

COURSE OUTLINE

Revision: Marjie Vittum-Jones, April 2008

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|--------------------------|---|
| DEPARTMENT: | Academic Programs |
| CURRICULUM: | Developmental Mathematics |
| COURSE TITLE: | Algebra I |
| COURSE NUMBER: | MATH 084 |
| TYPE OF COURSE: | College Preparatory |
| Special Requirement Met: | None |
| AREA(S) OF KNOWLEDGE: | None |
| COURSE LENGTH: | 1 quarter |
| CREDIT HOURS: | 5 |
| LECTURE HOURS: | 55 (lecture, lab, online formats) |
| LAB HOURS: | 0 |
| CLASS SIZE: | 25 (for lab or online) or 30 (for lecture) |
| PREREQUISITES: | Math 083 with a 2.0 or better or appropriate placement score. |

COURSE DESCRIPTION:

Math 084 is a first quarter algebra course dealing with operations of signed numbers, solutions of first-degree equations, graphs of linear equations, slopes, exponents, polynomials, and problem solving.

STUDENT LEARNING OUTCOMES ADDRESSED:

1. Communication – Read and listen actively to learn and communicate.

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STUDENT LEARNING OUTCOMES CONTINUED:

2. Computation – Use arithmetic and other basic mathematical operations as required by program of study. Apply quantitative skills for personal, academic, and career purposes. Identify, interpret and utilize higher level mathematical and cognitive skills (for those students who choose to move beyond the minimum requirements).
3. Critical thinking and problem-solving – Think critically in evaluating information, solving problems, and making decisions.
4. Personal responsibility – Be motivated and able to continue learning and adapt to change. Value one's own skills, abilities, ideas and art. Take pride in one's work. Be aware of civic and environmental issues.
5. Technology – Select and use appropriate technological tools for personal, academic and career tasks.

GENERAL COURSE OBJECTIVES:

The student will do most or all of the following:

1. Demonstrate success on evaluations over the topics studied.
2. Be able to work with the basic arithmetic skills.
3. Work to build a foundation of algebra skills for subsequent mathematical classes.
4. Develop skills in algebra through symbolic manipulation and applications.
5. Develop regular attendance and time management/organization skills.

TOPICAL OUTLINE:

- I. Real numbers and algebraic expressions
- II. Solving equations and inequalities.
- III. Graphs of linear equations
- IV. Graphs, slopes, and applications
- V. Exponents and properties of exponents
- VI. Polynomials and polynomials: operations
- VII. Problem solving

APPROX HOURS: 55

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| SLO # | Included in Course Objective Number | SSCC Student Learning Outcomes |
|---------|-------------------------------------|---|
| SLO 1.1 | 1 - 7 | Communication - Read and listen actively |
| SLO 1.2 | | Communication - Speak and write effectively |
| SLO 2.1 | 1 - 7 | Computation - Use mathematical operations |
| SLO 2.2 | 1 - 7 | Computation - Apply quantitative skills |
| SLO 2.3 | 1 - 7 | Computation - Identify, interpret, and utilize higher level mathematical and cognitive skills |
| SLO 3.1 | | Human Relations - Use social interactive skills to work in groups effectively |
| SLO 3.2 | | Human Relations - Recognize the diversity of cultural influences and values |
| SLO 4.1 | 1 - 7 | Critical Thinking and Problem Solving - |
| SLO 5.1 | 1 - 7 | Technology - Select and use appropriate technological tools |
| SLO 6.1 | 1 - 7 | Personal Responsibility - Be motivated and able to continue learning and adapt to change |
| SLO 6.2 | 1 - 7 | Personal Responsibility - Value one's own skills, abilities, ideas and art |
| SLO 6.3 | 1 - 7 | Personal Responsibility - Take pride in one's work |
| SLO 6.4 | | Personal Responsibility - Manage personal health and safety |
| SLO 6.5 | 1 - 7 | Personal Responsibility - Be aware of civic and environmental issues |
| SLO 7.1 | | Information Literacy - Access and evaluate information |
| SLO 7.2 | | Information Literacy - Use information to achieve personal, academic, and career goals, as well as to participate in a democratic society |

PREPARED BY: M. Vittum-Jones and O. Shatunova
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