

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.

January 09: Integration by substitution

ed 1: 5.5 Number 1-54 odd

ed 2: 5.5 Number 1-56 odd

January 11: Integration by parts

ed 1: 6.1 Number 1-28 odd

ed 2: 6.1 Number 1-30 odd

January 13: 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

January 18: Partial fractions

ed 1: 6.3 Number 1-39 odd

ed 2: 6.3 Number 1-39 odd

January 20: Partial fractions (cont)

January 23: Improper integrals

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

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

January 25: Areas between curves

ed 1: 7.1 Number 1-15 odd, 16

ed 2: 7.1 Number 1-19 odd, 18

January 27: Volumes

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

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

January 30: 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

February 01: Arc length

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

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

February 03: 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

February 06: Differential equations

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

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

February 08: 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

February 10: Linear differential equations

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

February 13: Homogeneous second-order differential equations

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

February 15: Inhomogeneous second-order equations by undetermined coefficients

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

February 17: Oscillations

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

February 20: Review

February 22: Midterm Exam I

February 24: Sequences

ed 1: 8.1 Number 3-36

ed 2: 8.1 Number 3-40

February 27: Series

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

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

March 01: The integral and comparison tests

ed 1: 8.3 Number 2-27

ed 2: 8.3 Number 2-31

March 03: Other convergence tests

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

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

March 13: Other convergence tests

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

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

March 15: Power series

ed 1: 8.5 Number 3-20

ed 2: 8.5 Number 3-24

March 17: Representing functions as power series

ed 1: 8.6 Number 1-30

ed 2: 8.6 Number 1-32

March 20: Representing functions as power series (cont)**March 22: Taylor and Maclaurin series**

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

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

March 24: Taylor and Maclaurin series (cont)**March 27: 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)

March 29: Review

March 31: Midterm Exam II

April 03: 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

April 05: 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

April 07: 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

April 10: 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

April 12: Areas and length in polar coordinates

ed 1: 9.4 Number 29-38

ed 2: 9.4 Number 29-38

April 14: 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

April 17: Partial derivatives

ed 1: 11.3 Number 1-60

ed 2: 11.3 Number 1-60

April 19: Review

April 21: Review

Departmental Final Exam: Thursday, April 27 from 2 - 3:50 pm

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