

# MAC2311 Calculus 1 Summer 2007

Professor David Rollins

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## Contact Information

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Office: MAP 103, MWF 10:00-11:00, TR 11:00-12:00. If these times don't work for you, set up an appointment.

## Course Information

Prerequisites: MAC1105 (College Algebra) and MAC1114 (College Trigonometry) or the equivalent.

Course Description: The ideas of limit, derivative and integral are introduced for functions of a single variable.

Topics: Chapter 1 - Functions and their representations; Chapter 2 - limit of a function, calculating limits, continuity, tangent lines; Chapter 3 - derivative of a function, product, quotient and chain rules, implicit differentiation, higher derivatives; Chapter 4 - applications, mean value theorem, curve sketching, optimization problems; Chapter 5 - areas and distance, definite integral, fundamental theorem, substitution method; Chapter 6 - applications of integration, volumes, work done.

Text: Calculus, James Stewart, Fifth Edition

Calculator: Note that no calculators with symbolic capabilities may be used. Only basic scientific calculators are allowed on the tests.

Homework: The suggested homework problem list is on page 2 of this syllabus. You should spend at least two hours outside after each class working homework problems, so about ten hours a week minimum.

Quizzes: A weekly quiz will be given each Friday when a test is not given. It will be based on the assigned homework during that week. These quizzes will count for 10% of your grade with each quiz has the same weight.

Exams: There will be four in-class exams during the semester each weighted equally. The first two will take place June 1 and June 22. Your second half instructor will announce the dates for exam 3 and 4.

Grades: Quizzes 10%, Exams 90%. Standard grade scale will be used.

Important Dates: Memorial Day, May 28, Independence Day, July 4. Withdrawal deadline: June 22.

Note: All information in this syllabus is subject to change. Any changes will be given in writing.

## Homework Problems

- 1.1: 1,2, 5-10, 16,17,23,39  
1.2: 3,4,9,10  
1.3: 4,5,20,22,31,35-39, 45,46
- 2.1: 1,2,5,6  
2.2: 4-7, 12,13  
2.3: 2,3,5,11-15, 17,19, 21,22,27,39,43,44,46  
2.5: 3-7, 10,11,15,16,34,37  
2.6: 7-11, 15-18
- 3.1: 3-5, 14-17, 25,27,28  
3.2: 1,2,4,5,8,11,17,20-22, 24,29  
3.3: 1-16, 19-26, 49,50,59,72  
3.4: 1,2,7,8,9,12,13,17,19,20  
3.5: 1-14, 23,31  
3.6: 4, 7-14, 22-34, 51,53,57,58,63  
3.7: 5-8, 12-20, 25,26,27,41,43  
3.8: 2,3, 5-12, 29,30,36,41,42  
3.9: 1,2,5,7,8,12,14,15,21,28,29  
3.10: 1,2,5,6,21,31,39,40
- 4.1: 3-10, 47,48,53,54,57,58,65  
4.2: 1,2,7,11,12,17,33  
4.3: 1,3, 5-8, 11,12-16, 25,27,33,34,38  
4.4: 1,4, 7-9, 12,14,15,17  
4.5: 7-10, 21,29,31  
4.7: 4-12, 25,29,30,31,38,40
- 5.1: 1,3,5,11,13,15  
5.2: 5,6,7,9,15,19,29,30,31,32  
5.3: 1,2,5,7,9,12,17,19,21,22,25,26,31,33,49,56  
5.4: 1,2,3,5,12,13,17,19,27,35,37,41,53,54  
5.5: 1,3,4,5,6,9,17,19,21,37,41,43,45,47,49
- 6.1: 1,2,3,5,6,9,15,21,22,37,41  
6.2: 1-8, 11,12. 14-18, 46,47,49  
6.3: 1-4  
6.4: 1,3, 5-13, 15,16  
6.5: 1-4