MATH 1100: Mathematical Reasoning

A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: 0
Lab Hours/Week: 0
OJT Hours/Week: *
Prerequisites: None
Corequisites: None

MnTC Goals: Goal 04 - Mathematical/Logical Reasoning

Mathematical reasoning and algebraic concepts applied to a selection of topics, which may include the mathematics of social choice, and the mathematics of management, geometry, and problem solving. Descriptive statistics and introductory probability and inferential statistics. A graphing calculator is required. Not open to students who have completed Math 1107 or Math 1170. Prerequisites: Two years of high school algebra and an appropriate score on the Mathematics Placement Test. [Core Curriculum Goal Area 4]

B. COURSE EFFECTIVE DATES: 05/11/2011 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Problem solving
2. Solving linear and quadratic equations
3. Solving basic inequalities
4. Graphing simple relations and functions
5. Basic probability, statistics, and data organization
6. Counting, permutations and combinations
7. Financial matters
8. Voting systems and apportionment

D. LEARNING OUTCOMES (General)

1. develop algebraic manipulation skills.
2. apply their algebra skills to model and solve practical problems.
3. perceive the beauty, utility and structure of mathematics.
4. apply problem solving strategies to look at problems from several points of view and judge the appropriateness of various models and techniques in each problem situation.
5. discuss problems and solutions in a mathematically logical fashion.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

Goal 04 - Mathematical/Logical Reasoning

1. Clearly express mathematical/logical ideas in writing.
2. Illustrate historical and contemporary applications of mathematical/logical systems.
3. Apply higher-order problem-solving and/or modeling strategies.
F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted