Math 0220 Schedule and Practice Problems

Below is the schedule of topics and associated textbook sections accompanied by highly recommended practice problems from, *Essential Calculus, Early Transcendentals*, 2nd Edition (ed 2) by James Stewart for MATH 0220: Analytic Geometry and Calculus 1. Relevant problems from the 1st Edition (ed 1) of the text are also listed for your convenience. Exam dates are indicated on the schedule, including the departmental final exam given to all students enrolled in daytime sections.

January 8: Review of Functions and Trigonometry
ed 1: Appendix A, 1.1, 1.2
ed 2: Appendix A, 1.1, 1.2

January 10: Limits
ed 1: 1.3 Number 1-8, 11, 13, 16, 19, 20
ed 2: 1.3 Number 1-8, 11, 13, 16, 19, 20

January 13: Calculating Limits
ed 1: 1.4 Number 1-24, 28, 29, 31-37, 43-48
ed 2: 1.4 Number 1-28, 32, 33, 35-38, 41-43

January 15: Continuity
ed 1: 1.5 Number 3-7, 13-16, 23, 24, 29-33, 35-42
ed 2: 1.5 Number 3-9, 15-18, 25, 26, 31-35, 37, 39-44

January 17: Limits Involving Infinity
ed 1:1.6 Number 1-5, 9, 10, 13-31, 38, 39, 43, 45
ed 2: 1.6 Number 1-5, 9, 10, 13-33, 40, 41, 47, 49

January 22: Derivatives and Rates
ed 1: 2.1 Number 1-20, 23-37, 41-43
ed 2: 2.1 Number 1-22, 25-30, 43-45

January 24: Derivative as a Function
ed1: 2.2 Number 1-12, 17-23, 27-31, 33, 39, 40
ed2: 2.2 Number 1-12, 19-25, 33-37, 41, 45, 46

January 27: Derivative Formulas
ed 1: 2.3 Number 1-26, 29-44, 49-52
ed 2: 2.3 Number 1-28, 31-46, 51-54

January 29: Products and Quotients
ed 1: 2.4 Number 1-30, 33-36, 41-44, 46, 51, 52
ed 2: 2.4 Number 1-30, 33-36, 41-44, 46, 47, 48

January 31: Chain Rule
ed 1: 2.5 Number 1-40, 43-50, 57, 58
ed 2: 2.5 Number 1-48, 51, 53-56, 63

February 3: Implicit Differentiation
ed 1: 2.6 Number 1-26, 31, 39
ed 2: 2.6 Number 1-28, 33, 43

February 5: Related Rates
ed 1: 2.7 Number 1-38
ed 2: 2.7 Number 1-31, 33-42

February 7: Linear Approximation
ed 1: 2.8 Number 1-24
ed 2: 2.8 Number 1-24

February 10: Exponentials, Logs and Inverses
ed 1: 3.1 Number 7-18, 23-30
ed 1: 3.2 Number 3-26, 31-38, 43-54,59-66, 69-74
ed 2: 3.1 Number 7-18, 23-30
ed 2: 3.2 Number 3-26, 31-34, 43-54, 59-60, 63-68, 71-76

February 12: Derivatives of Logs and Exponentials
ed 1: 3.3 Number 1-42, 45-58
ed 2: 3.3 Number 1-46, 51-64

February 14: Derivatives of Logs and Exponentials (cont)

February 17: Review

February 19: Exam 1

February 21: Inverse Trigonometric Functions
ed 1: 3.5 Number 1-10, 16-38
ed 2: 3.5 Number 1-10, 16-38

February 24: Hyperbolic Functions
ed 1: 3.6 Number 1-19, 26-41
ed 2: 3.6 Number 1-19, 26-41

February 26: L'Hopital's Rule
ed 1: 3.7 Number 1-36, 46
ed 2: 3.7 Number 1-38, 50

February 28: Extrema
ed 1: 4.1 Number 3-10, 15-48, 64
ed 2: 4.1 Number 3-10, 15-48

March 10: Mean Value Theorem
ed 1: 4.2 Number 5, 15, 17, 18, 23, 27, 29
ed 2: 4.2 Number 5, 15, 19, 20, 23, 27, 29

March 12: Shape of Graphs
ed 1: 4.3 Number 1-10, 13-17, 21-42
ed 2: 4.3 Number 1-12, 15-19, 23-44

March 14: Curve Sketching
ed 1: 4.4 Number 1-44
ed 2: 4.4 Number 1-44

March 17: Optimization
ed 1: 4.5 Number 7-17, 23, 46, 48
ed 2: 4.5 Number 9-19, 22, 23, 28, 54, 56

March 19: Newton's Method
ed 1: 4.6 Number 1, 2, 4-7, 9-12
ed 2: 4.6 Number 1, 2, 4, 6-8, 11-14

March 21: Antiderivatives
ed 1: 4.7 Number 1-20, 31-37, 46
ed 2: 4.7 Number 1-26, 37-43, 52

March 24: Area and Distance
ed 1: 5.1 Number 1-5, 7-9, 11, 12
ed 2: 5.1 Number 1-5, 9-11, 13, 14

March 26: Definite Integral
ed 1: 5.2 Number 1-4, 7, 9-14, 29-36, 45-47
ed 2: 5.2 Number 1-4, 7, 9-14, 29-36, 47-49

March 28: Evaluating Integrals
ed 1: 5.3 Number 1-32, 45-62
ed 2: 5.3 Number 1-36, 49-66

March 31 Fundamental Theorem of Calculus

ed 1: 5.4 Number 1-18, 25-28

ed 2: 5.4 Number 1-18, 25-28

April 2: Review

April 4: Exam 2

April 7: Substitution
ed 1: 5.5 Number 1-50
ed 2: 5.5 Number 1-52

April 9: Substitution (cont)
ed 1: 5.5 Number 1-50
ed 2: 5.5 Number 1-52

April 11: Integration by Parts
ed 1: 6.1 Number 1-28
ed 2: 6.1 Number 1-30

April 14: Trigonometric Integrals
ed 1: 6.2 Number 1-34
ed 2: 6.2 Number 1-34

April 16: Trigonometric Substitutions
ed 1: 6.2 Number 37-62
ed 2: 6.2 Number 35-64

April 18: Review

April 21: Review

Departmental Final Exam: Thursday, April 24 from 4:00 - 5:50 pm

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