

QR 102- Quantitative Reasoning –II

Tools for Quantitative Reasoning

Course Outline

- Functions: Linear Functions, Quadratic Functions, Applications of Linear and Quadratic Functions, Graphing tools for Linear and Quadratic Functions, Exponential Function and its Applications.
- Simultaneous Linear Equations in two Variables and their Applications.
- Graphical and Analytical Approaches to Solve Social & Economic Problems.
- Solving System of Linear Equations by Graphical, Substitution and Elimination Method.
- Absolute Value and Inequalities, Linear Inequalities, Compound Inequalities, Quadratic Inequalities, Inequalities Involving Absolute Value, Applications of Linear Inequalities.
- Introduction of Ratio, Proportion and Sequences.
- Logic, Logical Statements and Truth Tables, Conditional Statements.
- Statistical Tools for Data Analysis and Applications, Personal Health and Democracy, Displaying and Comparing Quantitative Data, Understanding Averages, Mean, Median and Mode, Standard Deviation, Constructing Scatter Plots and Correlation, Introduction to Theoretical Probability, Counting, Permutation and Combinations.

Recommended Books:

1. Bennett, J. & Briggs, W. (2015). Using and understanding mathematics, 6th Edition, Pearson Education, Limited.
2. http://xn--webducation-dbb.com/wp-content/uploads/2019/09/Jeffrey-Bennett-William-Briggs-Using-Understanding-Mathematics_-A-Quantitative-Reasoning-Approach- Pearson-2015.pdf
3. Blitzer, R. (2014). Precalculus, 5th Edition, Pearson Education, Limited. <https://www.ilearnacademy.net/uploads/3/9/2/2/3922443/precalculus-edition-5f.pdf>
4. Aufmann, Lockwood, (2008) Mathematical thinking and reasoning, Houghton Mifflin company USA.
5. Franklin D. Demana, Bert K. Waits, Gregory D. Foley & Daniel Kennedy, Pre-calculus Graphical, Numerical, Algebraic, 8th edition, Addison Wesley USA.
6. James Stewart, Lothar Redlin and Saleem Watson, Pre-calculus Mathematics for Calculus, 6th edition, Brooks/Cole Cengage Learning USA.