

**MATH 2415**  
**Calculus and Analytic Geometry III**  
Calculus (Early Transcendentals) by James Stewart, 5th edition

Note that there are two different Calculus Books by James Stewart. The Early Transcendentals version is the official book for this course. However, due to a miscommunication with the book store some people have the other text book. For Calculus III the text books are identical with the exception of section numbers and page numbers. To take this into account there are two sets of section numbers and pages numbers. The first refers to the Early Transcendentals version and the second (in parenthesis) refers to the other textbook.

<u>ASSN</u>	<u>SECT</u>	<u>TOPIC</u>	<u>PAGE/PROBLEMS</u>
1	13.1 (14.1)	Vector functions and space curves	<b>855 (891)</b> /1,3,5,7,9,11,17
2	13.2 (14.2)	Derivatives and integrals of vector functions	<b>861 (897)</b> /9,12,13,19,23,33,35,37
3	13.3 (14.3)	Arc length and curvature	<b>868 (905)</b> /1,2,5,9,14,39
4	13.4 (14.4)	Motion in space: velocity and acceleration	<b>878 (914)</b> /9,13,15
5	14.1 (15.1)	Functions of Several Variables	<b>897 (933)</b> /2,3,21,23,24,26,29,61
6	14.2 (15.2)	Limits and Continuity	<b>908 (944)</b> /1,3,5,7,11,15,21
7	14.3 (15.3)	Partial Derivatives	<b>919 (955)</b> /3,6,14,15,17,19,21,25,49,50,5
8	14.4 (15.4)	Tangent Planes and Linear Approximations	<b>930 (966)</b> /3,4,11,17,20,25,33
9	14.5 (15.5)	The Chain Rule	<b>938 (974)</b> /1,6,7,9,10,19,25,27,34,51
10	14.6 (15.6)	Directional Derivatives and the Gradient Vector	<b>950 (986)</b> /1,3,5,7,11,14,23,31,34,39,53
11	14.7 (15.7)	Maximum and Minimum Values	<b>938 (997)</b> /1,5,11,14,27,31,37
12	14.8 (15.8)	Lagrange Multipliers	<b>970 (1006)</b> /3,7,9,42
13	15.1 (16.1)	Double Integrals over Rectangles	<b>988 (1024)</b> /6,9,10
14	15.2 (16.2)	Iterated Integrals	<b>994 (1030)</b> /2,8,9,11,13,19,23,27
15	15.3 (16.3)	Double Integrals over General Regions	<b>1002 (1038)</b> /1,4,9,10,14,17,19,24,25,35
16	15.4 (16.4)	Double Integrals in Polar Coordinates	<b>1008 (1044)</b> /1,4,11,13,15,17,19,23,27,31
17	15.5 (16.5)	Applications of Double Integrals	<b>1018 (1054)</b> /3,7,11,15
18	15.6 (16.6)	Surface Area	<b>1022 (1058)</b> /1,3,6,7
19	15.7 (16.7)	Triple Integrals	<b>1033 (1066)</b> /3,7,11,14,17,20,29
20	15.8 (16.8)	Triple Integrals in Cylindrical and Spherical Coordinates	<b>1037 (1073)</b> /1,3,7,11,13,19,23,29,33,35
21	15.9 (16.9)	Change of Variables in Multiple Integrals	<b>1048 (1084)</b> /1,3,4,7,9,13,17
22	16.1 (17.1)	Vector Fields	<b>1060 (1096)</b> /1,3
23	16.2 (17.2)	Line Integrals	<b>1071 (1107)</b> /1,3,5,9,13,19,21,23
24	16.3 (17.3)	The Fundamental Theorem for Line Integrals	<b>1081 (1117)</b> /1,2,3,4,7,13,15,17,19
25	16.4 (17.4)	Green's Theorem	<b>1089 (1125)</b> /1,4,9,11,14,15,19
26	16.5 (17.5)	Curl and Divergence	<b>1096 (1132)</b> /1,3,12,13,15,23
27	16.6 (17.6)	Parametric Surfaces and Their Areas	<b>1106 (1142)</b> /1,2,6,17,19,21,31,35,39
28	16.7 (17.7)	Surface Integrals	<b>1119 (1155)</b> /1,7,10,11,15,21,22,25,27
29	16.8 (17.8)	Stokes' Theorem	<b>1132 (1161)</b> /3,7,10,14,17
30	16.9 (17.9)	The Divergence Theorem	<b>1132 (1168)</b> /3,9,15,23