

## Common Syllabus for M100

Textbook: Mathematical Ideas by Miller, Heeren, and Hornsby 11<sup>th</sup> ed.



**7.1 Linear Equations and 7.2 Applications of Linear Equations (optional)**

7.3 Ratio, Proportion, and Variation

**7.4 Linear inequalities (optional)**

7.5 Properties of Exponents and Scientific Notation

**7.6: Polynomials and Factoring (optional)**

7.7 Quadratic Equations and Applications

**8.1 The Rectangular Coordinate System and Circles (optional)**

**8.2 Lines, Slope, and Average Rate of Change (Emphasis on applications)**

**8.3 Equations of Lines and Linear Models**

**8.4 An Introduction to functions: Linear Functions, Applications, and Models (Emphasis on applications)**

**8.5 Quadratic Functions, Graphs, and Models (Emphasis on applications)**

**8.7 Systems of equations and Applications (Emphasis on applications)**

13.6 Regression and Correlation

**APENDIX:** Measurement, Metric System and Conversion

**MID-TERM EXAM (during the eighth week of classes)**

9.3 Perimeter, Area, and Circumference

9.5 Space Figures, Volume, and Surface Area

2.1 Symbols and Terminology

2.2 Venn Diagrams and Subsets

2.3 Set Operations and Cartesian Products

2.4 Surveys and Cardinal Numbers

11.1 Counting by Systematic Listing

11.2 Using the Fundamental Counting Principle

**11.3 Using Permutations and Combinations (optional)**

**11.5 Counting Problems Involving “Not” and “Or” (optional)**

12.1 Basic Concepts of Probability

12.2 Events Involving “Not” and “Or”

**12.3 Conditional Probability; Events Involving “And” (optional)**

**12.5 Expected Value (optional)**

13.2 Measures of central Tendency

13.3 Measures of dispersion

13.4 Measures of position (**Emphasize z-Scores**)

13.5 The Normal Distribution

**FINAL EXAM (during the final’s week)**