

Fall 2009 Math 32L Syllabus

Textbook: Calculus (4th ed), by Hughes-Hallett, et al.

Day	Section	Topic	Homework
1-1	Intro.	Selected topics from Math 31L	Review as needed.
1-2	<i>Course Pk</i>	Probability #1: Events	<i>Course Pack</i> /1,2,4,6,8.
Lab:		Air Pollution: Fine Particulate Matter	
1-3	<i>Course Pk</i>	Prob. #2: Random Variables	<i>Course Pack</i> /1-6,9,10.
2-1	<i>Course Pk</i>	Prob. #3: Expected Values	<i>Course Pack</i> /1-3,5,8,10,11,13.
2-2	9.2	Geometric series	9.2/1-3,5,7-9,11-13,20,21,24,26,28,31.
Lab:		Probability and Geometric Series	
2-3	<i>Course Pk</i>	Series#1: (seq/partial sums)	<i>Course Pack</i> /1-4,6,7; 9.1/17,38,39; 9.2/10,14,25,32.
3-1	7.1	Integration by Substitution	7.1/1-3,5,6,9,11,17,18,20,24,31,33,37,49-51,59, 77,81-83,87,89.
3-2	7.2	Integration by Parts	7.2/1,4,5,8,11,12,14,23,27,38,40,43,52-53.
Lab:		Integrating to Infinity	
3-3	7.4	Alg. Identities	7.4/1,2,8,9,20,23,24,32,35,40,57,63,64.
4-1	7.5,7.6	Approximating Definite Integrals	7.5/1,2,10-13,21,23; 7.6/3e (only with $n=2,4,8$), 4 (only with $n=2,4$),5c,.
4-2	<i>Course Pk</i>	Series#1: (n -th term test)	<i>Course Pack</i> /5,8-10; 9.2/18,19,29; 9.3/13,22, 24,28,33.
Lab:		Normal Data Sets, Part 1; Series Worksheet, Part 1 (p 219 <i>Course Pack</i>)	
4-3	<i>Course Pk</i>	Series #3: Integral Test	<i>Course Pack</i> /1,2a,b,3a,5a,b,c,6a,b.
5-1	9.4	Comp/Abs Conv/Lim Comp	9.4/1-7,9,24,26-28,32,48,50,52,66; 9.3/16; <i>Course Pack</i> p202/4a,c.
5-2	Review		
Lab:		Test #1	
5-3	7.7,7.8	Improper Integrals	7.7/2,4,7,9,10,17,22,29,38,43,44; 7.8/1,2,8,10,12, 19,21,26,28,32,33; work all problems in the “Background” section of the lab, <i>Present Value and Future Value</i> (on pages 109-111 of the <i>Course Pack</i>).
6-1	8.1	Areas and Volumes	8.1/1,3,4,7-10,16,18,19,24,25.
6-2	8.2	Arc length	8.2/10-12,18-21,28-31,36,39,41,42.
Lab:		Present Value and Future Value	
6-3	8.7	Distribution Functions	8.7/7,8,10,11,13-17,19,20; <i>Course Pk</i> p220/11c,d,g.
7-1	<i>Fall Break</i>		
7-2	8.8	Probability; Distributions	8.8/1,2,4-7,13,14.
Lab:		Varying Density, part III; gateway practice	
7-3	8.8	Normal Distributions	8.8/3,8-12.

8-1	10.1	Taylor Polynomials	10.1/1,3,5,6,17-20,22,25,28,33.
8-2	10.1	Taylor Polynomials	10.1/2,13,23,26,29-31,34,35.
Lab:	Normal Data Sets. Part 2		
8-3	9.4	Ratio Test	9.4/10,11,14,15,34,35,44; <i>Course Pack</i> p195/6,7,9a,b,d,e,h; p225/gateway practice.
9-1	Lab groups present normal lab results		<i>Course Pack</i> p220/12d-i,13,14.
9-2	<i>Course Pk</i> Series #4: Alt. Series Theorem		9.4/20,21,37-41,46,47,54; <i>Course Pk</i> p215/1-5,7,8; p220/10(a-d,f,k,l),11a,b,17a,b,d.
Lab:	Gateway Test		
9-3	9.5	Convergence of Power Series	9.5/1-4,7,10-14,17,21,23-25,27,30-32,35.
10-1	10.2	Taylor Series	10.2/5,7,13,18-20,22,25,26,28,29,31-34,40,41,43-45.
10-2	10.3	Using Taylor Series	10.3/2,8,12-14,23,26,30.
Lab:	Series Solutions of Initial Value Problems		
10-3	10.3	Using Taylor Series	10.3/5,6,16,20,22,29,36,40.
11-1	Catch up day		
11-2	Review		
Lab:	Test #2		
11-3	10.5	Fourier Series with period 2π	10.5/5,6,17,23-27.
12-1	10.5	General Fourier Series	10.5/12*,13*,19d.
12-2	10.5	Fourier series review	10.5/9,11,14,20d.
Lab:	Fourier Analysis of Musical Sound		
12-3	11.8	Predator-prey with phase plane	11.8/2,3,5-8,11-14.
13-1	11.8	SIR Model with phase plane	11.8/1,15a,16a,17a,18-20.
13-2	11.9	Phase Plane Analysis	11.9/1,2,4-6,8,10.
Lab:	Limited Immunity in Epidemics (Part I)		
13-3	Completion of lab		
14-1	11.10	Oscillations	11.10/3,5,7,12-13,15,16,18,19,22-25,27.
14-2	<i>Thanksgiving break</i>		
Lab:	<i>Thanksgiving</i>		
14-3	<i>Thanksgiving break</i>		
15-1	Review; TCE		
15-2	Review		
Lab:	Test #3		
15-3	Teacher's option		

Final Exam: Friday, December 11, 9:00 am - noon

**Caution: The answers to these problems in the back of the textbook and in the solutions manual are incorrect or flawed.*