

Math 125– Intermediate Algebra

West Los Angeles College www.wlac.edu

9000 Overland Ave., Culver City, CA 90230

Section 4486 – Fall 2014

Transfer: ; Units: 5

Class meets Tuesday & Thursday evenings from 4:30–7:05 p.m in MSA 109

Instructor Prof. Nancy Foreman

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Office hours 3:30–4:20 p.m. Tuesday in MSB 217 (or MSB 218)

Textbook *Intermediate Algebra* (11th ed.), by Lial, Hornsby, and McGinniss.

Prerequisite Successful completion of Beginning Algebra (Math 115), or by placement exam.

Course description Manipulative skills in algebra are developed and strengthened in the course.

The topics include rational exponents, the complete number system of algebra, algebraic and graphical solutions to linear and quadratic equations, logarithmic and exponential functions, elementary theory of equations and inequalities and conics. A wide variety of statement problems are included in the course.

Important First class meeting: September 2

dates Last day to drop without a “W”: September 12

Test dates (subject to change):

Last day to drop with a “W”: November 21

No Class: November 11 (Veteran’s Day), November 27 (Thanksgiving)

Last regular class meeting: Thursday, December 11

Final Examination: Thursday, December 18, 2014 from 4:30–6:30 p.m.

Evaluation is based on	Five Chapter Exams, 100 points each	500 pts.
	Homework (20 pts. each set)	100 pts.
	In Class Work	100 pts.
	Comprehensive Final Exam	<u>300 pts.</u>
	Total	1000 pts.

Notes: Homework papers will be collected and graded at each exam, see Homework section for details. In Class Work may include quizzes, group work, study skills activities, worksheets, board work, or other activities. A department wide Final Examination will be given; it requires a Scantron form.

Grading scale	900–1000 points:	A
	800–899 pts:	B
	700–799 pts:	C
	600–699 pts:	D
	≤ 599 pts:	F

Recommended materials Paper, pencils or pen, ruler. A dedicated scientific calculator is a necessary aid for this course (no cell phones, computers, or other communication devices are permitted on exams). Scantron form required for the final exam only.

Instructional Methods This course is taught using a variety of instructional methods which may include but are not limited to lecture, class discussion, small group work, and individual work.

Makeups, Late Work, Extra Help No makeups are possible for in-class work. Late homework may be submitted on Dec. 18 (Final Exam Night) for partial credit (up to one-half the original point score). Makeup exams are given only in extraordinary conditions and are greatly discouraged. Any makeup exams administered will be given during instructor's office hour only. For extra help and access to some class materials, join the professor's message board at <http://foreman-wlac-math.freeforums.net>. Other options include consulting a tutor, joining a study group, or attending the instructor's office hour to get help. The textbook publisher maintains a free online homework site at <http://interactmath.com/home.aspx>; select our textbook from the drop down menu to work interactive problems from the review sections for each chapter.

How to pass. Attend class, complete all homework and submit all work on time, stay on top of things and don't fall behind. Practice until you have mastered each new technique. If you wish to succeed, you need to put in sufficient time, energy and attention to detail.

Attendance & participation policy Students who are pre-registered in a class and miss the first meeting lose their right to a place in the class. Plan to attend every class session. If you must miss a class, email foremann@wlac.edu in advance. Every student is expected to maintain regular attendance, arriving on time and staying for the full class session. If roll call is missed, the student is marked absent for the night. Every student is required to participate in all class activities, which may include individual work, board work, group work, or other activities. College policy states that an instructor may drop a student who has missed more than five hours of class, or one week total. While students who do not attend class may be dropped, if you decide that you cannot complete the class, it is YOUR responsibility to drop (withdraw) on or before Nov. 21, 2014.

Etiquette & Discipline Please respect your classmates and the instructor, and refrain from disruptive behaviors such as coming late, leaving early, wandering in and out of class, eating or drinking during class, side conversations, texting, websurfing, etc. If you are in doubt, consider if your behavior is distracting or disruptive to others. If so, please stop. Let us maintain a civil atmosphere conducive to learning and thought. All college rules and regulations will be enforced; see the West Los Angeles College Catalog online at http://www.wlac.edu/academics/pdf/WLAC_12-14Catalog_FRONT.pdf (starting p. 41).

Academic dishonesty Cheating will not be tolerated. Maintain the highest standards of academic honesty. You may not give or receive help on tests or quizzes, and you may not turn in someone else's work as your own. If academic dishonesty is detected, a score of zero will be assigned, and the student(s) involved may be reported to the administration.

Special circumstances Students with disabilities or those who need accommodation for any reason must communicate with the instructor in a timely manner to ensure their needs are met. Any paperwork needed must be completed in advance. Contact Disabled Students Programs and Services located in HRLC 119 (phone 310-287-4450).

