

MAC2312 Calculus 2 Spring 2007

Professor David Rollins

January 7, 2007

Contact Information

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Office: MAP 103, MF 9:00-10:30, W 12:30-13:30. Excel Center (Eng III - 101) M 13:30-14:30. If these times don't work for you, set an appointment with me.

Course Information

Prerequisites: MAC2311 (Calculus 1) or the equivalent, MAC1105 (College Algebra) and MAC1114 (College Trigonometry) or the equivalent.

Course Description: MAC2312 is a continuation of the study of functions and the differential calculus for algebraic, trigonometric and exponential functions. New integration methods will be introduced. The ideas of inverse function, sequence, infinite series and power series will be studied.

Topics: Chapter 7 - Inverse functions, logarithmic and exponential functions, hyperbolic functions, inverse trigonometric functions, L'Hôpital's rule; Chapter 8 - Integration techniques including partial integration, trigonometric substitutions and partial fractions, numerical integration, improper integrals; Chapter 9 - Further applications of integration; Chapter 11 - Parametric equations, polar coordinates, area in polar coordinates, conic sections; Chapter 12 - Sequences, limits, infinite series, Taylor polynomials and series.

Text: Calculus, James Stewart, Fifth Edition

Calculator: Graphing calculator is optional. Note that no calculators with symbolic capabilities may be used.

Recitation: Monday evening you will attend a weekly problem solving session run by Chris Sentelle. He will go over problems you are having difficulty with, collect and grade assigned homework and administer the weekly quizzes. The morning class from 6-7 PM and the afternoon class from 7-8 PM. These take place in the Excel Center.

Homework: Each week a homework assignment will be assigned in class that will be turned in at the recitation session the following week. These will be graded and account for 5% of your grade. These homework problems alone are not enough to gain mastery of the course, so you should do more problems on your own from the suggested homework problem list on page 2 of this syllabus. You should spend at least two hours outside for each hour in class, so about eight hours a week minimum.

Quizzes: A weekly quiz will be given in the recitation that is based on the assigned homework. These quizzes will count for 15% of your grade with each quiz having the same weight. Your worst quiz will be dropped.

Exams: There will be four in-class exams during the semester worth 50 points each, and a comprehensive final exam worth 100 points. The final exam, in addition to counting as the final, it is used as test 5 where it is worth 50 points. The best 4 out of 5 test scores plus the final exam score (a maximum of 300 points) will be used to calculate the exam part of your grade.

Grades: Homework 5%, Quizzes 15%, Exams 80%. Grades will be assigned as follows: 92-100 A, 90-91 A-, 88-89 B+, 82-87 B, 80-81 B-, 78-79 C+, 72-77 C, 70-71 C-, 60-69 D, 0-59 F.

Important Dates: MLK Day, January 15, Withdrawal deadline: March 2, Spring Break March 8-13, Final Exam Week April 24-30. A common final will be given Saturday, April 28.

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

Homework Problems

7.1: 3-7 odd, 13-19 odd, 23-29 odd, 35-41 odd, 44

7.2*: 1-27 odd, 37, 41, 43, 55-67 odd, 71

7.3*: 3-17 odd, 23-39 odd, 43, 45, 47, 69-75 odd

7.4*: 3-9 odd, 21, 23, 25, 29, 31, 35, 39, 41, 43, 47

7.5: 1, 3, 5, 13, 19, 21, 23-31 odd, 43, 45, 49, 59-71 odd

7.6: 3, 7, 9, 11, 19, 21, 29abd, 31-43 odd, 49, 52, 55-61 odd

7.7: 5-49 odd, 79, 91

8.1: 3-29 odd, 43ab, 45

8.2: 5-45 odd, 53, 59, 65

8.3: 5-31 odd

8.4: 7-41 odd

8.5: 1-25 odd, 29, 37-45 odd

8.6: TBA

8.7: TBA

8.8: 5-39 odd, 49, 51

9.1: 5-15 odd, 31, 33

9.2: 5-15 odd, 25, 29

9.3-9.5: TBA

11.1: 3-13 odd, 14, 19, 21, 28abc

11.2: 5-19 odd, 25, 31, 33, 41, 43

11.3: 1-11 odd, 15, 17, 21, 23, 29-37 odd

11.4: 3-33 odd, 37, 39

11.5: 9-31 odd, 39, 43, 50

11.6: TBA

12.1: 5-21 odd, 27, 29, 33, 49, 53-59 odd

12.2: 9, 11-23 odd, 31, 33, 41, 43, 45, 52a

12.3: 3-21 odd, 25, 27

12.4: 3-21 odd, 29, 31

12.5: 5-19 odd, 23-29 odd

12.6: 3-13 odd, 19, 21, 25, 27, 29

12.7: 1-17 odd, 27-35 odd

12.8: 1-23 odd

12.9: 3, 5, 7, 11, 13, 17, 19, 25, 27, 29

12.10: 4, 5-13 odd, 21-27 odd, 31, 37, 41,43, 47, 55-59 odd

12.11: 1-7 odd, 11, 13, 15