Syllabus for SM221 Calculus III
Fall Semester, 2006-2007

Text: Calculus, Early Transcendentals, Edition 5e
by James Stewart

LESSON	SECTION & TOPIC	PROBLEMS
1.	12.1/2 3-D and Vectors	p. 797: 1,10,13,33; p. 805: 1,15,21,28,30
2.	12.3/4 Dot and Cross Product	p. 812: 1,7,11,22,35,37,45; p.820: 9,10,16,25,37
3.	12.5 Lines and Planes	p. 829: 1,3,5,13,23,26,33,45
4.	12.6 Cylinders and Quadric Surfaces	p. 837: 4,5,7,21-28
5.	13.1 Vector Functions and Space curves	p. 855: 1,7,11,19-24,40
6.	13.2 Derivatives and Integrals of Vector Functions	p. 861: 1,8,13,21,36,39,50
7.	13.3/4 Arc Length and Motion in Space through p.874	p. 868: 1,3,4; p. 878: 1,5,7,16,19
8.	13.4 Continued	p. 878: 20,23,24
9.	Review	
10.	**Test on Chapters 12 and 13**	
11.	14.1 Functions of Several Var.	p. 897: 1,2,8,31,34,38,45
12.	14.1 Continued	p. 897: 53-58
13.	14.3 Partial Derivatives	p. 919: 1,4,6,14,26
14.	14.3 Continued	p. 919: 29,36,46,57,67
15.	14.5 Chain Rule	p. 938: 3,6,7,13,21,40,47; p. 919: 71
16.	14.6 Directional Derivative & the Gradient Vector	p. 950: 1,4,7,15,25,27,30
17.	14.6 Continued	p. 950: 33,36,39; p. 930: 1,2
18.	Review	
19.	**Test on Chapter 14**	
20.	15.1/2 Double Integrals over Rectangles & Iterated Integrals	p. 988: 1,2,5,9; p. 994: 6,11,13,17,21`
21.	15.3 Double Integrals over General Regions	p. 1002: 2,5,7,13,20,21
22.	15.3 Continued; 15.4 Double Integrals in Polar Coordinates	p. 1002: 23,43,45; p. 1008: 3,4,10
22.	15.4 Continued	p. 1008: 21,23,26,27,29
23.	15.5 Center of Mass	p. 1018: 3,6,11
24.	15.7 Triple Integrals	p. 1030: 2,6,9,11,17
25.	15.7 Continued	p. 1030: 21,31,35
26.	12.7 Cylindrical Coordinates	p. 842: 3,9,13,31,36,37,43,57,63
27.	12.7 Cylindrical & Spherical	p. 842: 19,29,32,33,34,50,51,59,60
28.	15.8 Triple Integrals Cylindrical	p. 1037: 2,5,7,8
29.	15.8 Triple Integrals Spherical	p. 1037: 3,17,20,24,36

30.	Review	
31.	**Test on Chapter 15**	
32.	16.1 Vector Fields	p. 1060: 2,6,11-14,15,16
33.	16.1 Continued	p. 1060: 21,23,25,29-32
34.	16.2 Line Integrals	p. 1071: 1,7,8,9
35.	16.2 Continued	p. 1071: 17,21,37,45
36.	16.3 Fundamental Theorem for Line Integrals	p.1081: 1,2,4,7,11
37.	16.3/4 Green's Theorem	p. 1081: 15,17,23,34; p. 1089: 1,3,8
38.	16.4 Green's Theorem	p. 1089: 9,11,15,17
39.	16.5 Curl & Divergence	p. 1096: 1,5,9,11,12
40.	16.5 Continued	p. 1096: 13,15,17,19,21
41.	16.5 Continued	p. 1096: 22,25,26,31
42.	16.6 Parametric Surfaces	p. 1106: 1,2,3,4,11-16
43.	16.6 Continued	p. 1106: 21,23,24
44.	16.7 Surface Integrals	p. 1119: 5,7,11,15: p. 1018: 2,9,13
45.	16.7 Continued	p. 1119: 18,19,20,21,39
46.	16.9 Divergence Theorem	p. 1131: 7,8,12,13,15
47.	16.9 Continued	p. 1131: 23,24,25
48.	16.8 Stokes's Theorem	p. 1125: 1,2,3,5
49.	16.8 Continued	p. 1125: 7,9,16
50.	Review	
51.	**Test on Chapter 16**	

Contact: Prof. R. Lockhart, rbl@usna.edu
Last updated 8-22-2006.