

MESABI RANGE COMMUNITY & TECHNICAL COLLEGE – VIRGINIA/EVELETH

Course Outline

Course Title: Finite Math  
Semester Course Prefix and Number: MATH 1545  
Old Quarter Course Prefix and Number: MATH 118

Submitted By: Math Depart.  
Approval Date:  
Revision Date: 10/31/02

Number of Credits: 3  
Semester(s) Offered:  
Negotiated Class Size:  
Number of Lecture Credits: 3  
Number of Lab Credits:  
Number of Studio/Demonstration/Internship Credits:  
Number of Lab Hours:

Course Purpose Code:

- 0 – Developmental Courses
- 1 – Non-transferable, General Education
- 2 – Technical course related to career programs
- 3 – College course which has the primary goal of applying certain concepts (e.g. vocal ensemble)
- 4 - Other college course not considered a part of general education (MNTC) e.g. computer science, health, physical education
- 5 – Course which is intended to fulfill Minnesota Transfer Curriculum (MNTC) requirements.
- 9 – Continuing Education/Customized Training specialized credit course (not occurring in 0-5)

Catalog Description:

This course is primarily for students in the social sciences, behavioral sciences, and various business curricula. It provides an excellent background for statistics. Topics include set theory with operations and Venn diagrams; permutations, combinations, and Binomial Theorem, probability; Baye’s Theorem, frequency functions, binomial probability; matrices operations, transposes, inverses, solutions of systems of equations, and Linear programming with Simplex Method.

Prerequisites and/or recommended entry skills/knowledge:

Course Prerequisite(s): None  
Reading Prerequisite: None  
Composition Prerequisite: None  
Mathematics Prerequisite: “C” or better grade in MATH 0094 (or previous course 098), or instructor’s consent; MATH 1521 recommended (offered alternate years)

Career Programs and Transfer Majors Accessing this Course:

Minnesota Transfer Curriculum Goal(s) partially met by this course if applicable: Notes: No more than two goals may be met by any one course. (Curriculum Committee review and the Chief Academic Officer’s approval are required).

- 0.  None
- 1.  Communications
- 2.  Critical Thinking
- 3.  Natural Sciences
- 4.  Mathematical/Logical Reasoning
- 5.  History and the Social and Behavioral Sciences
- 6.  The Humanities and Fine Arts
- 7.  Human Diversity
- 8.  Global Perspectives
- 9.  Ethical and Civic Responsibility
- 10.  People and the Environment

**Learning outcomes, including any relevant competencies listed in the Minnesota Transfer Curriculum:**

The students will:

- Illustrate historical and contemporary applications of mathematical/logical systems
- Clearly express mathematical/logical ideas in writing both in traditional mathematical equations and inequations as well as in complete word sentences.
- Explain what constitutes a valid mathematical/logical argument (proof)
- Apply high-order problem solving and/or modeling strategies in solving systems of linear equations.

**Student assessment methods:**

Graded homework, chapter tests, pop quizzes, projects, and/or final exam

**Use of instructional technology** (includes software, interactive video and other instructional technologies):

If available

**Outline of the major course content:**

Primarily for students in the social sciences, behavioral sciences, and various business curricula. Provides an excellent background for statistics. Set theory operations and Venn diagrams; permutations, combinations, and Binomial Theorem. Probability: basic concepts, Baye's Theorem. Frequency functions, binomial probability. Matrices: operations, transposes, inverses, solutions of systems of equations. Markov Chains: regular and absorbing. Linear programming with Simplex Method.

**Additional special information** (special fees, directives on hazardous materials, etc.)

**Transfer Information:** (Please list colleges/majors that accept this course in transfer.)

This course transfers to any college that has a finite math course in their curriculum.

**Approvals:**

Body	Representative Signatures	Date
Curriculum Committee		
Faculty Association		
Meet and Confer		
Chief Academic Officer		

Distribution: Original – Administrative Office, Library, Learning Center, Records, Student Services, Curriculum Committee Chair