

Fall 2011 Math41L Syllabus - Friday Lab

Textbook: Calculus: Concepts and Contexts (4th ed), by James Stewart

Day	Date	Section	Topic
1-2	30-Aug	Handout	Review of AP AB Differentiation topics
1-3	31-Aug	Handout	Introduction to Probability
1-4	1-Sep	Handout	Expected Value
1-5	2-Sep	4.5	Lab: L'Hopital's Rule and Relative Rates of Growth
2-2	6-Sep	8.1,8.2	Introduction to sequences and series
2-3	7-Sep		Lab: Probability and geometric series
2-4	8-Sep		Lab: Riemann Sums
2-5	9-Sep		Lab: Riemann Sums
3-2	13-Sep	5.2	Definition of the integral
3-3	14-Sep	4.3,5.3	Mean Value Thm and the Fundamental Thm of Calculus Part I
3-4	15-Sep	5.4	Fundamental Thm of Calculus Part II
3-5	16-Sep	4.8,6.2,6.5	Lab: Review of AP AB Integration topics
4-2	20-Sep	5.5	u-substitution
4-3	21-Sep	5.7	Partial fractions
4-4	22-Sep	5.6	Integration by parts
4-5	23-Sep		Lab: Quantities of Varying Densities
5-2	27-Sep		Review
5-3	28-Sep		Test 1
5-4	29-Sep	p.227	Hyperbolic functions and practice with antidifferentiation
5-5	30-Sep	5.9	Lab: Approximation of the integral
6-2	4-Oct	5.10	Improper integrals
6-3	5-Oct	6.8	Probability distributions and expected value
6-4	6-Oct		Lab: Centers of Mass
6-5	7-Oct		Lab: Centers of Mass
7-2	11-Oct	<i>Fall Break</i>	
7-3	12-Oct	6.8	Normal distributions
7-4	13-Oct	8.3	Integral test for series
7-5	14-Oct		Gateway test
8-2	18-Oct	8.3	Comparison tests

8-3	19-Oct	8.4	Alternating series and absolute convergence
8-4	20-Oct	8.4	Ratio test
8-5	21-Oct		Lab: Using series to solve problems
9-2	25-Oct	8.5	Power series
9-3	26-Oct	8.6	Representing functions as power series
9-4	27-Oct	7.1	Introduction to differential equations
9-5	28-Oct		Lab: Series practice
10-2	1-Nov	7.2	Slope fields and Euler's method
10-3	2-Nov	7.3	Separation of variables
10-4	3-Nov		Review
10-5	4-Nov		Test 2
11-2	8-Nov	p.247	Taylor polynomials
11-3	9-Nov	8.7	Taylor series
11-4	10-Nov		Introduction to Taylor's Theorem
11-5	11-Nov		Lab: Remainder estimates for Taylor series
12-2	15-Nov	online supplement	Introduction to Fourier series
12-3	16-Nov	online supplement	Fourier series
12-4	17-Nov	online supplement	More on Fourier series
12-5	18-Nov		Lab: Fourier series
13-2	22-Nov	7.4	Applications of differential equations
13-3	23-Nov		<i>Thanksgiving break</i>
13-4	24-Nov		<i>Thanksgiving break</i>
13-5	25-Nov		<i>Thanksgiving break</i>
14-2	29-Nov	7.5	Population growth models and logistic growth
14-3	30-Nov		Oscillations
14-4	1-Dec		Lab: Chemical rate equations
14-5	2-Dec		Lab: Chemical rate equations
15-2	6-Dec		Review
15-3	7-Dec		Test 3
15-4	8-Dec		Lab: Net worth
15-5	9-Dec		Lab: Net worth
	16-Dec		Final exam
revised 7/1/2011			