

Phone: (559) 638-3641 ext. 3744	E-mail: <a href="mailto:doug.gong@reedleycollege.edu">doug.gong@reedleycollege.edu</a>
---------------------------------	--

**Math 103-78089:** Intermediate Algebra**Text (Optional):** [Elementary and Intermediate Algebra, 2<sup>nd</sup> ed., Woodbury.](#)**Prerequisite:** MATH 101**Basic Skills Advisories:** Eligibility for ENGL 126**Description**

This course will deal with many algebraic concepts including: equations and inequalities in two variables, rational exponents and roots, quadratic functions, exponential and logarithmic functions, and conic sections.

**Expectations / Responsibilities**

- |                   |  |
|-------------------|--|
| <b>Instructor</b> | <ul style="list-style-type: none"> <li>• Provide the necessary instruction for student success.</li> <li>• To hold students accountable for their achievement in relation to the course outcomes.</li> <li>• Clearly communicate progress being made in a timely fashion.</li> </ul>   |
| <b>Student</b>    | <ul style="list-style-type: none"> <li>• Be properly enrolled on WebAdvisor and Course Compass by Noon Thursday, June, 24, 2010.</li> <li>• Monitor the class Blackboard site regularly.</li> <li>• Provide a working e-mail address that you check regularly.</li> <li>• Learn the material that is assigned and <b>get help</b> when necessary.</li> <li>• Study the material daily and stay current on all assignments.</li> <li>• Students are responsible for officially dropping the class.</li> </ul> |

**Face to Face Meeting Dates**

July 15, 2010	Thursday	6:00-8:00 PM	Midterm	Room CCI 204
August 4, 2010	Wednesday	6:00-8:00 PM	Final Exam	Room CCI 204

**Grading Scale:**    **A** 90-100%      **B** 80-89%      **C** 70-79%      **D** 60-69%

**Homework** Online assignments must be completed on the Course Compass website  
**(40 %):** <http://www.coursecompass.com>. Written assignments will be collected on Face to Face meeting dates.

**Online Tests** Online tests will be given regularly. **It is not possible to stop the exam and return to it later!** Each test has a deadline and each test will cease to be available after its deadline.  
**(10 %):**

**Midterm/Final** Students will need to present a valid picture I.D. in order to take each exam. There will be one Midterm Exam and a Final. Each Exam has a two hour time limit. All significant work needs to be shown for each problem in order to receive full credit. If an exam is not taken as arranged, then it will be scored a zero.  
**(50 %):**

**ACADEMIC DISHONESTY**

**Cheating** is the act or attempted act of taking an examination or performing an assigned, evaluated task in a fraudulent or deceptive manner, such as having improper access to answers, in an attempt to gain an unearned academic advantage. Cheating may include, but is not limited to, copying from another's work, supplying one's work to another, giving or receiving copies of examinations without an instructor's permission, using or displaying notes or devices inappropriate to the conditions of the examination, allowing someone other than the officially enrolled student to represent the student, or failing to disclose research results completely.

**Plagiarism** is a specific form of cheating: the use of another's words or ideas without identifying them as such or giving credit to the source. Plagiarism may include, but is not limited to, failing to provide complete citations and references for all work that draws on the ideas, words, or work of others, failing to identify the contributors to work done in collaboration, submitting duplicate work to be evaluated in different courses without the knowledge and consent of the instructors involved, or failing to observe computer security systems and software copyrights. Incidents of cheating and plagiarism may result in any of a variety of sanctions and penalties, which may range from a failing grade on the particular examination, paper, project, or assignment in question to a failing grade in the course, at the discretion of the instructor and depending on the severity and frequency of the incidents.

**COURSE OUTCOMES:**

Upon completion of this course, students will be able to:

- A) create a linear equation given a slope and a point or two points; graph linear equations and inequalities and use function notation to find the value of expressions.
- B) add, subtract, multiply, and divide radical expressions and use exponent properties and conjugate properties to simplify and solve radical expressions.
- C) complete the square of a quadratic equation and use the quadratic formula to solve any quadratic equation; graph quadratic equations using translations.
- D) solve exponential and logarithmic equations by using equivalent expressions; use exponential and logarithmic properties to convert between common logarithms, natural logarithms and other bases.
- E) expand binomial expressions using Pascal's triangle and the binomial coefficient formula; find the  $n^{\text{th}}$  term of a sequence of numbers.
- F) graph each of the conic sections by translations; put conic equations and inequalities into the standard form.

**COURSE OBJECTIVES**

In the process of completing this course, students will:

- A) use function notation and the properties of lines and linear inequalities.
- B) simplify radical expressions and perform operations on radical expressions.
- C) graph parabolas and solve quadratic equations.
- D) use the properties of exponents and logarithmic functions to change the base of a logarithm.
- E) generalize arithmetic and geometric sequences and find the  $k^{\text{th}}$  term of a binomial expansion.
- F) manipulate and graph equations of conic sections.

**COURSE OUTLINE**

A.	Equations and Inequalities in Two Variables
1.	Slope of a line
2.	The equation of a line
3.	Linear inequalities in two variables
4.	Algebra using function notation
B.	Rational Exponents and Roots
1.	Rational exponents
2.	Simplified form for radicals
3.	Addition, subtraction, multiplication, and division of radical expressions
4.	Equations with radicals
5.	Complex numbers
C.	Quadratic Functions
1.	Completing the square
2.	The quadratic function
3.	Graphing Parabolas
4.	Quadratic Inequalities
D.	Exponential and Logarithmic Functions
1.	Exponential Functions
2.	The Inverse of a function
3.	Logarithms and their properties
4.	Exponential equations and change of base
E.	Sequences and Series
1.	Arithmetic and geometric sequences
2.	Series
3.	Binomial Expansion
F.	Conic Sections
1.	Circle
2.	Ellipses and Hyperbolas
3.	Second-degree inequalities and non-linear systems

**NOTE:** *If you have a verified need for an academic accommodation or materials in alternate media per the Americans with Disabilities Act or section 504 of the Rehabilitation act please contact me as soon as possible.*

*Please refer to SCCCD policies for guidance on all matters relating to this course.*