# MATH 101 – ELEMENTARY ALGEBRA SPRING 2012

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#### **Course Description**

This is a first course in elementary algebra, including algebraic expressions, linear equations and inequalities, linear equations and inequalities in two variables, exponents and polynomials, factoring, and rational expressions.

## **Course Objectives**

In the process of completing this course, students will:

- 1. Recognize the real number system, its subsets and how to perform operations on numbers from these subsets.
- 2. Simplify algebraic expressions and solve linear equations and inequalities
- 3. Graph linear equations in two variables and solve systems of linear equations.
- 4. Simplify expressions using the properties of exponents and perform operations with polynomials.
- 5. Factor algebraic expressions and solve equations of degree greater than one.
- 6. Perform arithmetic operations on rational expressions and solve equations containing rational expressions.

#### Student Learning Outcomes

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

- 1. Apply real number operations to simplify and factor algebraic expressions.
- 2. Solve linear and quadratic equations.
- 3. Use graphic representation of an equation in two variables to solve appropriate problems.

Prerequisite: Math 250 or equivalent.

Advisory: Math 256, eligibility for English 126.

#### <u>Textbook</u>

George Woodbury, Elementary and Intermediate Algebra, Third Addition.

All of the work for this course will be done using MyMathLab (www.coursecompass.com). The textbook will also be available electronically through this website. You will need to purchase an access code for MyMathLab one of the following ways:

- 1) You may purchase the bundled textbook from the Reedley College Bookstore, which includes the textbook and access code to MyMathLab. Be careful, once you open the kit, you will not be able to return it for a full refund.
- 2) You may purchase the access code through MyMathLab and use the textbook electronically. YOU MUST BE REGISTERED ON COURSE COMPASS BY THE END OF THE DAY ON FRIDAY JANUARY 13TH OR YOU WILL BE DROPPED FROM THE COURSE!

#### **Course Materials**

- Binder / notebook (for your notes)
- Paper, pens, pencils, ruler (for taking notes)
- Calculator(Non-graphing. Cell phones may not be used as calculators on exams!)

### <u>Blackboard</u>

This course will use Blackboard for certain announcements and handouts. You can access Blackboard from the Reedley college website or at <u>http://blackboard.reedleycollege.edu</u>. Your login is as follows: Login ID: Your student ID# Password: Your student ID#

#### **Online Homework**

Homework is the basis of learning any mathematics and therefore will be an important part of this course. The majority of the homework assignments in this class will be completed online. Each assignment will have a due date and it will be unavailable to the student after the due date. NO LATE HOMEWORK WILL BE ACCEPTED, however your two lowest homework scores will be dropped.

\*\*Note that when working on a homework assignment, you do not have to complete the entire assignment at one time. If you need to stop while in the middle of an assignment, the program will save the problems you have completed and you can come back where you left off at another time.

#### Written Homework

There may be written homework assigned throughout the semester. The grade on these assignments will be based on completeness, neatness and effort. All work must be shown to receive full credit. Solutions must be in pencil and problems must be in order. If you are absent on the day the assignment is due, your homework will not be accepted for full credit.

#### **In-class Activities**

There will be quizzes, in-class assignments and group projects assigned throughout the semester. No in-class assignments can be made up so it is very important to attend class every day. These assignments will be worth 10% of your final grade.

#### **Attendance**

Attendance is a key factor in your success in this course. Attendance will be taken daily. You are expected to be in class, on time with any assignments completed, and remain for the entire class session. If you are absent more than six class sessions before the final drop date, you may be dropped. If you are dropped for poor attendance, you will not be readmitted. If you wish to drop this course it is <u>your</u> responsibility to do so. Do not assume the instructor will.

#### Tardies:

It is distracting, rude and unfair to classmates and to the instructor when a student is late. Leaving class at anytime during the lecture will not be allowed. Please use the restroom/make phone calls before or after class. If you leave class at any time, it will count as a tardy. Two tardies will be counted as an absence. You are responsible for telling me, at the end of class, that you were tardy. If I mark you absent and you do not tell me of your tardy, you will remain absent. If you leave class early, you will be marked absent. Students with chronic tardiness may be dropped from the course.

#### \*\*\*\*THE LAST DAY TO DROP THIS CLASS IS FRIDAY MARCH 9TH. \*\*\*\*\*

#### <u>Exams</u>

There will be a total of 7 exams, one for each chapter covered. **Exams may not be taken late or made-up.** To compensate for illness and emergencies, the lowest exam score will be replaced by the final exam score, if it's to the advantage of the student.

## <u>Final Exam</u>

There will be a comprehensive final exam required for every student at the end of the semester. **The final exam may not be taken late or made-up.** Arrangements should be made with the instructor if you need to take the final exam or any other exam early.

## **Grading**

Final semester grades will be based on the following:

## Homework (Online / Written):

The total number of points you score on each homework assignment will be added up and divided by the total number of possible points. This number is then multiplied by 100 to give you a homework score between 0 and 100. Your homework score is worth 20% of your grade.

## <u>In-class Activities</u> (Group projects / in-class work):

The total number of points you score on each in-class assignment will be added up and divided by the total number of possible points. This number is then multiplied by 100 to give you an In-class activities score between 0 and 100. Your In-class activities score is worth 10% of your grade.

