

M2554 FINAL EXAM STUDY GUIDE-Spring, 2015
TEXT: CALCULUS-Early Transcendentals by Briggs & Cochran

To the student of M2554:

Below is a list of problems that will help you prepare more efficiently for your Final Exam. You should consider each problem to be representative of a TYPE that may occur on the exam. The time constraint will not permit that each section listed will have at least one representative on the exam, but you should prepare for each type of problem listed.

Section 2.1: The Idea of Limits & Section 2.2: Definitions of Limits

There will be no problems on the exam from these sections

Section 2.3: Techniques for Computing Limits

Pages 73-74: #'s 1-48 and #'s 56-65

Section 2.4: Infinite Limits

Pages 82-83: #'s 15-26 and #'s 37-39

Section 2.5: Limits at Infinity

Pages 92-93: #'s 9-30, #'s 38-46, & #'s 52-53

Section 2.6: Continuity

Pages 103-104: #'s 9-44

Section 2.7: Precise Definitions of Limits

There will be no problems on the exam from this section.

Section 3.1: Introducing the Derivative

Page 132: #'s 11-32

Section 3.2: Rules of Differentiation

Pages 142-143: #'s 7-49

Section 3.3: The Product and Quotient Rules

Pages 152-153: #'s 7-57

Section 3.4: Derivatives of Trigonometric Functions

Pages 161-162: #'s 1-55

Section 3.5: Derivatives as Rates of Change

Pages 171-172: #'s 11-27

Section 3.6: The Chain Rule

Pages 180-181: #'s 7-44

Section 3.7: Implicit Differentiation

Page 189: #'s 5-46

Section 3.8: Derivatives of Logarithmic and Exponential Functions

Page 199: #'s 9-22 and #'s 37-50

Section 3.9: Derivatives of Inverse Trigonometric Functions

Page 209: #'s 7-28

Section 3.10: Related Rates:

Pages 214-215: #'s 5-12 and #'s 14-22

Section 4.1: Maxima and Minima

Pages 229-230: #'s 19-46 and #'s 48-55

Section 4.2: What Derivatives Tell Us

Pages 243-244: #'s 11-14 and #'s 17-62

Section 4.3: Graphing Functions

There will be no problems on the exam from this section.

Section 4.4: Optimization Problems

Pages 261-262: #'s 5-13 (exclude part c of #10) and #'s 18-20

Section 4.5: Linear Approximation and Differentials

Pages 273-274: #'s 7-12, #'s 40-43, and the definition of differential: $du=u'dx$

Section 4.6: Mean Value Theorem

Page 279: #'s 7-12 and #'s 15-22

Section 4.7: L'Hopital's Rule

Pages 290-291: #'s 13-48

Section 4.8: Antiderivatives

Pages 301-302: #'s 11-48 and #'s 55-66

Section 5.1: Approximating Areas under Curves

There will be no problems on the exam from this section.

Section 5.2: Definite Integrals

There will be no problems on the exam from this section.

Section 5.3: Fundamental Theorem of Calculus

Pages 346-347: #'s 23-56

Section 5.4: Working with Integrals

Pages 354-355: #'s 7-14, #'s 19-28, and #'s 31-36

Section 5.5: Substitution Rule

Pages 363-365: #'s 13-44 and #'s 52-68

This concludes the material to be covered on the Final Exam.