

Math 103-56802

Mr. Jim Gilmore

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Office Hours: M, Th 11:00-11:50; W 9:00-9:50

Intermediate Algebra

REEDLEY COLLEGE

Spring 2010

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COURSE DESCRIPTION: This course will deal with many algebraic concepts consistent with a second course in algebra including: equations and inequalities in two variables, rational exponents and roots, quadratic functions, exponential and logarithmic functions, and the conic sections.

Basic Skills Advisories: Eligibility for ENGL 126

Subject Prerequisites: Math 101 or Equivalent

Optional Text: Charles P. McKeague, Elementary and Intermediate Algebra, Saunders College Publishing, 3rd Edition, 2008.

Optional Notes: Math 103 Notes are to be purchased from the bookstore.

Required Web Access: WebAssign can be purchased from the bookstore with text, or at www.webassign.net, or <http://cengage.com/ichapters/scccd>

ATTENDANCE: Students are expected to attend all class meetings, be on time, and be in class the entire class session. The classes are 1/11, 2/25, 4/8 and 5/13 at 7 pm in CCI 206. Calling me to tell me you will be absent **does not** excuse you. If you decide to drop the course, it is **your** responsibility to make the drop official in the Administrations and Records office or else possibly receive a grade of **F**.

Behavioral Standards: Your classmates and I would greatly appreciate that students in the class take care of any personal needs (i.e., using the restroom, getting a drink, sharpening a pencil) before class begins. Please turn your phone off when entering the class. You may not use your phone as a calculator. I would appreciate that you not bring guests to class.

NOTE: The drop deadline is **March 12, 2010**.

HOMEWORK: Homework is done using WebAssign on the computer. **NO LATE HOMEWORK WILL BE ACCEPTED!**

TESTS: There are no makeup exams for missed tests.

FINAL EXAM: A two-hour comprehensive final exam worth 1 test will be given at the end of the semester during finals week. You are required to take the final exam, however the final exam will replace your lowest test score..

GRADING:

- *Homework:* All of your homework scores will be worth the same percentage. So homework worth 10 points and homework worth 15 points will count the same. Homework percentages will be averaged to obtain a total homework percentage.
- *Online Tests:* All of your test percentages will be averaged. This will give you a score between 0 and 100.
- *In Class Tests:* All of your test percentages will be averaged. This will give you a score between 0 and 100.
- Your homework grade is worth 25% of your grade. Your online test grade is worth 5% of your grade and the in class test grade is worth 70% of your grade

Example: If your homework grade is 75, your online test grade is 85, and your in class test grade is 70%, then you would compute your grade as follows:

$$(.25)(75) + (.05)(85) + (.70)(70) = 18.75 + 4.25 + 49 = 72\%$$

<u>Percent of Total Points</u>	<u>Grade</u>
89-100	A
78-88	B
65-77	C
55-64	D
0-54	F

WHERE TO FIND YOUR GRADE:

Available at <http://sc.webgrade.classmanager.com/ReedleyCollege/> Your class will be identified by schedule number. Username and password is sent to your email that you have on record with Blackboard.

SPECIAL NEEDS REQUESTS: If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

Academic Dishonesty

Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure that this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entirely honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences.

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 a 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 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 and to change the base of a logarithm.
- E) generalize arithmetic and geometric sequences and find the k^{th} term of a binomial expansion.
- F) manipulate and graph the equations of the conic sections.

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^{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 CONTENT 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

Important Dates

January 11	Class Begins
January 18	Martin Luther King Jr. Day
February 12	Lincoln Day
February 15	Washington Day
March 12	Last day to drop
March 29-April 2	Spring Recess
May 17 (Thursday)	Final day from 7:00 PM in CI 206 (The final is a test. Be sure you plan to be there!)
May 21	End of semester