

Fall 2012 Math 122L Syllabus (Thursday Lab)

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

Day	Date	Topic	Homework
1-1	27-Aug	Review of AP AB Differentiation topics	p.164/7a,9,14,16;p.165(bottom)/1,3,9,10,13; p.166/29,33; p.167/42,43,45;171/11; p.309/56.
1-2	28-Aug	Introduction to Probability	handout cspk p.91/9-15; maple tutorial.
1-3	29-Aug	Expected Value	handout cspk p.97/7-13; complete maple tutorial.
1-4	30-Aug	Lab: L'Hopital's Rule and Relative Rates of Growth	4.5/1,5,6,11,12,17,31,61,63,64,72; finish relative rates of growth activity.
2-1	3-Sep	Introduction to sequences and series	8.1/5-10,46,47,49,51,52; 8.2/1,2,4,5,7,8*,9,10,44*,47.
2-2	4-Sep	Lab: Prob. & geometric series	8.2/6,11,14,15,17,35,36,41,43,49,50,53,54.
2-3	5-Sep	Lab: Riemann Sums	
2-4	6-Sep	Lab: Riemann Sums	5.1/2,13,15; complete lab exercises.
3-1	10-Sep	Definition of the integral	5.2/9,11,17-20,33,35,38-43,47,48,53*.
3-2	11-Sep	Mean Value Thm and the Fund.Thm of Calculus Pt. I	4.3/1,63; 5.3/6,15,19,22,30,31,32,51,53,69,73,74.
3-3	12-Sep	Fund Thm of Calculus Pt. II	5.4/1,2,4-8,11,14,16,22,31*,33.
3-4	13-Sep	Lab: Review of AP AB Integration topics	4.8/7,12,13,18,32,35,50,51; 6.2/3,9,16,20,25,26,34; 6.5/3,7,12,14,16,21.
4-1	17-Sep	U-substitution	5.5/5,12,18,20,29*,44,47,52,57,61,65,67,68,70,71; 6.5/19.
4-2	18-Sep	Partial fractions	5.7/21-24,32.
4-3	19-Sep	Integration by parts	5.6/5,9,18,25,29,36,39,40,45.
4-4	20-Sep	Lab: Quantities of Varying Densities	
5-1	24-Sep	Review	
5-2	25-Sep	Test 1	
5-3	26-Sep	Hyperbolic functions and antidifferentiation practice	finish exercises p.227; p.425/10-36.
5-4	27-Sep	Lab: Approx. of integrals	5.9/3,7,14,15,25-27,31,32,37,41.
6-1	1-Oct	Improper integrals	5.10/3,5,8-10,19,21,26,31,34*,43,44,46,48,50,52a,b,53,60.
6-2	2-Oct	Probability distributions and expected value	6.8/1,2,4-10,18*.
6-3	3-Oct	Lab: Centers of Mass	
6-4	4-Oct	Lab: Centers of Mass	
7-1	8-Oct	Normal distributions	6.8/12-17.
7-2	9-Oct	Integral test for series	8.3/2,5-8,11-18,31,32,34,36.
7-3	10-Oct	Comparison tests	8.3/4,9,10,19-30,42,44*,45*,46*.
7-4	11-Oct	Gateway test	

8-1	15-Oct	<i>Fall Break</i>	
8-2	16-Oct	<i>Fall Break</i>	
8-3	17-Oct	Alternating series and absolute convergence	8.4/1,3-14,20.
8-4	18-Oct	Lab: Using series to solve problems	
9-1	22-Oct	Ratio test	8.4/2,21-27,31,32*,35,37,40,41.
9-2	23-Oct	Power series	8.5/3,6,7-9,10,17,19,21,25,26,31*,33,34.
9-3	24-Oct	Representing functions as power series	8.6/1-5,7,9,11,12,21,24,26,30,37,38a,b.
9-4	25-Oct	Lab: Series practice	
10-1	29-Oct	Introduction to differential eqns	7.1/1-5,7*,9-15.
10-2	30-Oct	Slope fields and Euler's method	7.2/1,3-6,11,19,21-25.
10-3	31-Oct	Review	
10-4	1-Nov	Test 2	
11-1	5-Nov	Taylor polynomials	p.247/1-6.
11-2	6-Nov	Taylor series	8.7/2,3,7,10,11,15,18,25,27,33,44,52,60-63,65.
11-3	7-Nov	Introduction to Taylor's Theorem	8.8/1-8,27; Fourier series preparation handout.
11-4	8-Nov	Lab: Remainder estimates for Taylor series	
12-1	12-Nov	Introduction to Fourier series	online supplement 1-6.
12-2	13-Nov	Fourier series	online supplement 7-12.
12-3	14-Nov	More on Fourier series	online supplement 13-18,20.
12-4	15-Nov	Lab: Fourier series	
13-1	19-Nov	Separation of variables	7.3/1,3,4,10,14,16,19,21*,39,42,45.
13-2	20-Nov	Applications of differential eqns	7.4/3,6,8,13,14,19,21,22.
13-3	21-Nov	<i>Thanksgiving break</i>	
13-4	22-Nov	<i>Thanksgiving break</i>	
14-1	26-Nov	Population growth models and logistic growth	7.5/1,2,4,6,9,11,15.
14-2	27-Nov	Oscillations	complete in class handout.
14-3	28-Nov	Lab: Chemical rate equations	
14-4	29-Nov	Lab: Chemical rate equations	
15-1	3-Dec	Review	
15-2	4-Dec	Test 3	
15-3	5-Dec	Lab: Net worth or Force and Work	
15-4	6-Dec	Lab: Net worth or Force and Work	