

Syllabus for Math 142

Calculus II – Spring 2005

Course Description: This course is an introduction to single variable calculus. It covers basics of antiderivatives, integration, infinite sequences and series, and their applications.

Course Prerequisites: Calculus I, Math 141, or equivalent.

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Course web page: <http://www.math.utk.edu/~hannoun/math142.html>

Math dept office: 121 Ayres Hall

Text: *Calculus - Concepts and Contexts* (2nd ed.) by James Stewart

Class meetings: MW 5:45–7:35pm A 216

Calculator: A graphing scientific calculator is required for tests and class meetings

Quizzes: Quizzes will be given in class on a regular basis. At the end of the semester, you will be able to drop the lowest 25% (chopped) of the total number of quiz grades.

Exams: There will be three tests and a final exam. Tests and final will be based on the material covered in class as well as problems assigned as homework. Only the final is comprehensive although understanding of old material may be necessary for the tests. A tentative schedule is as follows:

Test 1	Monday Feb 21	5:35–7:45p	A 216
Test 2	Monday Mar 14	5:35–7:45p	A 216
Test 3	Wednesday Apr 20	5:35–7:45p	A 216
Final	Wednesday May 4	7:15–9:15p	A 216

Course Grade: The final course grade will be computed according to the following weights:

Quiz Av.	24%
Test 1	17%
Test 2	17%
Test 3	17%
Final	25%

Attendance: Class attendance is expected. If the total number of unexcused absences is 5 or less, the lowest test grade (not the Quiz average grade) may be replaced by the grade made on the final.

Make-ups: There are no make up tests. If you miss a test, your test grade will be the grade made on the final. A make up for the final is possible only under verifiable special circumstances. In such a case, the make up exam will be taken prior to the final exam. Please notify the instructor in a timely manner.

Special accommodation: If you need course adaptations or accommodations because of a documented disability or if you have emergency information to share, please contact the Office of Disability Services at 191 Hoskins Library or 974-6087. This will ensure that you are properly registered for services.

Homework Problems

Sections to be covered and suggested problems

1/12	4.9	Antiderivatives: 1–15 odd, 19, 21, 27, 29, 37, 43, 45
1/19	5.1	Areas and distances: 1–7 odd, 11–13, 17, 18
1/24	5.2	The definite integral: 3, 5, 9, 11, 17, 19, 21, 29–43 odd, 47
1/26	5.3	Evaluating definite integrals: 11–21 odd, 39, 41, 49, 51, 53
1/26,31	5.4	The fundamental theorem of calculus: 2, 3, 5, 9–11, 19, 24
1/31, 2/2	5.5	The substitution rule: 7–31 odd, 37, 39, 43, 47, 58, 59, 61, 63, 65
2/2	5.6	Integration by parts: 3, 5, 7, 10, 11–19 odd, 33–39 odd
2/7	5.7	Additional techniques of integration: 9–13 all.
2/7	Appendix G	Integration of rational functions by partial fractions: page 408: 17, 18, 19, 20, 27; page A56: 13–19, 23, 25, 27
2/9	5.8	Integration using tables and comp. alg. syst.: 1–11 odd, 14, 15, 17
2/9, 2/14	5.9	Approximate integration: 7–17 odd, 25, 27, 32, 33, 35
2/14	5.10	Improper integrals: 5–19 Odd, 23–31 odd, 41, 43, 47, 51, 55
2/16	Appendix H2	Polar coordinates: 1–5 odd, 9, 11, 15, 19, 25
2/16, 2/21	Test 1 Review:	
2/23	6.1	More about areas: 1–15 odd, 21, 22, 25–33 odd
2/23, 2/28	6.2	Volumes: 1–11 odd, 15, 17, 18, 19, 21, 23, 26, 29, 34, 37, 41
2/28	6.3	Arc length: 3, 4, 5, 7, 11, 13, 17, 21, 23, 24
3/2	6.4	Average value of a function: 1–13 odd
3/2, 2/7	6.5	Applications to Physics and Eng.: 1–13 odd, 14, 17, 25–31 odd, 32
3/7	6.6	Applications to Economics and Biology: 1–9 odd, 12–15 all
3/9	Test 2 Review:	
3/16	8.1	Sequences: 5–25 odd, 31, 32, 33, 35, 36, 39, 45, 47
3/28	8.2	Series: 3–9 odd, 10, 11–25 odd, 31, 33, 39, 43, 47, 49
3/30	8.3	The integral and comparison tests ... : 6–8, 13–19 odd, 20, 21, 23–25, 27–33 odd
3/4	8.4	Other convergence tests: 3, 5, 7, 11–13, 17, 19, 21, 22, 25–27, 29, 31
4/6	8.5	Power series: 3–17 odd, 25
4/6	8.6	Representation of functions as power series: 3–25 odd
4/11	8.7	Taylor and Maclaurin series: 7–13 odd, 17–23 odd, 29–35 odd, 39, 41, 47, 49
4/13	8.9	Application of taylor series: 3, 5, 7, 11–17 odd, 21, 23
4/18	Test 3 Review:	
4/25, 4/27	Final exam Review:	
