

# MATH 123B

## Elementary and Intermediate Algebra II

### Fall 2015

Time: TuTh 7:15pm to 9:20pm (section 4480)  
Place: Room MSA 009  
Instructor: Rex Perez  
E-Mail: rexeperez@gmail.com  
Office Hours: TuTh 6:45 – 7:10pm

This is the second module of a 3 semester combined Elementary and Intermediate Algebra course. The entry level for 123A is the same as Math 115 or Math 117. The exit level for 123C is the same as Math 125 or Math 128.

#### Required Text

Beginning & Intermediate Algebra by Lial, Hornsby & McGinnis. The Bookstore has a WLAC Custom Edition which is substantially the same as the regular 5<sup>th</sup> ed (2012, ISBN 9780321715869) You should be able to get a used copy, pdf or e-book inexpensively online. We will cover chapters 5 - 10 in this course and the rest of the book in Math 123C.

#### Prerequisite

Mathematics 123A with a grade of "C" or better, or equivalent preparation approved by the Chair of the Mathematics Division.

#### Course Description:

Second of three modules for Math 123 covering elementary algebra topics such as addition, subtraction, multiplication and division of polynomials, solutions of second degree equations and radical expressions. Solutions of word problems involving linear equations and inequalities will also be covered

#### Course Layout & Grading

Quizzes		10%	
Homework		10%	
Exams	3	50%	(Th 9/24, Th 10/22, Tu 11/24)
Department Final	1	30%	(Th 12/17)

#### Grading:

90%-100%	A
80%-89.9%	B
70%-79.9%	C
60%-69.9%	D
less than 60%	F

# Course Work

- Quizzes:** There will be quizzes given throughout the course. Some will be announced ahead of time; some will be pop-quizzes. There will be no make-up quizzes
- Homework:** It is very important to do your homework. This is a form of practice for your quizzes and exams. Also they are worth 10% of your grade. Written homework will all be due on test days.
- Exams:** There will be 3 exams accounting for 50% of your grade. There are no make-up exams.
- Final:** The final will be cumulative and will be worth 30% of your grade. You need to take the final in order to pass the class.

## General Institutional SLO - Student Learning Objectives

- A.) Critical Thinking: Analyze problems by differentiating fact from opinions, using evidence, and using sound reasoning to specify multiple solutions and their consequences.
- C.) Quantitative Reasoning: Identify, analyze, and solve problems that are quantitative in nature
- F.) Technical Competence: Utilize the appropriate technology effectively for informational, academic, personal, and professional needs.

## Math Program SLOs

- 1.) Apply quantitative thinking processes using basic mathematical operations (addition, subtraction, multiplication, division) to solve common academic, workplace and family problems. (Theme: Mathematical Operations)
- 3.) Use mathematical tools essential for analyzing quantitative problems and for producing solutions. (Theme: Mathematical Tools)
- 5.) Select appropriate math strategies for solving and handling real life problems involving finance, economics, and family issues. (Theme: Mathematical Problem Solving)

## Specific Learning Objectives:

Upon satisfactory completion of the course, a student will be able to:

- 1a. Factor a wide variety of polynomials using a variety of methods:
- GCF(distributive property)
  - Trial and error
  - Grouping
  - Special products
- 1b. Solve polynomial equations using factoring and the zero product property
- 1c. Set up and solve a wide variety of application problems involving polynomial equations, particularly quadratic equations
- 2a. Add, subtract, multiply, divide, and simplify rational expressions (algebraic fractions) and be aware of the domain restrictions of the simplified expressions

- 2b. Simplify complex algebra fractions
- 2c. Solve equation involving rational expressions and be aware of the possibility of extraneous roots
- 2d. Model and solve applications problems involving rational equations and expressions
- 2e. Solve literal equations and deal with scientific formulae
- 2f. Solve problems involving proportions and variation
- 3a. Evaluate simplify, add, subtract, multiply and divide radical expressions
- 3b. Exploit the connection between radicals and rational exponents to simplify radical expressions
- 3c. Solve equations containing radical expressions
- 3d. Model and solve applications problems involving radical equations and expressions
- 3e. Solve quadratic equation by factoring, square roots, completing the square, and the quadratic formula
- 3f. Perform all the standard operations with complex number
- 4a. Explain the concepts of relation and function
- 4b. Work with functional notation,  $f(x)$ , in the context of linear and quadratic functions
- 4c. Explain what domain and range are in the context of simple relations and functions

### **Miscellaneous Information:**

#### **Calculators:**

Calculators or laptops with symbolic manipulation capabilities (CAS) are not allowed on tests. That includes the TI-Nspire series, Casio ClassPad or Algebra FX2+ or Prizm, HP Prime, etc.

Also not allowed on tests are calculators built into a phone or any other device with communication capability.

#### **Attendance:**

Please be in class on time every day, stay to the end, and participate in all class activities. You may be dropped if you have missed more than six hours of class. If you have excessive absences (for ANY reason) AND you are not passing the course, you may be dropped without notice.

#### **Accommodations:**

Students with disabilities who need accommodations in this class should contact Disabled Students Programs and Services in SSB 320 (phone 310 -287-4450) immediately to improve the chances that such accommodations can be implemented in a timely manner.

#### **Cell Phones:**

Cell phone use is strictly forbidden in the classroom. If you possess a cell phone, it must be set on silent mode. If you absolutely must take an emergency call, please exit the classroom quietly and do so outside.

#### **Free tutoring**

Free tutoring is available in the Learning Resource Center ("Library"). Please use it!

## **Success in Course**

It is important to do all your homework, do all the assigned readings, come to class prepared and ready to learn and study for your quizzes and exams. I cannot stress enough the importance of staying on top of your work. Please make all the classes, ask questions and if you feel like you are still not getting the material, see me to get some extra help. By grasping the course material and practicing it during your homework's, it will make understanding and learning easier. Do not hesitate to ask questions and get extra help. I am here to help you do well.

## **Course Conduct**

It is important to show up to class on time and prepared. You will be better prepared to understand the course material during lecture by doing the required reading before hand. I encourage you to study together and discuss mathematics in a group but I expect everybody to hand in their own work and solutions. I do not tolerate cheating. This goes for quizzes, exams and homework.

## **Dates & Deadlines**

See [wlac.edu](http://wlac.edu) for drop dates.

Campus closed:

Labor Day, Sep 7

Veteran's Day, Nov 11

Thanksgiving Nov 26 – 29

\*\* If you decide to drop or not complete this course it is your responsibility to drop or withdraw.