

SYLLABUS

Mathematics 154, Sections 1-2: Intensive Calculus: Spring 2003

Lecturer: Prof. Daniel Ocone

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Office hours: Monday, 1:00-2:00PM, Thursday 10:00-11:15AM

Text: *Calculus; Early Transcendentals*, Stewart, fourth edition

Recitation Instructors: Calculators: Graphing calculators are necessary for homework and workshop problem. Calculators are not permitted in exams.

Schedule (Section numbers refer to the Stewart text.)

<i>Date</i>	<i>Lecture</i>	<i>Topics</i>	<i>Sections</i>
1/23	1	Area and Volume	6.1, 6.2
1/27	2	Volumes	6.2, 6.3
1/30	3	Work, Average Value	6.4, 6.5
2/3	4	Integration by parts	7.1
2/6	5	Trigonometric Integrals	7.3
2/10	6	Trigonometric Substitution	7.4
2/13	7	Partial fractions, Integration strategies, Use of tables.	7.4, 7.5, 7.6
2/17	8	Approximation for integrals	7.7
2/20	9	Improper Integrals	7.8
2/24	10	Arc Length, Surface Area	8.1, 8.2
2/27	11	Differential equations (direction fields and applications)	9.1, 9.2
3/3	12	Separation of variables, Exponential growth	9.3, 9.4
3/4		FIRST HOURLY EXAM (in recitation)	
3/6	13	Sequences	11.1
3/10	14	Series	11.2
3/13	15	Integral test. Estimates.	11.3
3/24	16	Comparison tests.	11.4
3/27	17	Alternating Series. Absolute convergence.	11.5, 11.6
3/31	18	Ratio and root tests. Strategies.	11.6, 11.7
4/3	19	Power series. Representation of functions.	11.8
4/7	20	Representation of functions by power series.	11.9
4/10	21	SECOND HOURLY EXAM	
4/14	22	Taylor series.	11.10
4/17	23	Binomial Series. Applications.	11.11, 11.12
4/21	24	Applications of Taylor series.	11.12
4/24	25	Parametric equations, Tangents, Arc length	10.1, 10.2, 10.3
4/28	26	Polar coordinates.	10.4
5/1	27	Calculus in polar coordinates.	10.5
5/5	28	Catch-up and Review.	
5/8		FINAL EXAM	