Department of Mathematics, CCNY
Math 20200: Calculus II
Student Course Syllabus   Spring 2016

Course Supervisor: Dr. A. Marchese, amarchese@ccny.cuny.edu

Text and Supplements

> **NOTE:** Most sections of Math 202 are using the following text. If your class is using a different text, your instructor will give you that information.

> *Essential Calculus, 2nd edition* by James Stewart, 2012, Cengage Learning. Our bookstore sells a looseleaf version that is cheaper than the hardcover. Digital access is also available at www.cengagebrain.com.

> **Supplement:** Review of Conic Sections by James Stewart, available in CCNY Math Dept web page of MATH 20200
> http://math.sci.ccny.cuny.edu/document/show/2376

> **Supplement:** Rotation of Axes Notes by Professor J. Douglas Faires, available in CCNY Math Dept web page of MATH 20200
> http://math.sci.ccny.cuny.edu/document/show/2685

> SUGGESTED: *Student Solutions manual for Stewart's Essential Calculus, 2nd edition* by James Stewart, Cengage Learning, ISBN-13: 9781133490944.

Math 20200 Syllabus (*Essential Calculus, 2nd edition*)
Lesson number corresponds to the video lessons posted at:
http://math.sci.ccny.cuny.edu/pages?name=Math+202+Video+Lessons

Lesson	Text Section	Suggested text problems
Lesson 1	5.1 Inverse Functions	3-25odd, 33-41odd
Lesson 2	5.2 The Natural Logarithmic Function	1-17odd, 21, 23, 31-41odd, 55-61odd
Lesson 3	5.3 The Natural Exponential Function	3, 5, 11-23odd, 29, 33, 37-41odd, 49, 61-69odd
Lesson 4	5.4 General Logarithm and Exponential Functions	3-9odd, 17, 21-39odd
Lesson 5	5.4 General Logarithm and Exponential Functions	(none)
Lesson 6	5.5 Exponential Growth and Decay (Omit Compound Interest)	1, 3, 7-17odd
Lesson 7	5.6 Inverse Trigonometric Functions	1-7odd, 14, 17, 19, 25, 31, 33, 39-45odd
Lesson 8	5.7 Hyperbolic Functions	1, 3, 17, 27, 29, 31, 35, 47, 53, 55
Lesson 9	5.8 Indeterminate Forms and L'Hospital's Rule	1-37odd, 43

Lesson 10	6.1 Integration by Parts	3-13,odd, 17-29odd, 35, 39
Lesson 11	6.2 Trigonometric Integrals and Substitutions	1-27odd, 35
Lesson 12	6.2 Trigonometric Integrals and Substitutions	39-63odd
Lesson 13	6.3 Partial Fractions	1-27odd, 31-41odd
Lesson 14	6.5 Approximate Integration (set up the expansion and simplify, no calculators)	7-17odd, 27, 31
Lesson 15	6.6 Improper Integrals	11, 13, 15, 17, 21, 25, 29
Lesson 16	6.6 Improper Integrals	41, 43, 45
Lesson 17	7.1 Areas Between Curves	1-15odd, 21, 35, 36, 37
Lesson 18	7.2 Volumes by Method of Disc or Washer	1-17odd, 27, 31, 33, 41, 43
Lesson 19	7.3 Volumes by Cylindrical Shells	1-19odd, 21a, 23a, 25a, 29-41odd
Lesson 20	7.4 Arc Length	7-17odd
Lesson 21	7.6 Work (Omit: Hydrostatic Pressure and Force, Moments and Centers of Mass)	1-17odd, 18
Lesson 22	9.1 Parametric Curves (Omit Graphing Devices)	1-13odd, 19, 21, 22
Lesson 23	9.2 Calculus with Parametric Curves	1-15odd, 33-39odd
Lesson 24	9.3 Polar Coordinates	1-5odd
Lesson 25	9.3 Polar Coordinates	7-39odd, 46, 47-53odd
Lesson 26	9.4 Areas and Lengths in Polar Coordinates	1-11odd, 15-35odd
Lesson 27	pdf - Conic Sections (Shifted Conics), Review of Conic Sections by Stewart	1-47odd
Lesson 28	pdf - Conic Sections (Rotation of Axes), Rotation of Axes by Faires	5-11odd **do part a) and find the angle of rotation.