

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

* New _____
 *Revised 12/8/06
 * Review only (no changes) _____
 (Date)

* Please check appropriate box:

- Lower Division Collegiate
 Occupational Supplementary
 Occupational Preparatory
 Other Education, Including General Ed & Adult Ed

COURSE TITLE Beginning Algebra II

COURSE NUMBER MTH65 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 12/8/06

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 second 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 graphs and equations of lines, negative integer exponents, solving formulas and rational equations, and practical geometry. A graphing calculator is required and its use is fully integrated in the course.

PREREQUISITE:

MTH 60 with a C or better; or suitable performance on the mathematics placement exam

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

Text, Graphing Calculator (the TI-83/ TI-84 series graphing calculator is recommended), Ruler, Protractor, Compass

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. Apply mathematical reasoning and **modeling** to solve problems arising from the real world. Model problem situations using mathematics verbally, numerically, visually, graphically, and/or algebraically.
3. Make **connections** among the various models.
4. Determine if a solution is reasonable and **verify results**.
5. Maintain and strengthen **prerequisites**, especially: one-step calculator entry including adding parentheses, unit conversions, simplifying expressions, and solving equations.
6. **Simplify algebraic expressions** including: integer exponents, and multiplying multi-term expressions.
7. **Algebraically solve equations** including: common factoring, and fractions.
8. Identify a table, equation, description, or graph as **linear or not** (without graphing).
9. Given linear information in any form, sketch the linear graph on paper and on the calculator.
10. Determine the **slope, horizontal, and vertical intercepts of a line**, and interpret their meaning in the context of an application, including units.
11. Write and interpret the **slope-intercept form of a line**.
12. Measure **angles** using a protractor and estimate the measurement of angles.
13. Construct geometric figures, including **scale drawings**, with specific length and angle measurements using a protractor and a ruler.
14. Use the properties of **similar triangles** to solve application problems.
15. Determine unknown **angles in geometric figures** and explain the reasoning using appropriate vocabulary.
16. Calculate lateral area, **surface area and volume** of prisms, cubes, cylinders, cones, pyramids, spheres and combined solids in applications.
17. Recognize a graph that is scaled incorrectly or is **misleading** in appearance.

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 includes assignments in-class work, and a cumulative in-class exam. Passing with a C or better serves as a prerequisite for Math 95.