

**NORTHEASTERN TECHNICAL COLLEGE
COURSE OUTLINE**

COURSE: MAT	PREFIX NO. 122	EFFECTIVE DATE AUGUST 2007	NEXT REVIEW DATE AUGUST 2008		
TITLE: Finite College Mathematics		CREDITS 3	CONTACTS		
			CLASS	LAB	TOTAL
			3	0	3

PREREQUISITES: Acceptable placement scores (COMPASS: Algebra 69-100) or MAT 101 with grade of "C" or better.

DESCRIPTION: This course includes the following topics: logic; sets; Venn diagrams; counting problems; probability; matrices; systems of equations; linear programming, including the simplex method and applications; graphs; and networks.

TEXTBOOK(S) OR ALTERNATIVE: Finite Mathematics, 2ND edition, by Berresford and Rockett, Houghton. 2005.

MATERIALS: The student should purchase textbook, notebook paper, pencils, erasers, ruler, graph paper, and suggested but not mandatory a good scientific calculator.

COLLATERAL READING: .

CLASS MANAGEMENT ACTIVITIES (Attendance, tardies, testing, academic dishonesty, etc.)

Academic Dishonesty: Students are expected to do their own work. Please refer to the NETC Student Code and Grievance Procedure for a definition of academic dishonesty and an outline of the disciplinary action that may result. Students exchanging test or project information or copying another's work will receive an "F" for the project/test.

Attendance: Students are expected to attend all scheduled classes and are responsible for all class work, homework, notes, etc., whether or not they are present. In the event of extenuating circumstances you are allowed to miss up to 8 hours. A student missing more than 8 hours of class for any reason will be dropped from the course for excessive absences. If the instructor drops a student for excessive absences at any time during the semester, a grade of "F" will be assigned. If the student withdraws from the course, a grade of "W" or "WF" will be assigned as outlined in the College catalog. There is no such thing as an excused absence! If you exceed the allowed number of absences, you will be dropped.

Tardies: A student is considered tardy if not present for roll call which is taken at the beginning of the class. If you leave early or enter late the time out of class will count as time absent also. Three tardies constitute one-hour of absence.

Testing: Chapter or topical tests will be given and a final exam may be given.

Classroom Etiquette:

1. Electronic communication devices (pagers, cell phones) are not allowed in the classroom. On-call emergency personnel should see the instructor for an exemption.
2. No visible food or drinks are allowed in the classroom.
3. No radios or headphones are allowed in the classroom.

Student ID Policy: It is mandatory that every student wear his/her ID at all times on campus. During the first week of classes, the instructor will issue a reminder to wear the ID. This reminder is a warning.

After the first week of classes, instructors are required to dismiss students without an ID from class. The student may get his/her ID (or a new one in Student Services for \$3.00) and return to class before the midpoint of the class. If the student cannot get an ID and return to class by the midpoint, the instructor will record the absence.

DISABILITIES STATEMENT: Students with disabilities are encouraged to contact the Vice President for Student Services to discuss needs or concerns as they pursue an academic program and participate in campus life. The Vice President for Student Services will provide guidance concerning official documentation of disabilities and/or accommodation of needs. (See College Catalog)

RESOURCES (A-V, Persons tools, equipment): Computerized instruction on selected topics and video taped lecture materials are available in the Student Success Center. Ask your instructor for details.

COURSE TOPICAL OUTLINE (List topics and sub-topics of course) and Calendar or approximate length of time devoted to topic.

TENTATIVE CLASS OUTLINE

<u>SECTION</u>	<u>DESCRIPTION</u>
3.1	Systems of Two Linear Equations in Two Variables
3.2	Matrices and Linear Equations in Two Variables
3.3	Systems of Linear Equations and the Gauss-Jordan Method
3.4	Matrix Arithmetic
3.5	Inverse Matrices and Systems of Linear Equations

TEST 1 _____

COURSE TOPICAL OUTLINE: (Continued)

<u>SECTION</u>	<u>DESCRIPTION</u>
4.1	Linear Inequalities
4.2	Two-Variable Linear Programming Problems
4.3	The Simplex Method for Standard Maximum Problems
4.4	Standard Minimum Problems and Duality
4.5	Nonstandard Problems: The Dual Pivot Element and the Two-Stage Method
4.6	Nonstandard Problems: Artificial Variables and the Big-M Method

TEST 2 _____

- 5.1 Sets, Counting and Venn Diagrams
- 5.3 Probability Spaces

TEST 3 _____

Logic - On the WEB

- L.1 Statements and Connectives
- L.2 Truth Tables
- L.3 Implications
- L.4 Valid Arguments
- L.5 Quantifiers and Euler Diagrams

TEST 4 _____

OBJECTIVES OF COURSE/LEARNING OUTCOMES: The student will be introduced to topics listed in the course description with an emphasis on mastering skills of matrices with linear equations and inequalities, logic, sets, Venn diagrams, and probability.

College Wide Competencies: Apply mathematical/computational skills to solve problems.

INSTRUCTIONAL METHODS TO COMPLETE OBJECTIVES: Lectures covering course material will be supplemented by problem solving and outside assignments.

EVALUATIVE METHODS TO APPRAISE OBJECTIVES: Chapter test or topical tests will be given. In addition, outside assignments may constitute a portion of the graded work for the course. The average of the topical test or chapter test will constitute a student's final average. A final exam may be given and NO test grades will be dropped.

MAKE-UP TEST PROCEDURE: Make-up tests are given **only** if the student has discussed with the instructor his or her individual need to take a make-up test. This discussion **must** take place before the test is given to the rest of the class or shortly after the class is over (same day). Failure to make prior arrangements will result in the student **not being allowed to take a make-up test.**

GRADING SCALE:

100 - 93 = A

92 - 85 = B

84 - 77 = C

76 - 69 = D

Below 69 = F