

# Multivariable Calculus: Topics and Assignments

Weeks 1 and 2

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Monday	7/31	NO SCHOOL!
Tuesday	8/1	NO SCHOOL!
Wednesday	8/2	Class Policy and Expectations ★ HW: Student Info
Thursday	8/3	Section 12.1: 3D Coordinate Systems ★ HW: 3, 6, 7, 13, 17, 21, 27-33, 37
Friday	8/4	Section 12.2: Vectors ★ HW: 1, 11, 13, 18, 21, 25, 27, 30, 35, 37

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Monday	8/7	Section 12.3: Dot Product ★ HW: 1, 7, 9, 20, 23(a,b), 27, 31, 42, 47, 49
Tuesday	8/8	Section 12.4: Cross Product ★ HW: 5, 7, 9, 13, 20, 22, 30, 33, 39, 41
Wednesday	8/9	Homework Day: 12.1-12.4
Thursday	8/10	Section 10.1: Parametric Equations ★ HW: 1, 7, 9, 12, 15, 24, 25, 29, 45
Friday	8/11	<b>Group Quiz: Sections 12.1-12.4</b>

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# Multivariable Calculus: Topics and Assignments

Weeks 3 and 4

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Monday	8/14	Section 12.5: Equations of Lines and Planes ★ HW: 1, 5, 9, 16, 21, 25, 29, 35, 41, 46, 51, 55, 69
Tuesday	8/15	Homework Day: 10.1, 12.5
Wednesday	8/16	Section 10.5: Conic Sections ★ HW: 5, 13, 21, 25-30
Thursday	8/17	Section 12.6: Cylinders and Quadric Surfaces ★ HW: 5, 7, 13, 17, 21-28, 33, 35
Friday	8/18	<b>Quiz: Sections 10.1, 12.5</b>

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Monday	8/21	Homework Day: 10.5, 12.6
Tuesday	8/22	Section 13.1: Vector Functions and Space Curves ★ HW: 1, 6, 7, 13, 17, 21-26, 47
Wednesday	8/23	Section 13.2: Derivatives and Integrals of Vector Functions ★ HW: 1, 5, 13, 17, 22, 25, 37, 39, 49
Thursday	8/24	Review Day
Friday	8/25	<b>Test: Sections 12.1-12.6</b>

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# Multivariable Calculus: Topics and Assignments

Weeks 5 and 6

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Monday	8/28	Section 13.2: Derivatives and Integrals of Vector Functions
Tuesday	8/29	Homework Day: 13.1-13.2
Wednesday	8/30	Section 13.3: Arc Length and Curvature ★ HW: 3, 5, 11, 14, 19, 21, 25, 29, 30
Thursday	8/31	Section 13.3: Arc Length and Curvature
Friday	9/1	<b>Group Quiz: Sections 13.1-13.2</b>

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Monday	9/4	NO SCHOOL!
Tuesday	9/5	Homework Day: 13.3
Wednesday	9/6	Section 13.4: Motion in Space ★ HW: 1, 7, 13, 16, 19, 25, 26
Thursday	9/7	Section 13.4: Motion in Space
Friday	9/8	<b>Quiz: Sections 13.1-13.3</b>

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# Multivariable Calculus: Topics and Assignments

Weeks 7 and 8

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Monday	9/11	Homework Day: 13.4
Tuesday	9/12	Section 14.1: Functions of Several Variables ★ HW: 1, 7, 11, 22, 28, 39, 49, 59-62
Wednesday	9/13	Homework Day: 14.1
Thursday	9/14	Review
Friday	9/15	<b>Test: Section 13.1-13.4</b>

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Monday	9/18	Section 14.2: Limits and Continuity ★ HW: 7, 11, 16, 17, 26, 29, 34, 37
Tuesday	9/19	Section 14.3: Partial Derivatives ★ HW: 1, 3, 22, 24, 29, 43, 45, 50, 51, 55, 61, 65
Wednesday	9/20	Homework Day: 14.2, 14.3
Thursday	9/21	Section 14.4: Tangent Planes and Linear Approximations ★ HW: 4, 15, 19, 21, 28, 33, 35, 39
Friday	9/22	Section 14.5: The Chain Rule ★ HW: 6, 9, 11, 14, 19, 23, 29, 34, 43

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# Multivariable Calculus: Topics and Assignments

Weeks 9 and 10

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Monday	9/25	Homework Day: 14.4, 14.5
Tuesday	9/26	Section 14.6: Directional Derivatives and the Gradient ★ HW: 5, 10, 13, 17, 20, 23, 29, 41, 46, 49
Wednesday	9/27	Section 14.6: Directional Derivatives and the Gradient
Thursday	9/28	Homework Day: 14.6
Friday	9/29	<b>Group Quiz: Sections 14.1-14.4</b>

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Monday	10/2	Section 14.7: Maximum and Minimum Values ★ HW: 1, 6, 13, 18, 29, 33, 40, 43, 51
Tuesday	10/3	Section 14.7: Maximum and Minimum Values
Wednesday	10/4	Homework Day: 14.7
Thursday	10/5	<b>Quiz: Sections 14.5-14.7</b>
Friday	10/6	Fun Day!

