HIBBING COMMUNITY COLLEGE
COURSE OUTLINE

COURSE NUMBER & TITLE: Math 0961: Algebra for Liberal Arts
CREDITS: 5 (5 Lec/ 0 Lab)
PREREQUISITES: Placement Exam

CATALOG DESCRIPTION:
Algebra for Liberal Arts is a course designed to prepare students for liberal arts mathematics courses. Topics covered include solving equations, inequalities and applied problems, graphing functions, finding equations of functions, determining domain and range for functions, solving systems of equations and applied problems, polynomial operations, and polynomial factoring.

OUTLINE OF MAJOR CONTENT AREAS:
1. Review
   A. Operations and solving equations: integers, fractions, decimals
   B. Solving equations and applied problems: ratios, proportions, percents
2. Solving equations and inequalities
   A. Formulas
   B. Problem solving
   C. Sets, inequalities, and interval notation
   D. Intersections, unions, and compound inequalities
   E. Absolute-value equations and inequalities
3. Functions
   A. Graphs
   B. Domain and range
   C. Rate of change
   D. Finding equations of functions
4. Systems of Equations
   A. Graphical Solutions
   B. Substitution
   C. Elimination
   D. Applied Problems
5. Polynomial Functions
   A. Operations
   B. Factoring
COURSE GOALS/OBJECTIVES/OUTCOMES:
1. Students will perform operations and solve equations and applied problems involving integers, fractions, decimals, ratios, proportions, and percents.
2. Students will evaluate formulas and solve a formula for a specified expression.
3. Students will graph inequalities and solve inequalities and applied problems involving inequalities.
4. Students will find intersections and unions of sets.
5. Students will solve and graph conjunctions and disjunctions of inequalities and solve applied problems involving conjunctions and disjunctions.
6. Students will solve equations and inequalities involving absolute-value expressions.
7. Students will graph functions.
8. Students will determine whether a correspondence is a function and identify the domain, range, and intercepts of functions.
9. Students will solve applied problems involving functions.
10. Students will find equations of functions.
11. Students will solve applied problems involving rate of change.
12. Students will solve systems of equations graphically, by substitution, and by elimination.
13. Students will solve applied problems using systems of equations.
14. Students will perform operations involving polynomial functions.
15. Students will factor polynomial functions.

MNTC GOALS AND COMPETENCIES MET:
N/A

HCC COMPETENCIES MET:
Communicating Clearly & Effectively
Thinking Creatively & Critically

STUDENT CONTRIBUTIONS:
The student will attend class regularly, participate in class discussion, complete daily assignments, in class exercises, exams, and a comprehensive final examination. The student will spend a minimum of two hours completing assignments for every hour in class. These must be accomplished in such a way that they meet minimum standards set by the instructor.

STUDENT ASSESSMENT SHALL TAKE PLACE USING INSTRUMENTS SELECTED/DEVELOPED BY THE COURSE INSTRUCTOR.

SPECIAL INFORMATION: (SPECIAL FEES, DIRECTIVES ON HAZARDOUS...
MATERIALS): The student may be required to provide a calculator for this course. If a specific calculator model is required, this model will be specified by the instructor on the course syllabus.