

# MATH 103 – INTERMEDIATE ALGEBRA

## FALL 2012

**Instructor:** Jamie Shepherd  
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**Class Hours:** Monday / Tuesday / Thursday 2:00pm – 3:30pm  
**Room:** CCI 206  
**Schedule No:** 52988  
**Course Id.:** shephard75051

### Course 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.

### Course Objectives

In the process of completing this course, students will:

1. Use the properties of lines and linear inequalities, and apply operations on functions.
2. Simplify radical and complex expressions and perform operations on them.
3. Solve quadratic equations using various techniques including factoring and quadratic formula, and graph parabolas.
4. Apply the properties of exponents and logarithmic functions to change the base of a logarithm.
5. Manipulate and graph equations of conic sections.

### Student Learning Outcomes

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

1. Simplify and/or factor mathematical expressions into forms more conducive to analysis.
2. Solve equations introduced in Intermediate Algebra (linear, quadratic, exponential, logarithmic, and radical).
3. Graph functions and relations introduced in Intermediate Algebra (linear, quadratic, exponential, logarithmic, and radical).
4. Apply Intermediate Algebra topics (linear, quadratic, exponential, logarithmic, and radical functions) to solve real-life problems.

**Prerequisite:** Math 101 or equivalent.

**Advisory:** Eligibility for English 126.

### Textbook:

**George Woodbury, Elementary and Intermediate Algebra, 3<sup>rd</sup> Edition.**

Most of the work for this course will be done using a website called MyMathLab ([www.mymathlab.com](http://www.mymathlab.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.  
OR
- 2) You may purchase the access code through MyMathLab and use the textbook electronically.

**YOU MUST BE REGISTERED ON MYMATHLAB BY THE END OF THE DAY ON THURSDAY  
AUGUST 16TH 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)

## 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 will be some 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 Assignments

There may 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 included as part of your homework grade.

## Attendance

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 your responsibility to do so. Do not assume the instructor will.**

**\*\*\*\*THE LAST DAY TO DROP THIS CLASS IS FRIDAY OCTOBER 12TH.\*\*\*\***

## Exams

There will be a total of 6 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.

## Final Exam

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:

### **1. Homework (Online / Written / In-class):**

The total number of points you score on each assignment will be added up and divided by the total number of possible homework 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.**

### **2. Exams and Final:**

Your 6 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 80% of your grade.**

**Example:** If your Homework score is 85 and your Exam score is 75, then you would compute your grade as follows:

$$(0.20)*(85) + (0.80)*(75) = 17 + 60 = 77$$

<u>Percent</u>	<u>Grade</u>
90-100	A
80-89	B
70-79	C
60-69	D
0-59	F

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

## 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 Integrity

All students are expected to adhere to the College policy on academic integrity. All work submitted is expected to be your own. Cheating and/or plagiarism will not be tolerated. The college policy on cheating and plagiarism can be found in the [Fresno City College 2012 - 2014 Catalog](#).

Cheating is the practice of fraudulent or deceptive acts for the purpose of improving a grade or obtaining course credit...Plagiarism is a specific form of cheating which consists of the misuse of the published and/or unpublished works of another by representing the material so used as one's own work.

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.**

**Tentative Course Schedule**  
(Subject to change at the discretion of the instructor)

Week of	Topic(s)	Text Section
08/13/12	Class Intro / MyMathLab Linear Equations and Absolute Value Equations Linear Inequalities and Absolute Value Inequalities	8.1 8.2
08/20/12	Graphing Linear and Absolute Value Functions Review of Factoring	8.3 8.4
08/27/12	Solving Systems of Equations <b>Exam #1 (Chapter 8) – Thursday August 30<sup>th</sup></b>	8.5
09/03/12	<b>Labor Day - No Class Monday September 3<sup>rd</sup></b> Square Roots, Radical Notation Rational Exponents	9.1 9.2
09/10/12	Simplifying, Adding, and Subtracting Radical Expressions Multiplying and Dividing Rational Expressions	9.3 9.4
09/17/12	Radical Equations and applications The Complex Numbers <b>Exam #2 (Chapter 9) – Thursday September 20<sup>th</sup></b>	9.5 9.6
09/24/12	Solving Quadratic Equations and Completing the Square The Quadratic Formula Equations in Quadratic Form	10.1 10.2 10.3
10/01/12	Graphing Quadratic Equations Applications using Quadratic Equations	10.4 10.5
10/08/12	Quadratic and Rational Inequalities <b>Exam #3 (Chapter 10) – Tuesday October 9<sup>th</sup></b> Review of Functions	10.6 11.1
10/15/12	Linear Functions Quadratic Functions The Algebra of Functions	11.2 11.3 11.5
10/22/12	Inverse Functions <b>Exam #4 (Chapter 11) – Thursday October 25<sup>th</sup></b>	11.6
10/29/12	Exponential Functions Logarithmic Functions Properties of Logarithmic Functions	12.1 12.2 12.3
11/05/12	Exponential and Logarithmic Equations Applications of Exponential and Logarithmic Functions Graphing Exponential and Logarithmic Functions	12.4 12.5 12.6
11/12/12	<b>Veterans Day - No Class Monday November 12<sup>th</sup></b> <b>Exam #5 (Chapter 12) – Thursday November 15<sup>th</sup></b>	
11/19/12	Parabolas, Circles	13.1, 13.2
11/26/12	Ellipses, Hyperbolas	13.3, 13.4
12/03/12	Non-linear Systems of Equations <b>Exam #6 (Chapter 13) – Tuesday December 4<sup>th</sup></b> Final Exam Review	13.5
<b>12/10/12</b>	<b>Final Exam (Chapters 8-13) – Monday December 10<sup>th</sup> 2pm – 3:50pm</b>	