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## Multivariable Calculus: Topics and Assignments

Week 11 and 12

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Monday	10/16	Section 14.8: Lagrange Multipliers ★ HW: 3, 6, 9, 21, 27, 30, 37
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Tuesday	10/17	Section 14.8: Lagrange Multipliers
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Wednesday	10/18	Homework Day: 14.8
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Thursday	10/19	Test Review
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Friday	10/20	<b>Test: Sections 14.1-14.7</b>
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Monday	10/23	Section 15.1: Double Integrals over Rectangles ★ HW: 1, 4, 5, 13, 18
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Tuesday	10/24	Homework Day: 15.1
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Wednesday	10/25	Section 15.2: Iterated Integrals ★ HW: 9, 12, 17, 22, 25, 27, 36
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Thursday	10/26	Homework Day: 15.2
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Friday	10/27	Section 15.3: Double Integrals over General Regions ★ HW: 5, 9, 13, 16, 19, 32, 37, 44, 51, 55, 57
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## Multivariable Calculus: Topics and Assignments

Weeks 13 and 14

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Monday	10/30	Homework Day: 15.3
Tuesday	10/31	Section 15.4: Double Integrals in Polar Coordinates ★ HW: 4, 5, 9, 13, 21, 24, 31, 33
Wednesday	11/1	Homework Day: 15.4
Thursday	11/2	Section 15.5: Applications of Double Integrals ★ HW: 2, 5, 9, 13, 15
Friday	11/3	<b>Group Quiz: Sections 15.1-15.4</b>

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Monday	11/6	Section 15.6: Surface Area ★ HW: 4, 5, 7, 11, 13
Tuesday	11/7	Homework Day: 15.5, 15.6
Wednesday	11/8	Section 15.7: Triple Integrals ★ HW: 7, 13, 17, 20, 27, 30, 33, 36
Thursday	11/9	Section 15.7: Triple Integrals
Friday	11/10	NO SCHOOL!

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## Multivariable Calculus: Topics and Assignments

Weeks 15 and 16

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Monday	11/13	Homework Day: 15.7
Tuesday	11/14	Section 15.8: Triple Integrals in Cylindrical Coordinates ★ HW: 1, 4, 5, 8, 9, 11, 20, 23, 29
Wednesday	11/15	Homework Day: 15.8
Thursday	11/16	Section 15.9: Triple Integrals in Spherical Coordinates ★ HW: 1, 4, 5, 10, 13, 17, 19, 27, 35, 39
Friday	11/17	<b>Quiz: Sections 15.5-15.7</b>

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Monday	11/20	Homework Day: 15.9
Tuesday	11/21	Fun Day
Wednesday	11/22	NO SCHOOL!
Thursday	11/23	NO SCHOOL!
Friday	11/24	NO SCHOOL!

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## Multivariable Calculus: Topics and Assignments

Weeks 17 and 18

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Monday	11/27	NO SCHOOL!
Tuesday	11/28	Section 15.10: Change of Variables ★ HW: 3, 5, 7, 13, 15, 19, 23
Wednesday	11/29	Homework Day: 15.10
Thursday	11/30	Review
Friday	12/1	<b>Test: Section 15.1-15.10</b>

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Monday	12/4	Section 16.1: Vector Fields ★ HW: 5, 9, 11-14, 15-18, 21, 25
Tuesday	12/5	Homework Day: 16.1
Wednesday	12/6	Section 16.2: Line Integrals ★ HW: 3, 7, 11, 15, 17, 20, 33, 41
Thursday	12/7	Section 16.2: Line Integrals
Friday	12/8	Homework Day: 16.2

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## Multivariable Calculus: Topics and Assignments

Weeks 19 and 20

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Monday	12/11	Section 16.3: Fundamental Theorem for Line Integrals ★ HW: 1, 5, 9, 13, 17, 20, 21, 24, 26, 33
Tuesday	12/12	Section 16.3: Fundamental Theorem for Line Integrals
Wednesday	12/13	Homework Day: 16.3
Thursday	12/14	Section 16.4: Green's Theorem ★ HW: 2, 3, 7, 10, 13, 17, 22, 23
Friday	12/15	Homework Day: 16.4

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Monday	12/18	Section 16.5: Curl and Divergence
Tuesday	12/19	<b>Group Quiz: Sections 16.1-16.4</b>
Wednesday	12/20	Community Day
Thursday	12/21	NO SCHOOL!
Friday	12/22	NO SCHOOL!

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## Multivariable Calculus: Topics and Assignments

Weeks 21 and 22

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Monday	1/8	Review: 16.1-16.3
Tuesday	1/9	Review: 16.4-16.5 ★ HW: 16.5: 5, 7, 9-11, 12, 18, 19, 21
Wednesday	1/10	Section 16.6: Parametric Surfaces ★ HW: 3, 5, 13-18, 19, 23, 25
Thursday	1/11	Section 16.6 Parametric Surfaces
Friday	1/12	Homework Day: 16.5, 16.6

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Monday	1/15	NO SCHOOL!
Tuesday	1/16	Senior Trip
Wednesday	1/17	Section 16.7: Surface Integrals ★ HW: 2, 3, 5, 9, 11, 19, 21, 24, 25
Thursday	1/18	Section 16.7: Surface Integrals
Friday	1/19	<b>Quiz: Sections 16.4-16.6</b>

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## Multivariable Calculus: Topics and Assignments

Weeks 23 and 24

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Monday	1/22	Homework Day: 16.7
Tuesday	1/23	Section 16.8: Stokes' Theorem ★ HW: 1, 2, 5, 7, 10, 14, 17
Wednesday	1/24	Homework Day: 16.8
Thursday	1/25	Section 16.9: Divergence Theorem ★ HW: 1, 3, 6, 9, 12, 13, 23
Friday	1/26	Homework Day: 16.9

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Monday	1/29	Review: Chapter 12 & 13 ★ HW: Make Final Formula Sheets
Tuesday	1/30	Reivew: Chapter 14 & 15 ★ HW: Make Final Formula Sheets
Wednesday	1/31	Review: Chapter 16 ★ HW: Make Final Formula Sheets
Thursday	2/1	<b>Final Part 1: Sections 16.1-16.9</b>
Friday	2/2	<b>Final Part 2: Chapters 12-15</b>

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