

COURSE OUTLINE
MT. HOOD COMMUNITY COLLEGE DISTRICT
Gresham, Oregon 97030

* New _____
 * Revised 10/25/06
 * Review only (no changes) _____
 (Date)

* Please check appropriate box:

- | | |
|---|---|
| <input type="checkbox"/> Lower Division Collegiate | <input checked="" type="checkbox"/> Occupational Preparatory |
| <input type="checkbox"/> Occupational Supplementary | <input type="checkbox"/> Other Education, Including General Ed & Adult Ed |

COURSE TITLE Beginning Algebra I

COURSE NUMBER MTH60 COURSE CREDIT 3

* Lecture Hours 2 | 20 Lab Hours 3 | 30 Seminar Hours _____ | _____
 Wkly/Term Wkly/Term Wkly/Term

* GRADING STATUS:

- Letter Grade Only S/U Only Optional No Grade

* HEADCOUNT LOADING:

- Yes No * Factor _____

Guided Studies Requirement:

Student must be proficient in:

- Reading (RD90)
 Writing (WR90)
 Mathematics (MTH20)
 Not applicable

For Instruction Office Use Only General Education Category Apply general requirement or distribution to:		
AA _____	AS _____	AS/OT-Bus _____
AAS _____	AGS _____	
VP Approval _____	Date _____	

Mathematics Department 10/25/06

1) Prepared by _____ Date _____ 4) Approved by Dean _____ Date _____

2) Approved by Distance Education Admin. _____ Date _____ 5) Curriculum Committee _____ Date _____

3) Approved by Department Chair _____ Date _____ 6) Approved by VP of Instruction _____ Date _____

* See legend/definition for explanation

COURSE DESCRIPTION: (for catalog)

This is the first half of the beginning algebra course for both the baccalaureate prep and technical prep student emphasizing problem solving and real work applications using numerical, algebraic and graphical models. The topics covered include the real number system, positive integer exponents, unit conversions and dimensional analysis, simplifying algebraic expressions, modeling and solving problem situations with linear equations and formulas, the Cartesian plane, and applications which require the Pythagorean Theorem.

PREREQUISITE:

MTH 20 with a C or better; or suitable performance on the mathematics placement exam

INSTRUCTIONAL MATERIALS REQUIRED OF STUDENT: (text, supplies, etc.)

Text, ruler, graphing calculator, a TI-83/ TI-84 series graphing calculator is recommended

STUDENT LEARNING OUTCOMES:

Upon successful completion of this course, the student will be able to:

1. **Communicate** effectively (orally and in writing) a problem solving process, results, and conclusions using mathematical terminology and correct mathematical syntax.
2. Make **connections** among the various models: verbal, numeric, visual, graphical, and algebraic.
3. Determine if a solution is reasonable and **verify results**.
4. Maintain and strengthen **prerequisites**, especially: simplifying expressions using terms, one-step calculator entry including adding parentheses, area and perimeter, percents, ratios, arithmetic with positive and negative numbers.
5. Use unit fractions to **convert** between equivalent units of measure, including rates and other derived or indirect measurements.
6. Use **dimensional analysis** as a problem-solving tool and demonstrate appropriate units throughout calculations.
7. State results from calculations with a reasonable **precision and/or number of digits**.
8. **Create equations, tables, and graphs** to model patterns and application situations.
9. Use equations, tables, and graphs to **answer questions** about patterns and application situations.
10. **Simplify algebraic expressions** including: combining like terms, the distributive property (both multiplication and division), and positive integer exponents.
11. **Algebraically solve equations** including: linear equations, simple quadratics (with x^2 , but not x), and literal equations or formulas.
12. Solve problems using the **Pythagorean Theorem**.

GENERAL INSTRUCTIONAL METHODS:

The MHCC Mathematics Curriculum emphasizes conceptual understanding, real-world applications, multiple representations of problem situations, making connections, mathematical modeling and mathematical problem solving. This represents a shift away from technique mastery and procedural skills. For students to see mathematics as an integrated whole, the above objectives should be presented in a connected fashion and not treated as discrete topics or concepts.

EVALUATION PROCESS:

Assessment will be based on a variety of methods noted below. Student evaluation includes problems or activities that incorporate and integrate several outcomes. A cumulative in class final is required. Passing with a C or better serves as a prerequisite for Math 65.

- Worksheets
- Projects
- In-class Individual Exams
- In-class Team Exams
- Take-Home Individual Exams
- Take-Home Team Exams
- Writing Assignments
- Daily Homework
- Attendance
- Teamwork/Participation