

# Math 0240 Schedule and Practice Problems

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## January 10: Vectors

ed1: 10.2 Number 2, 5-29  
ed2: 10.2 Number 2, 5-30, 33-37

## January 12: The Dot Product

ed1: 10.3 Number 3-8, 12-34  
ed2: 10.3 Number 2-10, 14-39

## January 14: The Cross Product

ed1: 10.4 Number 1-9, 13-16, 21-37  
ed2: 10.4 Number 1-9, 13, 17-20, 25-41

## January 19: Equations of Lines and Planes

ed1: 10.5 Number 1-41, 45-50  
ed2: 10.5 Number 1-43, 47-52

## January 21: Cylinders and Quadric Surfaces

ed1: 10.6 Number 3-8, 11-30  
ed2: 10.6 Number 3-8, 11-30

## January 24: Vector Functions and Space Curves

ed1: 10.7 Number 3-22, 33-52  
ed2: 10.7 Number 3-22, 33-52

## January 26: Arc Length and Curvature

ed1: 10.8 Number 1-4, 7-8, 11-19, 21-25, 33-38  
ed2: 10.8 Number 1-4, 9-10, 13-21, 23-27, 37-40

## January 28: Motion in Space: Velocity and Acceleration

ed1: 10.9 Number 1-25  
ed2: 10.9 Number 1-25

## January 31: Kepler's Laws (no binormal vectors)

ed1: 10.9 Number 1-25  
ed2: 10.9 Number 1-25

## February 2: Functions of several variables

ed1: 11.1 Number 1-11 odd, 13-35, 41-50  
ed2: 11.1 Number 1-11 odd, 13-35, 41-50

## February 4: Partial derivatives

ed1: 11.3 Number 1-60  
ed2: 11.3 Number 1-64

## February 7: Tangent planes and linearization

ed1: 11.4 Number 1-6, 11-32  
ed2: 11.4 Number 1-6, 11-34

## February 9: Chain rule

ed1: 11.5 Number 1-30  
ed2: 11.5 Number 1-30

## February 11: Directional derivative and the gradient vector

ed1: 11.6 Number 1-34  
ed2: 11.6 Number 1-36

## February 14: Maximum and minimum values

ed1: 11.7 Number 1-28  
ed2: 11.7 Number 1-28

## February 16: Lagrange multipliers

ed1: 11.8 Number 1-17, 25-37 odd, 38-40  
ed2: 11.8 Number 1-19, 29-39 odd, 42-44

## February 18: Review

## February 21: Exam 1

## February 23: Double integrals over rectangles

ed1: 12.1 Number 7-34

ed2: 12.1 Number 7-26, 29-35

**February 25: Double integrals over general regions**

ed1: 12.2 Number 1-28, 37-42

ed2: 12.2 Number 1-12, 15-32, 43-48

**February 28: Double integrals in polar coordinates**

ed1: 12.3 Number 1-26

ed2: 12.3 Number 1-26

**March 2: Applications of double integrals**

ed1: 12.4 Number 1-14

ed2: 12.4 Number 1-16

**March 4: Triple integrals**

ed1: 12.5 Number 1-20, 23-40

ed2: 12.5 Number 1-20, 23-42

**March 14: Triple integrals in cylindrical coordinates**

ed1: 12.6 Number 1-23, 25-28

ed2: 12.6 Number 1-25, 28-30

**March 16: Triple integrals in spherical coordinates**

ed1: 12.7 Number 1-27, 35-36

ed2: 12.7 Number 1-27, 37-39

**March 18: Change of variables in multiple integrals**

ed1: 12.8 Number 1-22

ed2: 12.8 Number 1-10, 15-21, 23-26

**March 21: Vector fields**

ed1: 13.1 Number 1-32

ed2: 13.1 Number 1-32

**March 23: Line integrals**

ed1: 13.2 Number 1-24, 33-37

ed2: 13.2 Number 1-22, 37-40, 43

**March 25: Fundamental Theorem of Line Integrals**

ed1: 13.3 Number 1-22

ed2: 13.3 Number 1-22

**March 28: Green's Theorem**

ed1: 13.4 Number 1-21

ed2: 13.4 Number 1-21

**March 30: Green's Theorem (cont)**

**April 1: Review**

**April 4: Exam 2**

**April 6: Curl and divergence**

ed1: 13.5 Number 1-30

ed2: 13.5 Number 1-30

**April 8: Parametric surfaces and their areas**

ed1: 13.6 Number 1-4, 15-22, 29-44

ed2: 13.6 Number 1-4, 15-22, 29-44, 46

**April 11: Surface integrals**

ed1: 13.7 Number 1-27

ed2: 13.7 Number 1-31

**April 13: Stokes' Theorem**

ed1: 13.8 Number 1-15

ed2: 13.8 Number 1-17

**April 15: Stokes' Theorem (cont.)**

**April 18: Divergence Theorem**

ed1: 13.9 Number 1-30

ed2: 13.9 Number 1-30

**April 20: Divergence Theorem (cont.)**

**April 22: Review**

**TBA:**

Final Exam (all day sections)