Math 125 (5 units) Intermediate Algebra WLAC

Spring 2015 Section 1487 MTWTh 8 AM – 9:15 AM in GC 330
Spring 2015 Section 1490 MTWTh 9:35 AM – 10:50 AM in CE 205

Instructor: I-Shen Lai

Email: ishenlai@yahoo.com
Voicemail: (310)434-8080
Homepage: http://homepage.smc.edu/lai_i-shen

Office Hours (in MSB 214 or 217)
Mondays 11-11:30 AM
Thursdays 11-11:45 AM
More TBD

Etudes: Know how to log on to Etudes. Once Etudes is activated, all course material will be posted on Etudes and not on my homepage.

REQUIRED TEXT: Intermediate Algebra, 11th Edition, by Lial, Hornsby, and McGinnis

REQUIRED MATERIALS & SUPPLIES: Notebook, binder, sharpened or mechanical pencil, eraser, ruler, stapler, non-graphing scientific calculator (recommended TI 30XII).
CALCULATORS: Basic scientific calculators are allowed on some exams (to be announced). Any calculator that can graph or manipulate symbols is not allowed. No cell phone calculators are allowed.

COURSE DESCRIPTION:

Intermediate Algebra is the prerequisite for transfer-level math courses. It is a further development of the algebra skills you acquired in elementary algebra, with the added topics of rational exponents, systems of linear equations in three variables, complex rational expressions, complex numbers, exponentials, logarithms, and conic sections. Emphasis is placed on the characteristics and properties of linear, quadratic, exponential, logarithmic, and inverse functions. Prerequisite: Satisfactory score on the Intermediate Algebra Placement test, or Math 115 or Math 118 with a grade of "C" or better.

SPECIAL NOTE FOR MATH 125: There is more content covered in Math 125 (12 chapters) than perhaps any other math course at WLAC. Because of this the pace of instruction is unusually fast. Students who are uncomfortable with a fast pace should seriously consider the option of taking the Math 127/128 sequence or the Math 123ABC sequence.
Because of the high volume of material covered in this course, limited class time will be allocated for review or homework questions.

STUDENT LEARNING OUTCOMES:

Upon the successful completion of Math 125 students should be able to:

- Select and use appropriate algebraic techniques to solve a wide variety of equations and systems of equations.
- Analyze, model, and solve application problems including those involving variations.
- Construct and analyze graphs of functions, inequalities, and conic sections.

COURSE OBJECTIVES:

- Demonstrate facility with operations involving real and complex numbers, algebraic expressions, and functions
- Use appropriate techniques to solve equations, including: linear, quadratic (or quadratic in form), exponential and logarithmic equations; equations involving rational or radical expressions or absolute value, and those involving factorable polynomials; and systems of linear and non-linear equations.
- Use functions and systems of equations to model data and solve 'story' problems
- Solve and graph linear and non-linear inequalities in one and two variables
- Graph and analyze functions (linear, quadratic, rational, radical, exponential, logarithmic) and conic sections
- Write, evaluate, and apply arithmetic and geometric sequences and series
- Be prepared to succeed in a transfer-level mathematics course

COMMUNITY (a.k.a. CLASS CONDUCT and GOALS)

Community is built on mutual trust and respect. Every class is a community of learners, and we can enjoy this semester better if we become a team with a common goal. In order to learn and thrive in this class, we all need to invest the time and effort necessary for success.

I will hold very high standards and expectations for you. I trust that you will take this class very seriously and will work to the best of your ability; you will come to class on time, ready to learn and participate; you will complete the homework daily; you will seek help when needed; you will be prepared for exams; and you will abide by the Academic Honor Code. DO NOT BREAK THIS TRUST!

You can hold me accountable as your teacher—I will commit to do my very best to teach, to motivate, to support, to be available, and to walk alongside you on this 16-week journey.

Have the right attitude, and you may be surprised at what a wonderful, fun, fruitful semester this could be. ☺

CLASSROOM CONDUCT + CELLPHONE/ELECTRONICS POLICY:

In order to maintain this trust, please be respectful to your instructor and fellow students. Refrain from talking during lectures. Do not leave the classroom (or walk in and out) or pack up before you are dismissed. Silence your phones and do not use your phone or electronic devices in class. Repeated warnings for disruptive behavior or phone usage may result in you being dropped from the class.

ATTENDANCE, DROP AND WITHDRAWAL POLICY:

Attendance is mandatory. You should plan to arrive to each class *on time* and *stay for the entire class session.* If you are absent four times, you may be dropped from the class. (**for the first two weeks of class**, if you have to miss class for any one day, please inform me or you risk being dropped.) If you miss part of a class (late or leave early), it counts as half an absence. You will be responsible for all announcements made in class. If you miss class, please be sure to contact a classmate for all announcements.

