

**Professor's Address**

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**TA's Address**

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**Textbook**

*Single Variable Calculus*, by James Stewart, 6th Edition, Thomson Brooks/Cole 2008.

**Exams and Grades** There will be three hour exams (see the next page) and one final exam scheduled for Monday, 15 December 10:30 – 12:30A.M.

(see <http://registrar.missouri.edu/classes-exams/fs08final-exams.php>).

If, for reasons beyond your control, you cannot be in class the day of an exam, you must make arrangements *before* the date of the exam to take the exam at an alternate time. Each hour exam will count 100 points while the comprehensive final exam counts 200 points. Homework/Quizzes count 100 points. The listed homework assignments are incomplete; additional problems will be assigned. Course grades will be awarded using the plus-minus grading system. As a rough guide, my grading policy is approximated by the following ranges: 90% to 100% is an A, 80% to 89% a B, 60% to 79% a C, 50% to 59% a D and below 50% an F.

Quizzes and special homework assignments to hand in will be announced in class.

**Office Hours** Professor: Regular office hours are Monday and Wednesday 2:00–3:00 P.M. and by appointment. These times could change. If so, I will revise this document on the course web page. Please feel free to see me in my office; I will try my best to help with all of your questions. I also will respond to e-mail.

TA: Tuesday and Thursday 11:00-12:00 A.M. in MSB Room 27.

**Prerequisites** If you are enrolled in this course and the MU system shows that you do not satisfy the required prerequisites, in particular honors status, the Mathematics Department will drop you from the class *after* the last day for add/drop has passed, at which time, you will not be able to add another course. It is your responsibility to provide appropriate documentation for satisfying prerequisites and to check that the corresponding documentation has been entered in the MU system.

	Section Number and Topic	Homework Assignment
1	1.1 <i>Functions</i>	2, 5–8, 13, 18, 19, 23, 32, 56, 59
2	1.2 <i>Mathematical Models</i>	5, 8, 9, 13, 15, 17, 26*
3	1.3 <i>New Functions from Old</i>	1, 3, 11, 26, 31–36, 39, 43, 50, 54, 58, 60
4	2.1 <i>The Tangent and Velocity Problems</i>	1, 3*, 5, 8
5	2.2 <i>The Limit of a Function</i>	1, 5, 6, 12, 19, 22, 40, 42*
6	2.3 <i>Calculating Limits Using Limit Laws</i>	1–9, 10, 11–30, 32*, 36, 47, 52, 53, 59, 62
7	2.4 <i>The Precise Definition of a Limit</i>	1–4, 11, 19–32, 39
8	2.5 <i>Continuity</i>	1, 5, 13, 15–20, 40, 43(a), 47–50, 60, 65
9	3.1 <i>Rates of Change</i>	1, 3, 5–8, 14, 21, 31, 40, 41, 44, 49
10	<b>Exam 1</b>	
11	3.2 <i>Derivatives</i>	1, 3, 12, 17–28, 41, 52, 55
12	3.3 <i>Differentiation Formulas</i>	1–20, 23–42, 43, 53–56,
	3.3 homework continued	62, 66, 70, 75.81, 84, 89, 99, 102
13	3.4 <i>Trig Functions</i>	1–24, 34, 35, 36*, 38, 39, 46, 51
14	3.5 <i>The Chain Rule</i>	1–54, 70, 73, 76, 79
15	3.6 <i>Implicit Differentiation</i>	1–30, 40, 43, 51
16	3.7 <i>Applications</i>	1–4, 7, 8, 10, 13, 14, 20, 25, 26
17	3.8 <i>Related Rates</i>	1–14, 19, 22, 23, 31, 36, 38
18	3.9 <i>Linear Approximation</i>	1–4, 11–14, 23–28, 34, 38, 40
19	4.1 <i>Max and Min</i>	1, 2, 15, 19, 22, 29–42, 45–56, 65, 69, 72
20	4.1 <i>Catch up and Review</i>	4, 6, 8, 10, 13, 15
21	<b>Exam 2</b>	
22	4.2 <i>Mean Value Theorem</i>	1–4, 5, 6, 15, 17, 19, 20, 24, 26–27, 29, 34
23	4.3 <i>Shape of Graphs</i>	1–4, 9–14, 15–17, 18, 42, 55
24	4.4 <i>Limits at Infinity</i>	1–3, 7–30, 33–38, 43–46, 57, 59,
25	4.5 <i>Curve Sketching</i>	1–38, 40, 41, 42
26	4.7 <i>Optimization</i>	1–10, 12, 16, 18, 26, 27, 35, 37, 41, 63, 70*
27	4.8 <i>Newton's Method</i>	4, 5–8, 15, 17, 25, 27, 32, 34, 40*
28	4.9 <i>Antiderivatives</i>	1–40, 51, 56, 57, 61, 62, 70
29	5.1 <i>Areas and Distances</i>	1–5, 12, 15, 22, 26
30	5.2 <i>Definite Integral</i>	1–6, 8, 9, 17, 18, 25, 36, 39, 41–44, 52–53, 65, 66
31	<i>The Fundamental Theorem of Calculus</i>	1, 2, 5, 7–36, 37, 47–50, 51, 60, 61, 63
32	<b>5.3 Exam 3</b>	
33	5.3 <i>Indefinite Integrals</i>	1–42, 45, 50, 56, 59
34	5.4 <i>Substitution Rule</i>	1–30, 35–50, 53, 55, 61
35	6.1 <i>Areas Between Curves</i>	1–28, 43, 49, 56
36	6.2 <i>Volumes</i>	1–18, 35, 47, 51, 60, 63, 71*
37	6.2 <i>Cylindrical Shells</i>	1–26, 21, 46.

