# LONG ISLAND UNIVERSITY * DEPARTMENT OF MATHEMATICS

## MATH 15 – SYLLABUS     *        Prerequisite - DSM 09 or Placement Exam

**TEXT:**        **A Survey of Math with Applications,** 6th Edition, by: Angel and Porter,
                Addison Wesley Publishers

**NOTE:**        Textbook is available at the LIU Bookstore located on the ground floor of the H-building.

**COURSE REQUIREMENTS:** Three Quizzes and a Final Exam Scientific Calculator
                (Designated by Department)

| WEEK | CHAPTER | DESCRIPTIONS |
|---|---|---|
| **One:** | Chapter 1: | Inductive Reasoning; Estimation; Problem Solving |
| **Two:** | Chapter 2: | Set Concepts; Subsets; Venn Diagrams and Set Operations: Venn Diagrams with Three Sets and Verification of Set Statements |
| **Three:** | Chapter 2: | Applications of Sets; Infinite Sets |
| **Four:** | Chapter 5: | Number Theory; The Integers; The Rational Numbers; The Irrational Numbers and the Real Number System; Rules of Exponent and Scientific Notation |
| **Five:** | Chapter 6: | Algebra, Graphs and Functions: Linear Equations, Linear Inequalities and their Graphs |
| **Six:** | Chapter 6 | Quadratic Equations, Quadratic Functions and their Graphs |
| **Seven:** | Chapter 11 | Consumer Mathematics: Percent, Personal Loans and Simple Interest, Compound Interest |
| **Eight:** | Chapter 11: | Installment Buying, Buying a House with a Mortgage |
| **Nine:** | Chapter 12: | Basic Probability: Nature of Probability, Odds, Expectation, Tree Diagrams |
| **Ten:** | Chapter 12: | "Or" and "And" Problems, Conditional Probability, Counting Principles, Probability Problems using Combinations |
| **Eleven:** | Chapter 13: | Basic Statistics: Frequency Distributions, Statistical Graphs |
| **Twelve:** | Chapter 13: | Measures of Central Tendency, Measures of Dispersion |
| **Thirteen:** | Chapter 9: | Geometry: Points, Lines, Planes, and Angles. Polygons, Perimeter, Area, Volume |