Although I retain the right to drop you given the above circumstances, it is nevertheless your responsibility as a student to withdraw from class if you do not intend to complete it. If you wish to drop this class, you may do so online or in person through Admissions up to the last day to drop. Please be aware of all college deadlines.

METHODS OF PRESENTATION:

LECTURE (majority of class time)

Most of my lectures are interactive, and I welcome participation and feedback such as answers or questions, when I ask for them and they are not distracting or disruptive. Be an active participant during lectures by listening attentively and taking good, neat notes. Please refrain from talking among yourselves. If you have a question about the lecture, write it down until an appropriate time arises in which you can ask it, usually when I pause and ask for questions, or after class.

SEATWORK/GROUPWORK

When time allows, I may pose a problem for you to work out at your seat individually, in pairs, or in groups. Be an active participant in such activities. This is when you may discuss problems with each other as well as ask me questions. Abide by the time limits and be ready to stop discussion and return to lecture time when directed to do so. Such work may or may not be collected. (If you are very uncomfortable working with others in group situations, please let me know so that you may be excused from group activities.)

ACADEMIC HONOR CODE (a.k.a. academic dishonesty will result in serious consequences)

Pursuant to West Los Angeles College's "Standards of Student Conduct", all forms of cheating and plagiarism are absolutely forbidden. Since dishonesty in any form harms the individual, other students and the college, policies on academic integrity are strictly enforced. Students should read WLAC's publication on student conduct on cheating & plagiarism outlined in the College Catalog or at http://www.wlac.edu/academics/pdf/WLAC_Catalog08-10_Policies41-53.pdf

METHODS OF EVALUATION

CLASSWORK

Class work may be assigned at any time, and may or may not be collected. You have to be present and participating in order to receive credit. General participation will also count towards your grade, and non-attendance and/or non-participation will count negatively towards your grade.

HOMEWORK, WORKSHEETS and ASSIGNMENTS

Suggested problems will be assigned for homework. It is your responsibility to keep up with the homework according to the topics that are covered in class daily.
Homework will not be collected for a grade. However, not doing homework consistently will likely result in a substandard grade on exams. Failure to do the suggested problems will highly jeopardize your ability to be successful in this class.

Worksheets, assignments, and review packets will be assigned to be turned in and checked. These must be turned in on time.

QUIZZES

Quizzes based on homework problems will be given frequently (usually towards the end of each chapter). Quizzes will be announced beforehand. Quizzes may be given at the beginning or end of class. No make-up quizzes for any reason, including being late or leaving early. The two lowest quiz scores will be dropped.

EXAMS

Three exams and a final exam make up the bulk of your grade in this class. In general, you should be passing your exams in order to make satisfactory and consistent progress toward passing the class.

No make-up exams will be given under any circumstance. In the event of an emergency (with a valid document to prove it—e.g. hospital note, police report, court document, etc.), inform me right away ON THE DAY of the exam (by email or voicemail) in order to exercise the option below. You MUST provide the official document. The cumulative department final exam cannot be missed and must be taken on the college-scheduled date.

In the final calculation of your grade, a higher final exam score may be used to replace ONE (lowest) exam score. If you missed an exam with a documented emergency and informed me on or before the exam day, the final exam score will replace the missed exam (this option can only be used for one missed exam; you will receive a score of zero for additional exams missed.) If you missed an exam without a documented emergency or did not inform me by the exam day, you will receive a score of zero *that cannot be replaced.*

You will need a Scantron form 882-ES (green half-sheet) for each exam and the final.

BASIS OF GRADING:

	Point value	Percent of grade
Classwork, Worksheets, Assignments	60 points total	15%
Quizzes (12 quizzes, lowest 2 dropped)	60 points total	15%
Exams (3 exams) *lowest quiz score can be replaced by the same weight of a higher final score	180 points total (60 points each)	45%
Final Exam	100 points	25%
Total	**400 points**	**100%**

*extra credit opportunities, if available, will be limited to a total maximum of 2.5% of grade (10 points).

OVERALL GRADING SCALE:

The course grade will be determined as follows:
(Adjustments may be made at instructor's discretion)

A	89.5% – 100%	(358 - 400 points)
B	79.5% – 89.4%	(318-357 points)
C	69.5% – 79.4%	(278-317 points)
D	54.5% – 69.4%	(218-277 points)
F	below 54.5%	(below 218 points)

STUDENTS WITH DISABILITIES:

I encourage students requesting disability-related accommodations to contact Disabled Student Services as soon as possible. An early notification of your request for test-taking and/or other accommodations is necessary to ensure that your disability related needs are addressed appropriately. HRLC 119 (phone 310-287-4450)

TENTATIVE SCHEDULE

subject to change

****Note that most topics in the first half of the semester are REVIEW TOPICS that are ENTRY SKILLS (prerequisite skills) which should have been mastered previously, either in Math 115 or demonstrated proficiency if you placed into this class. As such, limited class time will be spent going over the details of review topics. Instead, we will work problems under the assumption that we are only reviewing the main ideas of each topic. If you feel your previous background was weak and need extra help, you may contact me, find extra tutoring outside of class (HLRC or private), or consider taking the slower-paced Math 123ABC sequence.

