

Fall 2017 Math 122L Syllabus (Friday Lab)

Textbook: Calculus: Concepts & Contexts (4th ed), by James Stewart
 "AHP" = "Math 122L Additional Homework Problems, "CP"=Coursepack

Day	Date	Topic	Homework
1-1	29-Aug	Review of AP AB Differentiation Topics	p.165 (bottom): 1,3,9,10,13; p.166 : 23,29,33; p.167 : 42,43,45; AHP : Review of AP Differentiation. Topics
1-2	30-Aug	Lab : L'Hopital's Rule and Relative Rates of Growth	4.5 : 1,5,6,11,12,15-17,22,31,42,43,61,63,64; AHP : L'Hopital's Rule and Relative Rates of Growth.
1-3	31-Aug	Riemann Sums	
1-4	1-Sep	Lab : Riemann Sums	5.1 : 2,13,15; 5.9 : 3,14(a,b),15(a,b),37; AHP : Riemann Sums.
2-1	5-Sep	Definition of the integral	5.2 : 17-20,33,35,38-43,47,48,53; AHP : Definition of the Definite Integral.
2-2	6-Sep	Mean Value Thm and the Fund.Thm of Calculus Pt. I	4.3 : 1,63; 5.3 : 6,15,19,22,30,31,32,53,73,74,76. AHP : MVT and FTC Part I.
2-3	7-Sep	Fund Thm of Calculus Pt. II	5.4 : 2,4,5,7,8,11,13,14,16,17,21,22,31; AHP : FTC Part II.
2-4	8-Sep	Lab : Review of AP AB Integration Topics	
3-1	12-Sep	U-Substitution	5.5 : 5,12,18,20,29,44,47,52,57,61,67,68,70,71; AHP : U-Substitution.
3-2	13-Sep	Integration By Parts	5.6 : 5,9,10,12,13,18,25,29,36,,45; AHP : Integration by Parts.
3-3	14-Sep	Improper Integrals	5.10 : 5,8-10,19,21,26,31,34,50,52a,b,53; AHP : Improper Integrals.
3-4	15-Sep	Lab : Varying Density	
4-1	19-Sep	Partial Fractions	5.7 : 21-24,32; AHP : Partial Fractions.
4-2	20-Sep	Problem Solving Practice	
4-3	21-Sep	Review	
4-4	22-Sep	Exam 1	
5-1	26-Sep	Introduction to Probability	CP p.91 : 9-15; AHP : Introductoin to Probability.
5-2	27-Sep	Expected Value	CP p.97 : 7-13, AHP : Expected Value.
5-3	28-Sep	Introduction to Sequences and Series	8.1 : 5-10,16,19,22,46,48; 8.2 : 1,2,4,8,9,10,22,27,44,47; AHP : Introduction to Sequences and Series.
5-4	29-Sep	Lab : Probability and Geometric Series	8.2 : 11,14,15,17,35,36,41,43,49,53,54; AHP : Probability and Geometric Series.
6-1	3-Oct	Integral Test	8.3 : 2,5-8,11-18,31-36; AHP : Integral Test.
6-2	4-Oct	Comparison Tests	8.3 : 9,10,19-30,42-46; AHP : Comparison Tests.
6-3	5-Oct	Alternating Series and Absolute Convergence	8.4 : 3-14,20; AHP : Alternating Series and Absolute Convergence.
6-4	6-Oct	Gateway Test	
7-1	10-Oct	<i>Fall Break</i>	
7-2	11-Oct	Ratio Test	8.4 : 2,21-27,31,32,35,37,40,41; AHP : Ratio Test.
7-3	12-Oct	Probability Distributions and Expected Value	6.8 : 1,2,4-10; AHP : Probability Distributions and Expected Value.

7-4	13-Oct	Lab: Using Series to Solve Problems	
8-1	17-Oct	Normal Distributions	6.8: 12-17; AHP: Normal Distributions.
8-2	18-Oct	Power Series	8.5: 3,6,7-9,10,17,19,21,23,25-27,33,34; AHP: Power Series
8-3	19-Oct	Lab: Centers of Mass	
8-4	20-Oct	Lab: Centers of Mass	
9-1	24-Oct	Representing Functions as Power Series	8.6: 1-5,7,11,12,14,16,21,24,26,29,30,37, 38a,b; AHP: Representing Functions as Power Series.
9-2	25-Oct	Lab: Series Practice	
9-3	26-Oct	Review	
9-4	27-Oct	Exam 2	
10-1	31-Oct	Taylor Polynomials	AHP: Taylor Polynomials.
10-2	1-Nov	Taylor Series	8.7: 1-5,7,10,11,14,15,18,25,27,29,30,33,44,50,52,60-63, 65; AHP: Taylor Series.
10-3	2-Nov	Lab: Remainder Estimates for Taylor Series	8.8: 14-18,26; AHP: Fourier Series Preparation.
10-4	3-Nov	Lab: Remainder Estimates for Taylor Series	
11-1	7-Nov	Fourier Series: Day 1	online supplement 1-6.
11-2	8-Nov	Fourier Series Day 2	online supplement 7-11.
11-3	9-Nov	Fourier Series Day 3	online supplement 13-18,20; AHP: Fourier Series.
11-4	10-Nov	Lab: Fourier Series	
12-1	14-Nov	Introduction to Differential Equations	7.1: 1-5,7,9-15; AHP: Introduction to Differential Equations.
12-2	15-Nov	Separation of Variables	7.3: 1,3,4,10,14,16,19,21,39,42,45; AHP: Separation of Variables.
12-3	16-Nov	Applications of Differential Equations	7.4: 3,8,13,14,22.
12-4	17-Nov	Lab: Chemical Rate Equations	
13-1	21-Nov	Lab: Chemical Rate Equations	
13-2	22-Nov	<i>Thanksgiving break</i>	
13-3	23-Nov	<i>Thanksgiving break</i>	
13-4	24-Nov	<i>Thanksgiving break</i>	
14-1	28-Nov	Slope Fields and Euler's Method	7.2: 1,3-6,11,19,21-25(a)(i,ii),(b); AHP: Slope Fields and Euler's Method.
14-2	29-Nov	Catch Up Day	
14-3	30-Nov	Review	
14-4	1-Dec	Exam 3	
15-1	5-Dec	Population Growth Models and Logistic Growth	7.5: 1,2,4,6,9,11,15; AHP: Population Growth Models and Logistic Growth.
15-2	6-Dec	Lab: Series Solutions to Differential Equations	
15-3	7-Dec	Lab: Net Worth	
15-4	8-Dec	Lab: Net Worth	