Section 1: Course Description

This course is the second half of the first of two courses in algebra (MATH 110: Elementary Algebra and MATH 120: Intermediate Algebra) designed to teach students the language in which we communicate mathematics and mathematical ideas.

Section 2: Student Learning Outcomes

Upon completion of this course, students will (1) be able to solve problems using the essential tools of algebra: to evaluate expressions and functions involving real numbers, to simplify variable expressions and to solve linear equations, (2) understand the relationship between an algebraic object and its geometric representation and (3) be able to use linear functions and their graphs to model and analyze problems.

The focus in MATH 112 is on the third of the Student Learning Outcomes.

Section 3: Instructor Contact Information

Instructor: Evan Leach

Email: leache@smccd.net (Include "MATH 110" in the subject line of your email messages.)

Website: www.smccd.net/accounts/leache

Office Location: Building 7, Room 7107

Office Phone: (650) 738-4186

Office Hours: Monday-Thursday 9-10, 1-2; Tuesday and Thursday 10-11, Friday 9-10, and by appointment

Section 4: Required Materials

Textbook: <u>Elementary and Intermediate Algebra, Discovery and Visualization</u>, 3rd edition, Hubbard and Robinson, Houghton Mifflin, 2002

Calculator: Texas Instruments TI-83 Plus/TI-84 or equivalent

Students must also maintain an adequate supply of pencils, erasers and letter-sized loose-leaf paper.

Section 5: Important Dates

Last Day to Add/Drop (with partial refund): Monday, 29 January 2007

Last Day to Drop (without refund): Friday, 9 February 2007

Last Day to Withdraw: Thursday, 26 April 2007

Final Exam: Wednesday, 23 May 2007, 8:10 – 10:40 AM

Section 6: Attendance

Attendance will be taken each class meeting using a sign-in sheet. Any student who misses two
of the first three class meetings (17, 19 and 21 January 2007) without notifying the instructor
will be removed from the class. Any student who misses six or more class meetings before the
Last Day to Withdraw will be removed from the class by the instructor. A grade penalty will
be imposed on any student who misses their sixth class meeting after the Last Day to
Withdraw.

*If you wish to drop or withdraw from this course, do so via WEBSMART. Failure to do so may
result in a grade of F for this course.*

Section 7: Homework

Homework will be assigned at each class meting and collected at the end of the following class
meeting. Homework assignments will consist of a selection of problems from the book or from a
handout. Homework assignments must be completed on letter-sized loose-leaf paper. Homework
assignments may not be submitted on paper torn from a spiral-bound notebook. Scores for
homework assignments will be based on accuracy, clarity and promptness.

Include your first and last name as well as the assignment number on each page of your
homework assignments. If the problems for the assignment are from the textbook, list those
problems on the top of each page as well.

Section 8: Quizzes

Quizzes will be given periodically during the last ten to fifteen minutes of class. Make-up quizzes will not be given. Scores for missed quizzes will be generated from the subsequent Midterm.

Section 9: Midterm Exams

Two Midterms will be given during the semester. Make-up midterms will not be given. Any student who misses a midterm will receive a score for that section equal to 80% of their score on the final exam. The first midterm will take place on 14 February 2007, and the second midterm on 9 May 2007.

Section 10: Final Exam

The Final Exam will take place on Wednesday, 23 May 2007 from 8:10-10:40 AM. The Final Exam will be comprehensive. Any student who misses the Final Exam will receive a maximum grade of D for the course.

Section 11: Grading Policy

Each student's grade will be based on their performance on homework and quizzes (25%), midterms (25% each) and the final exam (25%). Letter grades will be based on the standard scale below.

Percentage	Letter Grade
90-100%	A
80-89%	B
70-79%	C
60-69%	D
0-59%	F

Section 12: Skills Inventory

Part 1 Upon completion of this course, students will be able to solve problems using the essential tools of algebra: to evaluate expressions and functions involving real umbers, to simplify variable expressions and to solve linear equations.

     (1)   Arithmetic of real numbers, including the order of operations

     (2)   Write and simplify variable expressions

     (3)   Solve linear equations of a single variable

     (4)   Evaluate expressions and functions

Part 2 Upon completion of this course, students will understand the relationship between an algebraic object and its geometric representation.

     (1)   Produce the graph of a function in a specified window on the calculator

     (2)   Evaluate a function using the TRACE and TABLE functions of the calculator

     (3)   Find the zeros of a function on the calculator

     (4)   Find the minimum and maximum value of a function on the calculator

     (5)   Find the points of intersection of the graphs of two functions

Part 3 Upon completion of this course, students will be able to use linear functions and their graphs to model and analyze problems.

     (1)   Calculate the slope, x-intercept and y-intercept of a linear function

     (2)   Produce the graph of a linear function

     (3)   Write the equation of a linear function given information about the function

     (4)   Solve systems of linear equations

     (5)   Graph linear inequalities and systems of linear inequalities

In each Part, applications of each skill will be stressed.

In MATH 112, we will focus on those skills listed in Part 3.