Course SLOs

1. Select and use appropriate algebraic techniques to solve a wide variety of equations and systems of equations.
2. Analyze, model, and solve application problems including those involving variations.
3. 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

Course content

Review of Real Numbers, Variable Expressions, Solving First Degree Equations and Inequalities, with applications, Introduction to Functions, Rectangular Coordinate System, Graphing Linear Equations and Inequalities, Systems of Equations and Inequalities, Polynomials, Factoring, Rational Expressions, Proportions and Variation, Rational Exponents and Radicals, Quadratic Equations and Inequalities, Functions and Relations, Algebra of Functions, Inverse Functions, Exponential and Logarithmic Functions, Sequences and Series, Conic Sections

Homework. Homework will be assigned for each section. Homework and reading assignment list is given below. Expect to study and work problems for at least 10 hours per week, or a minimum of two hours study time for every classroom hour. Required homework exercises are listed below. EOO means “every other odd numbered question”. **For full credit, homework papers must be given in order, neat and legible, necessary and sufficient work shown, with the section number of each book section written in the upper right hand corner of the page on which it is worked. If this is not done the homework will be returned to you ungraded. Submit homework on the corresponding exam day.** Note: the exercises given at the end (in italics) are recommended, but not required. They are *optional* basic skills exercises and are included here for those who may need more review. If you have difficulty beginning the regular homework, try the optional review questions first. Homework sections with optional basic skills exercises are marked with an asterisk(*).

Required Homework

Homework Set 1 Due with Exam 1 on Sept. 18

Ch 1 Review Exercises (pp 42–44), Work Exercises 1–89 EOO*

Section 2.1: Read pp. 48–53, Work Exercises 33–69 EOO*

Section 2.2: Read pp. 56–62, Work Exercises 9–53 EOO*

Section 2.3: Read pp. 67–74, Work Exercises 29–61 EOO*

Section 2.4: Read pp. 81–84, Work Exercises 13–45 EOO*
Section 2.5: Read pp. 91–98, Work Exercises 35–71 EOO*
Section 2.6: Read pp. 103–108, Work Exercises 1–65 EOO
Section 2.7: Read pp. 112–117, Work Exercises 1–105 EOO
Section 3.1: Read pp. 136–143, Work Exercises 33–69 EOO*
Section 3.2: Read pp. 148–155, Work Exercises 1–85 EOO
Section 3.3: Read pp. 161–169, Work Exercises 1–85 EOO
Section 3.4: Read pp. 175–179, Work Exercises 1–37 EOO
Section 3.5: Read pp. 181–187, Work Exercises 1–57 EOO
Section 3.6: Read pp. 190–193, Work Exercises 1–65 EOO

Homework Set 2 Due with Exam 2 on Oct. 2

Section 4.1: Read pp. 210–219, Work Exercises 55–91 EOO*
Section 4.2: Read pp. 226–231, Work Exercises 1–9 odd, 15, 19–25 odd, 31–39 odd
Section 4.3: Read pp. 233–240, Work Exercises 17–33 odd, 37–47 odd*
Section 4.4: Read pp. 247–251, Work Exercises 1–25 odd
Appendix A: Read pp. 715–720, Work Exercises 1–17 odd, 21, 27
Section 5.1: Read pp. 264–273, Work Exercises 91–119 EOO*
Section 5.2: Read pp. 278–281, Work Exercises 79–85 odd*
Section 5.3: Read pp. 284–290, Work Exercises 1–53 EOO*
Section 5.4: Read pp. 293–298, Work Exercises 43–79 EOO, 83, 85, 97–101 odd, 113–125 odd*
Section 5.5: Read pp. 302–306, Work Exercises 9–49 EOO, 61–73 odd*
Appendix B: Read pp. 723–725, Work Exercises 1–27 odd

Homework Set 3 Due with Exam 3 on Oct. 21

Section 6.1: Read pp. 320–324, Work Exercises 23–55 EOO*
Section 6.2: Read pp. 326–331, Work Exercises 1–61 EOO
Section 6.3: Read pp. 333–337, Work Exercises 9–57 EOO*
Section 6.4: Read pp. 339–342, Work Exercises 1–69 EOO
Section 6.5: Read pp. 343–349, Work Exercises 7–47 EOO, 55–71 EOO*
Section 7.1: Read pp. 362–368, Work Exercises 1–11 odd, 33–89 EOO*
Section 7.2: Read pp. 371–377, Work Exercises 17–85 EOO
Section 7.3: Read pp. 380–384, Work Exercises 5–37 EOO*
Section 7.4: Read pp. 386–391, Work Exercises 1–41 EOO, 49–57 odd
Section 7.5: Read pp. 396–402, Work Exercises 9–61 EOO*
Section 7.6: Read pp. 407–412, Work Exercises 1–41 EOO, 47, 55

