



Catalog Description:

This is the first of a two semester course sequence. The topics covered in Math 1140 will include differential calculus of one real variable, with review of important algebra and pre-calculus concepts. Calculus with Review I is a course designed with an emphasis on reviewing these fundamental pre-calculus skills as they apply to calculus.

Prerequisite:

A grade of C- or above in 1148 and 1149, or in 1144, 1150, or 150, or Math Placement Level L.

Exclusions:

Not open to students with credit for 1141, or 1151 or above, or 151.xx or above.

Text:

calculus with review developed by XIMERA

Topics List:

- I.1 Equations and Inequalities
- I.2 Understanding functions
- I.3 What is a limit?
- I.4 Polynomial functions
- I.5 Rational functions
- I.6 Limit laws
- I.7 (In)determinate forms
- I.8 Using limits to detect asymptotes
- I.9 Continuity and the Intermediate Value Theorem

Midterm 1

- II.10 An application of limits
- II.11 Definition of derivative
- II.12 Derivatives as functions
- II.13 Rules of differentiation
- II.14 Product rule and quotient rule
- II.15 Chain Rule

Midterm 2



- III.16 Exponential and Logarithmic functions
- III.17 Derivatives of exponential functions
- III.18 Higher order derivatives and graphs
- III.19 Trigonometric functions
- III.20 Derivatives of trigonometric functions
- III.21 Maximums and minimums

Midterm 3

- IV.22 Mean Value Theorem
- IV.23 Optimization
- IV.24 Applied optimization

Final