

MATH 205
Differential & Integral Calculus II
Winter 2005

Instructor: _____

Office/Tel. No.: _____

Office Hours: _____

Course Examiner: Dr. Y. Khidirov, Email: khidirov@alcor.concordia.ca

Text: *Single Variable Calculus*, by James Stewart, 5th Edition, Brooks/Cole.

Prerequisite: Math 203 or an equivalent Calculus I course.

Calculators: Calculators are not permitted in the class test and final examination.

Math Help Centre: The Centre has been organized to help students in solving problems. A schedule of its operation and its location will be posted in the Department. The Centre is staffed by senior undergraduate and graduate students. If you are having difficulty with the material, your professor is also available during his/her office hours to give a reasonable amount of help. Note, however, that if you do not attend a class it is not reasonable to expect your professor to cover the missed material for you.

Assignments and Solutions: Students are expected to submit assignments weekly. Some (but not all) questions will be marked. Late assignments **will not** be accepted. Working on assignment questions and other selected problems is essential. There is not enough class time to do all the examples needed for a good understanding of the material, and so students are strongly encouraged to do as many problems on their own as their time permits. The sheet of suggested supplementary problems attached to this outline contains specially selected problems to complement the assignments. Solutions to the even-numbered assignment questions will be available at the Copy Centre on each campus about 1 week after the due date. In addition, a solutions manual for all odd-numbered questions is packaged with the text to provide quick and thorough feedback

Test: There will be one midterm test in Week 7.

Final Exam: The final examination will be three hours long.

Final Grade: The final grade will be based on the higher of (a) or (b) below:
a) 10% for the assignments, 15% for the midterm test, and 75% for the final.
b) 100% for the final examination.

Note: Students are strongly advised to do all assignment and supplementary questions. Students who plan to use a graphing calculator should study section 1.4.

Week	Topics	Assignments
1	5.1 Areas 5.2 The definite integral	p.378: 2, 4, 18, 20 p.390: 6, 12, 22, 34, 48, 54
2	4.10 Antiderivatives 5.3 The fundamental theorem	p.358: 4, 8, 12, 16, 24, 28, 34, 42 p.402: 8, 12, 14, 22, 28, 32, 38, 40
3	5.4 Indefinite integrals 5.5 The substitution rule	p.411: 2, 8, 12, 26, 30, 38 p.420: 2, 4, 14, 18, 22, 28, 32, 36, 50, 58
4	7.1 Integration by parts 6.1 Areas between curves	p.480: 6,14, 22, 28, 34 p.442: 2, 4, 6, 10, 18, 24
5	6.2 Volumes 6.4 Work 6.5 Average value of a function	p.452: 2, 6, 12, 24, 30, 48, 52 p.463: 8, 10, 18, 20 p.467: 4, 8, 10
6	7.2 Trigonometric integrals 7.3 Trigonometric substitutions	p.488: 2, 8, 20, 22, 30 p.494: 2, 6, 8, 16, 20, 22
7	Class Test	
8	7.4 Integration of rational functions 7.8 Improper integrals	p.504: 4, 8, 12, 18, 22, 28, 32 p.537: 2, 8, 14, 24, 26, 28, 32, 36
9	11.1 Sequences 11.2 Series	p.710: 4, 10, 12, 14, 16, 20, 26, 32, 54, 58 p.720: 14, 16, 20, 32, 36, 40, 42
10	11.3 Integral test 11.4 Comparison test 11.5 Alternating series	p.729: 4, 6, 12, 14, 20, 22, 24 p.734: 4, 6, 10, 14, 18, 24 p.739: 2, 4, 8, 14, 18, 24, 30
11	11.6 Ratio and root test 11.8 Power series	p.745: 2, 6, 10, 14, 18, 22, 24 p.753: 4, 8, 12, 16, 18, 22
12	11.9 Representations as power series 11.10 Taylor and Maclaurin series (Omit Taylor's Inequality)	p.759: 6, 8, 14, 18, 26, 30 p.770: 4, 6, 18, 24, 26, 40, 46
13	Review - Tutorials	

Supplementary problems

Week	Topics	Assignments
1	5.1 Areas 5.2 The definite integral	p.378: 3, 5, 17 p.390: 7, 9, 21, 37, 53
2	4.10 Antiderivatives 5.3 The fundamental theorem	p.358: 3, 5, 13, 27, 35 p.402: 9, 11, 15, 23, 29, 37
3	5.4 Indefinite integrals 5.5 The substitution rule	p.411: 1, 11, 19, 27, 35 p.420: 3, 7, 21, 27, 31, 35, 41, 51, 57, 65
4	7.1 Integration by parts 6.1 Areas between curves	p.480: 5, 13, 21, 31, 33, 45 p.438: 3, 9, 11, 21, 25
5	6.2 Volumes 6.4 Work 6.5 Average value of a function	p.452: 5, 9, 15, 27, 29, 49 p.463: 1, 3, 13, 19, 23 p.467: 3, 5, 9
6	7.2 Trigonometric integrals 7.3 Trigonometric substitutions	p.488: 3, 9, 15, 29, 31 p.494: 3, 7, 9, 13, 17, 23
7	Class Test	
8	7.4 Integration of rational functions 7.8 Improper integrals	p.504: 5, 15, 17, 21, 25, 29, 35 p.537: 3, 9, 17, 21, 31, 37
9	11.1 Sequences 11.2 Series	p.710: 3, 17, 21, 33, 57, 59 p.720: 15, 19, 21, 27, 37, 43
10	11.3 Integral test 11.4 Comparison test 11.5 Alternating series	p.729: 3, 9, 15, 21, 23 p.734: 3, 7, 9, 15, 19 p.739: 3, 5, 11, 15, 29
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