

Math 0230 Schedule and Practice Problems

This is the schedule of topics and associated textbook sections accompanied by highly recommended practice problems from, *Essential Calculus, Early Transcendentals*, 2nd Edition by James Stewart for all day sections. Relevant problems from the 1st Edition of the text are also listed for your convenience. Exam dates are also on the schedule. The hyperlinked pdfs by some topics will direct you to sections found on the [website accompanying our text](#). The website is used for additional topics that are not included in the print or electronic version of the textbook.

August 29: Integration by substitution

ed 1: 5.5 Number 1-54 odd

ed 2: 5.5 Number 1-56 odd

August 31: Integration by parts

ed 1: 6.1 Number 1-28 odd

ed 2: 6.1 Number 1-30 odd

September 2: Trigonometric integrals and substitution

ed 1: 6.2 Number 1-33 odd, 41-57 odd

ed 2: 6.2 Number 1-33 odd, 43-59 odd

September 7: Partial fractions

ed 1: 6.3 Number 1-39 odd

ed 2: 6.3 Number 1-39 odd

September 9: Partial fractions (cont)

September 12: Improper integrals

ed 1: 6.6 Number 5-31 odd, 41, 43, 45

ed 2: 6.6 Number 5-31 odd, 41, 43, 45

September 14: Areas between curves

ed 1: 7.1 Number 1-15 odd, 16

ed 2: 7.1 Number 1-19 odd, 18

September 16: Volumes

ed 1: 7.2 Number 1-11 odd, 21, 27

ed 2: 7.2 Number 1-11 odd, 27, 33

September 19: Volumes by cylindrical shells

ed 1: 7.3 Number 5, 6, 9, 18, 19, 20, 21, 23

ed 2: 7.3 Number 5, 6, 9, 10, 11, 12, 17, 19, 33, 34

September 21: Arc length

ed 1: 7.4 Number 2, 3, 5, 6, 10

ed 2: 7.4 Number 2, 7, 10, 15, 17

September 23: Applications to physics and engineering

(no moments or center of mass; hydrostatic pressure and force optional)

ed 1: 7.5 Number 1, 3, 5, 7, 9, 12, 13, 15, 17, 18, 23, 25, 27, 30

ed 2: 7.6 Number 1, 3, 5, 7, 9, 12, 13, 15, 17, 18, 27, 28, 31, 34

September 26: Differential equations

ed 1: 7.6 Number 1-15 odd, 21-29

ed 2: 7.7 Number 1-15 odd, 21-29

September 28: Applications of differential equations

ed 1: 7.6 Number 35, 37, 39, 43, 45, 46

ed 2: 7.7 Number 35, 37, 39, 43, 45, 46

September 30: Linear differential equations

Section: [Linear Differential Equations](#) Number 1-20

October 3: Homogeneous second-order differential equations

Section: [Second-Order Linear Differential Equations](#) Number 1-24

October 5: Inhomogeneous second-order equations by undetermined coefficients

Section: [Nonhomogeneous Linear Equations](#) Number 1-22 (undetermined coefficients only)

October 7: Oscillations

Section: [Applications of Second-Order Differential Equations](#) Number 1-10

October 10: Review

October 12: Midterm Exam I

October 17: Sequences

ed1: 8.1 Number 3-36

ed2: 8.1 Number 3-40

October 19: Series

ed 1: 8.2 Number 3-29, 33, 34

ed 2: 8.2 Number 3-28, 31-34, 35-37, 43, 44

October 21: The integral and comparison tests

ed 1: 8.3 Number 2-27

ed 2: 8.3 Number 2-31

October 24: Other convergence tests

ed 1: 8.4 Number 1-18, 19-37 odd

ed 2: 8.4 Number 1-18, 19-39 odd

October 26: Other convergence tests

ed1: 8.4 Number 1-18, 19-37 odd

ed2: 8.4 Number 1-18, 19-39 odd

October 28: Power series

ed 1: 8.5 Number 3-20

ed 2: 8.5 Number 3-24

October 31: Representing functions as power series

ed 1: 8.6 Number 1-30

ed 2: 8.6 Number 1-32

November 2: Representing functions as power series (cont)

November 4: Taylor and Maclaurin series

ed 1: 8.7 Number 1-34, 37-64

ed 2: 8.7 Number 1-34, 37-64

November 7: Taylor and Maclaurin series (cont)

November 9: Applications of Taylor polynomials

(no remainder, no physics)

ed 1: 8.8 Number 3,5,7, 9-15 parts (a) and (c)

ed 2: 8.8 Number 3,5,7, 9-15 parts (a) and (c)

November 11: Review

November 14: Midterm Exam II

November 16: Parametric curves

ed 1: 9.1 Number 1, 3, 5, 7, 9, 10, 13, 15, 16, 17, 18, 22, 31

ed 2: 9.1 Number 1, 3, 5, 7, 9, 10, 13, 15, 16, 17, 18, 22, 31

November 18: Calculus with parametric curves

ed 1: 9.2 Number 1-15 odd, 24, 25, 28, 30, 35, 37, 40

ed 2: 9.2 Number 1-15 odd, 24, 25, 28, 30, 35, 37, 38

November 28: Polar coordinates

ed 1: 9.3 Number 1-6, 7, 9, 10, 11, 13-20, 23-29 odd, 46, 47, 51-54

ed 2: 9.3 Number 1-6, 7, 9, 10, 11, 13-20, 23-33 odd, 46, 47, 51-54

November 30: Areas and length in polar coordinates

ed 1: 9.4 Number 1-13, 15-25 odd

ed 2: 9.4 Number 1-13, 15-25 odd

December 2: Areas and length in polar coordinates

ed 1: 9.4 Number 29-38

ed 2: 9.4 Number 29-38

December 5: Functions of several variables

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

ed 2: 11.1 Number 1-11 odd, 13-35, 41-50

December 7: Partial derivatives

ed 1: 11.3 Number 1-60

ed 2: 11.3 Number 1-60

December 9: Review

Departmental Final Exam: Wednesday, December 14 from 8 - 9:50am

Day sections only. Section locations will be scheduled at a later date by the Registrar's Office.