 474-7043) to provide reasonable accommodation to students with disabilities.

Cell Phones Turn off your cell phone before you come to class.

Incomplete Grade Incomplete (I) will only be given in Computer Science, Mathematics or Statistics courses in cases where the student has completed the majority (normally all but the last three weeks) of a course with a grade of C or better, but for personal reasons beyond his/her control has been unable to complete the course during the regular term. Negligence or indifference are not acceptable reasons for the granting of an incomplete grade. (Note: this is essentially the old University policy.)

Late Withdrawals A withdrawal after the university deadline from a Department of Mathematical Sciences course will normally be granted only in cases where the student is performing satisfactorily (i.e., C or better) in a course, but has exceptional reasons, beyond his/her control, for being unable to complete the course. These exceptional reasons should be detailed in writing to the instructor, department head and dean.

Academic Dishonesty Academic dishonesty, including cheating and plagiarism, will not be tolerated. It is a violation of the Student Code of Conduct and will be punished according to UAF procedures.