Homework Set 4 Due with Exam 4 on Nov. 18

Section 8.1: Read pp. 428–432, Work Exercises 41–89 EOO*
Section 8.2: Read pp. 435–431, Work Exercises 1–105 EOO
Section 8.3: Read pp. 443–450, Work Exercises 1–117 EOO, 129
Section 8.4: Read pp. 453–455, Work Exercises 1–53 EOO
Section 8.5: Read pp. 458–463, Work Exercises 1–105 EOO
Section 8.6: Read pp. 468–472, Work Exercises 1–53 EOO, 63, 67
Section 8.7: Read pp. 474–479, Work Exercises 1–81 EOO

Section 9.1: Read pp. 496–502, Work Exercises 17–85 EOO, 95
 Section 9.2: Read pp. 505–510, Work Exercises 5–57 EOO
 Section 9.3: Read pp. 512–519, Work Exercises 5– 81 EOO
 Section 9.4: Read pp. 523–526, Work Exercises 7–59 EOO
 Section 9.5: Read pp. 531–536, Work Exercises 1–41 EOO
 Section 9.6: Read pp. 541–548, Work Exercises 1–45 EOO
 Section 9.7: Read pp. 552–557, Work Exercises 1–45 EOO

Homework Set 5 Due with Exam 5 on Dec. 9

Section 10.1: Read pp. 572–576, Work Exercises 1–37 EOO
 Section 10.2: Read pp. 580–585, Work Exercises 1–41 EOO
 Section 10.3: Read pp. 588–592, Work Exercises 1–65 EOO
 Section 10.4: Read pp. 595–601, Work Exercises 1–49 EOO
 Section 10.5: Read pp. 604–609, Work Exercises 1–61 EOO
 Section 10.6: Read pp. 613–619, Work Exercises 1–61 EOO
 Section 11.1: Read pp. 636–639, Work Exercises 1–37 EOO
 Section 11.2: Read pp. 642–646, Work Exercises 1–41 EOO, 49, 51, 53
 Section 11.3: Read pp. 650–654, Work Exercises 1–33 EOO
 Section 11.4: Read pp. 657–661, Work Exercises 1–37 EOO, 43, 45
 Section 11.5: Read pp. 664–666, Work Exercises 1–33 EOO

Homework Set 6: Submit with Final Exam for 10 points extra credit

Section 12.1: Read pp. 678–682, Work Exercises 1–49 EOO
 Section 12.2: Read pp. 684–689, Work Exercises 1–45 EOO
 Section 12.3: Read pp. 691–697, Work Exercises 1–33 EOO, 37–57 EOO
 Section 12.4: Read pp. 701–705, Work Exercises 1–37 EOO

*Since preparation levels differ, the exercises given in italics are recommended for students who may need extra review.

***Optional Review homework (Not required/no credit)**

<i>Section 1.1: Exercises 1–109 EOO</i>	<i>Section 5.2: Exercises 1–77 EOO</i>
<i>Section 1.2: Exercises 1–117 EOO</i>	<i>Section 5.3: Exercises 1–53 EOO</i>
<i>Section 1.3: Exercises 1–85 EOO</i>	<i>Section 5.4: Exercises 1–37 EOO</i>
<i>Section 1.4: Exercises 1–49 EOO</i>	<i>Section 5.5: Exercises 1–7 odd</i>
<i>Section 2.1: Exercises 1–29 EOO, 49–59 odd</i>	<i>Section 6.1: Exercises 1–21 odd</i>
<i>Section 2.2: Exercises 1–7 odd</i>	<i>Section 6.3: Exercises 1– 3, 6, 7, 8</i>
<i>Section 2.3: Exercises 1–27 odd</i>	<i>Section 6.5: Exercises 1–3, 5</i>
<i>Section 2.4: Exercises 1–7 odd</i>	<i>Section 7.1: Exercises 13–29 EOO</i>
<i>Section 2.5: Exercises 1–29 EOO</i>	<i>Section 7.2: Exercises 1–15 odd</i>
<i>Section 3.1: Exercises 1–29 EOO</i>	<i>Section 7.3: Exercises 1–3</i>
<i>Section 4.1: Exercises 1–53 EOO</i>	<i>Section 7.5: Exercises 1–7 odd</i>
<i>Section 4.3: Exercises 1–15 odd</i>	<i>Section 8.1: Exercises 1–37 EOO</i>
<i>Section 5.1: Exercises 1–89 EOO</i>	

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