Precalculus Algebra and Analytic Geometry: University of Idaho

(For a list of materials used in the course, please see http://www.theNCAT.org/R2R/AcadPrac/CM/UI_PreCalc_Mat.pdf.)

Precalculus Algebra and Analytic Geometry is a one-semester, three-credit course that covers the following topics:

Linear Equations and Equations that lead to Linear Equations

Zero Product Property

Applications of Linear Equations

Quadratic Equations
- Completing the Square
- Quadratic Formula

Radical Equations; Equations Quadratic in Form

Linear Inequalities

Equations and Inequalities Involving Absolute Value

Rectangular Coordinates

Graphs of Equations

Lines

Parallel and Perpendicular Lines

Functions

Properties of Functions

Library of Functions; Piece-Wise Defined Functions

Graphing Techniques; Transformations

Operations of Functions; Composite Functions

Quadratic Functions and Models

Polynomial Functions

Polynomial and Rational Inequalities

Synthetic Division

The Real Zeros of a Polynomial Function

Complex Numbers; Quadratic Equations with a Negative Discriminant

Complex Zeros; The Fundamental Theorem of Algebra

One-to-One Functions; Inverse Functions

Exponential Functions

Logarithmic Functions

Properties of Logarithms; Exponential and Logarithmic Models

Logarithmic and Exponential Equations

Compound Interest

Growth and Decay; Newton's Law of Cooling

Conic Sections