

## Math 251 - Multivariate Calculus

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### Textbooks:

- “*Essential Calculus – Early Transcendentals*” by Stewart, published by Thomson Brooks/Cole, 2007
- “*Linear Algebra for Calculus*” (a supplement to the above text) by Heuvers, etc.

### Material Covered:

<b>Linear Algebra</b> - Chapters 1-6	approx. 10 Lectures
<b>Calculus</b> - Chapter 10: Vectors and the Geometry of Space	approx. 12 Lectures
- Chapter 11: Partial Derivatives	approx. 10 Lectures
- Chapter 12: Multiple Integrals	approx. 10 Lectures
- Chapter 13: Vector Calculus	approx. 4 Lectures

### Assignments:

- **Linear Algebra**

<u>Chapter</u>	<u>Page</u>	<u>Problems</u>
1	9	1-5, 9, 10, 13, 14
2	22	1abc, 2abc, 3, 5, 6
3	42	1def, 2befh, 3abcde, 4abcd, 5, 7
4	59	1-4, 9ab, 10
5	73	1-5, 6cde, 9, 15bc, 16ab
6	95	1, 2, 4, 5, 7, 8, 16

- **Calculus**

<u>Section</u>	<u>Page</u>	<u>Problems</u>
10.1	521	1-27 odd
10.2	529	1-21 odd, 27, 29
10.3	535	1-25 odd, 31
10.4	543	1-17 odd, 23-35 odd
10.5	551	1-43 odd
10.6	558	1-27 odd
10.7	568	1-27 odd, 33-51 odd, 57-65 odd
10.8	576	1, 3, 7-27 odd, 35, 37, 41
10.9	586	1-11 odd, 15-21 odd, 29-33 odd
11.1	599	1-35 odd, 41-47 odd, 51
11.2	608	1-15 odd, 19-27 odd
11.3	618	1-33 odd, 37-53 odd, 65, 71
11.4	624	1-5 odd, 11-27 odd, 31
11.5	631	1-25 odd, 29, 33, 39
11.6	642	1-25 odd, 31, 33, 37
11.7	650	1-13 odd, 23-27 odd, 31-45 odd
12.1	672	1-33 odd, 37, 39
12.2	680	1-27 odd, 31-41 odd, 48, 51
12.3	686	1-17 odd, 23-29 odd
12.4	693	1-13 odd
12.5	700	1-19 odd, 25, 31, 37
12.6	706	1-13 odd, 17, 21
12.7	711	1-15 odd, 21, 23
12.8	721	1-15 odd, 19-23 odd
13.1	730	1-17 odd, 21-25 odd, 29, 31
13.2	740	1-19 odd, 27, 33, 35
13.3	749	1-21 odd
13.4	756	1, 3, 7-19 odd

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A Sample Schedule:

- Week 1: LA Chapters 1-3
- Week 2: LA Chapters 4-5
- Week 3: LA Chapter 6, Review & **Test 1**
- Week 4: Calc Sections 10.1-10.3
- Week 5: Calc Sections 10.5-10.7
- Week 6: Calc Sections 10.8-10.9
- Week 7: Review, **Test 2** & Calc Sections 11.1-11.2
- Week 8: Calc Sections 11.3-11.5
- Week 9: Calc Sections 11.6-11.7
- Week 10: Calc Sections 12.1-12.2, Review & **Test 3**
- Week 11: Calc Sections 12.3-12.5
- Week 12: Calc Sections 12.6-12.8
- Week 13: Calc Sections 13.1-13.3
- Week 14: Calc Section 13.4, Review & **Test 4**
- Week 15: Catch-up days & Reviews
- Week 16: **Final Exam**