**Notes on Syllabus** (a) The topics are listed in the order we will cover them. Most items will take one class day to cover. You will be able to stay with the schedule by coming to class. The exact dates of the hour exams will be announced at least one week in advance. (b) Starred problems (\*) might require the use of a calculator or computer, or they might be too long for a class discussion. These problems are recommended but not required. (c) Homework problems are recommended to help you learn concepts. It is not important that you do every problem of each given type. On the other hand, it is important that you are able to solve problems of each given type. So, you will have to decide how many examples you need to solve to be confident you know the subject. The homework problems listed in this syllabus are for you to use to study and will be the main focus of the recitations. These assignments will not be collected.

**Operating Procedure** The most important features of the theory will be discussed in class and an attempt will be made to answer all questions. The recitations on Tuesday and Thursday will be mainly devoted to working through homework problems. In order to be successful, you are strongly encouraged to take part in all class and recitation discussions. But, experience dictates that *the most important key to success* is the completion of all homework assignments. There are at least two good reasons for this: Exam questions will often be taken directly from the homework and, by doing the homework assignments prior to the class meetings, you can take full advantage of the class discussions. In this regard, please note that there are very few class hours. If you remove exam days and holidays there are approximately 40 class hours. In the real world, this is just one week of work! Clearly, it is impossible to cover every detail of what you need to know during class meetings. To master the course, you must learn most of the material outside of class.

**Feedback** I sincerely want every member of the class to learn as much as possible about the wonderful subject of Calculus. I welcome constructive criticism of the way the course is conducted. Your evaluations of the course will be requested near the end of the semester.

**Disabilities** If you need accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please inform me immediately. Please see me privately after class, or at my office. To request academic accommodations (for example, a note taker), students must also register with Disability Services (<http://web.missouri.edu/~accesscm>), AO38 Brady Commons, 882-4696 or 882-8054 TTY. It is the campus office responsible for reviewing documentation provided by students requesting academic accommodations, and for accommodations planning in cooperation with students and instructors, as needed and consistent with course requirements. Another resource, MU's Adaptive Computing Technology Center (<http://iatservices.missouri.edu/adaptive>), 884-2828, is available to provide computing assistance to students with disabilities. For more information about the rights of people with disabilities, please see [ada.missouri.edu](http://ada.missouri.edu) or call 884-7278.

**Academic Honesty** Academic honesty is fundamental to the activities and principles of a University. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. When in doubt about plagiarism or collaboration, consult the course instructor. The academic community regards academic dishonesty as an extremely serious matter, with serious consequences that range from probation to expulsion.

If at any time you have questions about this policy, please ask.

**Complaints** If you have communication (or other problems) with your instructor, you can report them to Professor Ian Aberbach (Director of Undergraduate Studies) either by phone (882-4898) or by e-mail ([aberbach@math.missouri.edu](mailto:aberbach@math.missouri.edu)).