Week	Date	Topics
1	M 2/9	Welcome and Introduction! 1.1 Basic Concepts
	T 2/10	1.2 Operations on Real Numbers 1.3 Exponents, Roots, Order of Operations
	W 2/11	1.4 Properties of Real Numbers 2.1 Linear Equations in One Variable
	Th 2/12	2.5 Linear Inequalities in One Variable
2	(**M 2/16**)	**No class**: President's Day Holiday
	T 2/17	2.6 Set Operations and Compound Inequalities
	W 2/18	2.7 Absolute Value Equations and Inequalities
	Th 2/19	3.1 The Rectangular Coordinate System 3.2 The Slope of a Line
3	M 2/23	3.3 Linear Equations in Two Variables
	T 2/24	3.5 Introduction to Relations and Functions
	W 2/25	3.6 Function Notation and Linear Functions
	Th 2/26	4.1 Systems of Linear Equations 4.2 Systems of Linear Equations in Three Variables

4	M 3/2	4.3 Applications of Systems of Linear Equations
	T 3/3	3.4 Linear Inequalities in Two Variables (and Systems)
	W 3/4	5.1 Integer Exponents and Scientific Notation
	Th 3/5	5.2 Adding and Subtracting Polynomials 5.3 Polynomial Functions, Graphs, and Composition
5	M 3/9	5.3 Continued 5.4 Multiplying Polynomials
	T 3/10	5.5 Dividing Polynomials
	W 3/11	6.1 Greatest Common Factors; Factoring by Grouping Review
	Th 3/12	**Exam 1 (Chapters 2-5)**
6	M 3/16	6.2 Factoring Trinomials
	T 3/17	6.3 Special Factoring 6.4 A General Approach to Factoring
	W 3/18	6.5 Solving Equations by Factoring
	Th 3/19	7.1 Rational Expressions and Functions; Multiplying and Dividing
7	M 3/23	7.2 Adding and Subtracting Rational Expressions
	T 3/24	7.3 Complex Fractions
	W 3/25	7.4 Equations with Rational Expressions and Graphs
	Th 3/26	7.5 Applications of Rational Expressions 7.6 Variation
8	M 3/30	8.1 Radical Expressions and Graphs 8.2 Rational Exponents
	(T 3/31)	**No class**: Cesar Chavez Day
	W 4/1	8.3 Simplifying Radical Expressions
	Th 4/2	8.4 Adding and Subtracting Radical Expressions 8.5 Multiplying and Dividing Radical Expressions
(9)	(**4/4-10**)	**No class**: Spring break!
10	M 4/13	8.6 Solving Equations with Radicals
	T 4/14	8.7 Complex Numbers
	W 4/15	9.1 The Square Root Property and Completing the Square 9.2 The Quadratic Formula
	Th 4/16	9.3 Equations Quadratic in Form
11	M 4/20	9.4 Formulas and Further Applications
	T 4/21	9.5 Graphs of Quadratic Functions
	W 4/22	9.6 More about Parabolas and Their Applications
	Th 4/23	9.7 Polynomial and Rational Inequalities
12	M 4/27	Review
	T 4/28	**Exam 2 (Chapters 6-9)**
	W 4/29	10.1 Inverse Functions
	Th 4/30	10.2 Exponential Functions
13	M 5/4	10.3 Logarithmic Functions 10.5 Common and Natural Logarithms
	T 5/5	10.4 Properties of Logarithms
	W 5/6	10.6 Exponential and Logarithmic Equations
	Th 5/7	10.6 Exponential & Logarithmic Eqns; Further Applications

14	M 5/11	11.1 Additional Graphs of Functions
	T 5/12	11.1 Additional Graphs of Functions
	W 5/13	11.2 The Circle and the Ellipse
	Th 5/14	11.3 The Hyperbola and Functions Defined by Radicals
15	M 5/18	11.4 Nonlinear Systems of Equations
	T 5/19	12.1 Sequences and Series 12.2 Arithmetic Sequences
	W 5/20	12.4 The Binomial Theorem
	Th 5/21	Review
16	(**M 5/25**)	**No class**: Memorial Day Holiday
	T 5/26	**Exam 3 (Chapters 10-12)**
	W 5/27	Review
	Th 5/28	Review
17	(M 6/1)	**No class**: Finals week (All the best on your finals!)
	(T 6/2)	**No class**: Finals week (All the best on your finals!)
	W 6/3	**FINAL EXAM (Cumulative)** **Section 1487 (8 AM class): 8 AM – 10 AM** **Section 1490 (9:35 AM class): 10:15 AM - 12:15 PM**