Spring 2009 Math 32L Syllabus

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

Day	Section	Topic	Homework
1-2	*Course Pk*	Probability #1: Events	*Course Pack*/1,2,4,6,8.
1-3	*Course Pk*	Prob. #2: Random Var	*Course Pack*/1-6,9,10.
2-1	*Course Pk*	Prob. #3: Expected Val	*Course Pack*/1-3,5,8,10,11.
Lab:	Probability and Geometric Series		
2-2	9.2	Geometric series	9.2/1-3,5,7-9,11-13,20,21,24,26,28,31.
2-3	*Course Pk*	Series#1: (seq/partial sums)	*Course Pack*/1-4,6,7; 9.1/17,38,39; 9.2/10,14,25,32.
3-1	*Martin Luther King, Jr., holiday*		
Lab:	Integrating to Infinity		
3-2	*Course Pk*	Series#1: (n-th term test) 9.3 (through example #1)	*Course Pack*/8-10; 9.2/18,19,29; 9.3/13,22,24,28,33.
3-3	*Course Pk*	Series #3: Integral Test	*Course Pack*/1,2a,b,3a,5a,b,c.
4-1	9.4	Comp/Abs Conv/Lim Comp	9.4/1-7,9,24,26-28,32,48,50,52,66; 9.3/16; *Course Pack* p202/4a,c.
Lab:	Normal Data Sets, Part 1; Series Worksheet, Part 1 (p 219 *Course Pack*)		
4-2	9.4	Ratio Test	9.4/10,11,14,15,34,35,44; *Course Pk* p195/6,7,9a,b,d,e,h.
4-3	*Course Pk*	Series #4: Alt. Series Theorem	9.4/20,21,37-41,46,47,54; *Course Pk* p215/1-5,7,8; p220/10(a-d,f,k,l),11a,b,17a,b,d.
5-1	Review		
Lab:	Test #1		
5-2	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.
5-3	7.5,7.6	Approximating Definite Integrals	7.5/1,2,10-13,21,23; 7.6/3e (*only with n=2,4,8*), 5c,4 (*only with n=2,4*).
6-1	7.2	Integration by Parts	7.2/1,4,5,8,11,12,14,23,27,38,40,43,52-53.
Lab:	Air Pollution: Fine Particulate Matter		
6-2	7.4	Alg. Identities	7.4/1,2,8,9,20,23,24,32,35,40,57,63,64; *Course Pack* p186/5.
6-3	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; gateway practice: Course Pack/p225.
7-1	8.7	Distribution Functions	8.7/7,8,10,11,13-17,19,20; *Course Pk* p220/10g-j,11c,d,g.
Lab:	Gateway Test		
7-2	8.8	Probability; Distributions	8.8/1,2,4-7,13,14.
7-3	8.8	Normal Distributions	8.8/3,8-12; *Course Pack* p220/12a-c.

Day	Section	Topic	Homework
8-1	8.1	Areas and Volumes	8.1/1,3,4,7-10,16,18,19,24,25.
Lab:	Normal Data Sets. Part 2		
8-2	8.2	Volume and Arclength	8.2/10-12,18-21,28-31,36,39,41,42.
8-3	*Catch up day; prepare for presentation.*		Work all problems in the "Background" section of the lab, *Present Value and Future Value* (on pages 109-111 of the *Course Pack*)
9-1	Lab groups present normal lab results		*Course Pack* p220/12d-i,13,14.
Lab:	Present Value and Future Value		
9-2	10.1	Taylor Polynomials	10.1/1,3,5,6,17-20,22,25,28,33.
9-3	10.1	Taylor Polynomials	10.1/2,13,23,26,29-31,34,35.
10	*Spring Break*		
11-1	Review		
Lab:	Test #2		
11-2	9.5	Convergence of Power Series	9.5/1-4,7,10-14,17,21,23-25,27,30-32,35.
11-3	10.2	Taylor Series	10.2/5,7,13,18-20,22,25,26,28,29,31-34,40,41,43-45.
12-1	10.3	Using Taylor Series	10.3/2,8,12-14,23,26,30.
Lab:	Series Solutions of Initial Value Problems		
12-2	10.3	Using Taylor Series	10.3/5,6,16,20,22,29,36,40.
12-3	10.5	Fourier Series with period 2π	10.5/5,6,17,23-27.
13-1	10.5	Fourier series review	10.5/9-11.
Lab:	Fourier Analysis of Musical Sound		
13-2	10.5	General Fourier Series	10.5/12,13,19d.
13-3	10.5	Fourier series review	10.5/8,14,18,20d.
14-1	11.10	Oscillations	11.10/3,5,7,12-13,15,16,18,19,22-25,27.
Lab:	Fourier quiz (and Gateway make-up)		
14-2	11.8	Predator-prey with phase plane	11.8/2,3,5-8,11-14.
14-3	11.8	SIR Model with phase plane	11.8/1,15a,16a,17a,18-20.
15-1	11.9	Phase Plane Analysis	11.9/2,3,4-6,8,10.
Lab:	Limited Immunity in Epidemics (Part I)		
15-2	Review of lab		
15-3	Review for test		
16-1	Test #3		
Lab:	Gateway test makeup		
16-2	*TCE Day*		

Final Exam: Thursday, April 30, from 2:00–5:00pm; place to be announced.