#### Exams and Final:

Your 7 exam percentages and your final exam percentage will be averaged. This average will be multiplied by 100 to give you an exam score between 0 and 100. Your exam score is worth 70% of your grade.

**Example:** If your Homework score is 85, your In-class Activities score is 80 and your Exam score is 70, then you would compute your grade as follows:

$(0.20)^{*}(85) + (0.10)^{*}(80) +$	$(0.70)^*(70) = 17 + 8 + 49 = 74$
and your final gr	ade would be 74%

<b>Percent</b>	<u>Grade</u>
90-100	А
80-89	В
70-79	С
60-69	D
0-59	F

Your current grade in the class will be available through the CourseCompass website.

#### **Important Dates:**

January 16 (M) - Martin Luther King, Jr. Day observed (no classes held, campus closed) January 20 (F) - Last day to drop a full-term class for a refund for Spring 2012 January 27 (F) - Last day to register for a full-term fall class for Spring 2012 January 27 (F) - Last day to drop a full-term class to avoid a "W" for Spring 2012 February 10 (F - Last day to change a class to/from a Pass/No-Pass grading basis February 17 (F) - Lincoln Day observed (no classes held, campus closed) February 20 (M) - Washington Day observed (no classes held, campus closed) March 9 (F) - Last day to drop a full-term class (letter grades assigned after this date) April 2-6 (M-F)- Spring Recess (no classes, campus open, classes reconvene April 9) May 14-18 (M-F) – Spring 2012 Final Exams week May 18 (F) – End of Spring 2012 semester

#### **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.

#### Note: This syllabus is subject to change at the discretion of the instructor.

Week of	Topic(s)	Textbook Section
01/09/12	Class Intro / Course Compass	
	Integers, Opposites, and Absolute Values	1.1
	Operations with Integers	1.2
	Fractions	1.3
01/16/12	Monday Jan. 16 <sup>th</sup> - Martin Luther King Jr. Day – No Class	
	Operations with Fractions	1.4
	Decimals and Percents	1.5
01/21/12	Basis Statistics	1.6
	Exponents and Order of Operations	1.7
	Introduction to Algebra	1.8
01/30/12	Exam #1 (Chapter 1) – Monday January 30 <sup>th</sup>	
	Introduction to Linear Equations	2.1
	Solving Linear Equations: General Strategy	2.2
02/06/12	Problem Solving; Applications of Linear Equations	2.3
	Applications involving Percentages; Ratio and Proportion	2.4
	Linear Inequalities	2.5
02/13/12	Friday Feb. 17 <sup>th</sup> – Lincoln Day – No Class	
	Exam #2 (Chapter 2) – Wednesday February 15 <sup>th</sup>	
	The Rectangular Coordinated System; Equations in Two Variables	3.1
	Graphing Linear Equations and their Intercepts	3.2
02/20/12	Monday Feb. 20 <sup>th</sup> – Washington Day – No Class	
	Slope of a Line	3.3
	Linear Functions	3.4
02/27/12	Parallel and Perpendicular Lines	3.5
	Equations of Lines	3.6
	Exam #3 (Chapter 3) – Friday March 2 <sup>nd</sup>	
03/05/12	Systems of Linear Equations; Solving Systems by Graphing	4.1
	Solving Systems of Equations with Substitution Method	4.2
	Solving Systems of Equations with Addition Method	4.3
03/12/12	Applications of Systems of Equations	4.4
	Exam #4 (Chapter 4) – Wednesday March 14 <sup>th</sup>	
	Exponents	5.1
03/19/12	Negative Exponents; Scientific Notation	5.2
	Polynomials; Addition and Subtraction of Polynomials	5.3
	Multiplying Polynomials	5.4
03/26/12	Dividing Polynomials	5.5
	Exam #5 (Chapter 5) – Wednesday March 28 <sup>th</sup>	
	Introduction to Factoring ; GCF and Factor by Grouping	6.1
04/02/11	Monday – Friday, April 2 <sup>nd</sup> - 7 <sup>th</sup> – Spring Recess – No Classes	
04/09/12	Factoring Trinomials	6.2
	Factoring Trinomials (cont.)	6.3
	Factoring Special Binomials	6.4
04/16/12	Factoring Polynomials – A General Strategy	6.5
	Solving Quadratic Equations by Factoring	6.6
	Quadratic Functions	6.7
	Applications of Quadratic Equations	6.8

**Tentative Course Schedule – Math 101 - Fall 2012** 

04/23/12	Exam #6 (Chapter 6) – Monday April 23 <sup>rd</sup>	
	Rational Expressions and Functions	7.1
	Multiplication and Division of Rational Expressions	7.2
04/30/12	Addition / Subtraction of Rational Expressions (Same Denominator)	7.3
	Addition / Subtraction of Rational Expressions (Different Denominator)	7.4
	Complex Fractions	7.5
05/07/12	Rational Equations	7.6
	Applications of Rational Equations	7.7
	Exam # 7 (Chapter 7) Wednesday May 9 <sup>th</sup>	
	Friday May 11 <sup>th</sup> – Review for final	
04/14/12	Final Examination – Monday May 14 <sup>th</sup> – 1:00pm – 2:50pm	Ch 1 - 7

\*This schedule is tentative and subject to change at the discretion of the instructor.