MATH 2210: Discrete Mathematics

A. COURSE DESCRIPTION

   Credits: 4
   Lecture Hours/Week: 0
   Lab Hours/Week: 0
   OJT Hours/Week: *.*
   Prerequisites: None
   Corequisites: None
   MnTC Goals: None

Symbolic logic, number concepts, mathematical induction, set theory, relations and functions, graphs, trees, recurrence relations, and complexity of algorithms. Prerequisites: CS 2321 or Math 2471 or instructor permission.

B. COURSE EFFECTIVE DATES: 08/27/2012 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

   1. Introduction to logic and proof
   2. Sets, relations and functions
   3. Mathematical induction
   4. Congruence and the Euclidean Algorithm
   5. Graphs, trees and their applications
   6. Counting techniques

D. LEARNING OUTCOMES (General)

   1. Understand the fundamental concepts and methods of discrete mathematics.
   2. Analyze problems, discern structure and pattern and make conjectures in discrete mathematical contexts.
   3. Develop valid mathematical proofs.
   4. Communicate mathematical ideas and understanding effectively.
   5. Develop and appreciation of mathematics and the wide range of applications of discrete mathematics.

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

   None

F. LEARNER OUTCOMES ASSESSMENT

   As noted on course syllabus

G. SPECIAL INFORMATION

   None noted