Intermediate Algebra (Mth 95)   Winter 2016

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Times & Location   CRN 11595   TuTh   1:15 – 3:00   RTEC 136, Redmond Campus

Text: Hawkes Learning System (HLS) and Software **ISBN:** 9780918091970

Help! *Regular office hours:*   Redmond: TuTh 12:00-1:15, Bend: Wed 10:00 – 2:00, 12:00-1:00 Grandview Smart Lab. I encourage all of you to contact me anytime you are having difficulties with the course material or assignments. You are welcome to stop by my Bend office anytime or arrange another time to meet. Just let me know.

Free drop-in tutoring is available 7 days a week in the Bend Tutoring Center (library's lower level). There is limited tutoring available in Redmond. See tutortest.cocc.edu for the tutoring schedule. I encourage you to take advantage of the free tutoring and it's a good place to do homework because you can get instant help when you need it.

If you have experienced test anxiety consider attending HD_100_TT. Additional Study Skills courses are offered for those who want to improve their study skills. If you have any issues that would affect your success at COCC please check with the CAP center in the basement of the Library or visit their web sites.

cap.cocc.edu/CAP+Testing/testtips/   or   cap.cocc.edu/Personal+counseling/

Prerequisites: You should have successfully (B- or better) completed COCC's Mth 65 or its equivalent. If you decide to take this class even though you do not meet these prerequisites, be aware that you will have to work extra diligently to succeed in the class. If you have had difficulties with Math courses in the past or do not meet the prerequisites, please see me **TODAY** so I can help get you up to speed.

Calculators and Technology: You are required to have a graphing, programmable calculator. I recommend the TI-83 or TI 84 which I will use in class. Other calculators are fine, however, you are responsible for knowing how to use it. Calculators that are part of cell phones or PDA's will not be allowed in testing situations.

About the Course: We will cover a selection of topics from our text. However, my overriding concern is that you are well prepared for Mth 105/Mth 111 upon completion of Mth 95. Thus, we may spend extra time reviewing past topics where students traditionally have had difficulties.

Withdrawing from the Course: You may drop this class (and receive no grade) by submitting a drop form at the Boyle Center (BEC) or using the on-line BANNER system, without an instructor's signature, through the 7th week. After that, if you want to withdraw from the class, you must obtain your instructor's signature then turn in the drop slip at BEC (before the drop deadline); your grade will be a W. The last day to withdraw is Wednesday, the last week of regular classes. If you intend to quit the class, do not wait until the last minute to drop! If you do not formally drop the class, but just stop coming, you will receive an F.

Cell phone use during class is absolutely inappropriate!
Cell phones must be off and out of sight.

Evaluation

Homework: Traditional homework is handled through the Hawkes Learning System (HLS). Daily assignments are due at the end of each week. In order to allow for questions and answers, you have an additional three day grace period with full credit. After 3 days and until the end of the week, HLS homework receives a 50% penalty. After one week late, the assignment receives zero credit. In addition to the regular assignments, there are some optional bonus assignments for which you can receive extra credit.

Labs/Projects: A Lab/Project is more extensive than a homework problem. Learning to communicate your ideas to your peers and to work together effectively is a part of this course. Often there will be a written component that complements the mathematics. Labs may begin during class in a group setting and I highly encourage you to work together outside of class but I realize you may not be able to work with others outside of class so you will turn in individual labs. These are instructor graded so late or messy projects will be penalized. I will drop the lowest score on these assignments. In addition, there is one optional bonus assignment for which you can receive extra credit.

Written Tests: There are two in-class midterms scheduled plus a final exam. You will not be allowed to consult your notes or textbook during these exams unless otherwise specified. In all cases, you must legibly show your work for full credit. The lowest score among your written exams is dropped.

HLS Tests: Prior to the two written midterms, there is an HLS test. There is <u>no grace period</u> on these tests. None of the HLS tests are dropped.

> *In all cases, if you are going to miss a written exam you must make **prior arrangements** for rescheduling that exam. Failure to make <u>prior</u> arrangements <u>will</u> result in a **zero** for that exam.*

Final Grade: Your grade will be based on:

HLS Homework:	15%
Two HLS Tests	5%
Labs/Projects (best 5 of 6):	15%
Three exams (best 2 of 3):	65%

Grading Scale:

100% -- **A** -- 90% -- **B** -- 80% -- **C** -- 70% -- **D** -- 60% -- **F** -- 0%.

Cheating or Plagiarism: You are highly encouraged to work together and help each other. However cheating or plagiarism on any assignment or test will result in a zero being recorded for that item, and may result in an F for your final course grade.

Behavior: At all times, I expect you to abide by the behavior guidelines for COCC students. Cell phone use (including texting), social chatting during lecture, foul language, arriving late or leaving early are just a few of the disruptive behaviors that are inappropriate in a college class. Your rights and responsibilities are detailed at studentlife.cocc.edu/Policies/Rights+and+Responsibilities/. Failure to abide by these guidelines will result in notification to Student Life and can result in dismissal from the class. If you have a special situation that requires cell phone use, leaving early or arriving late, please let me know.

Discrimination Policy: Faculty, staff and students are protected from discrimination and harassment under Title VII of the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972. It is the policy of the Central Oregon Community College Board of Directors that there will be no discrimination or harassment on the basis of age, disability, gender, marital status, national origin, color, race, religion, sexual orientation or veteran status in any educational programs, activities or employment. Persons having questions about equal opportunity and nondiscrimination should contact the Equal Employment Officer, c/o COCC's Human Resources office, (541) 383-7216. COCC is an affirmative action, equal opportunity institution.

ADA Statement: Students with documented disabilities who may need accommodations, those who have any emergency medical information the instructor should know of, or who need special arrangements in the event of evacuation, should make an appointment with the instructor as early as possible, no later than the first week of the term. Students may also wish to contact [Anne Walker](), the **Coordinator of Services for Students with Disabilities** (541) 383-7743.

Course Description:
Mth 95 is an intermediate algebra course intended to reinforce the basic algebraic skills covered in Mth 60/65 and to further develop the application of those skills to solving a variety of applied, real-world, and theoretical mathematical problems. Emphasis will be placed on integrating the solution of problems using symbolic, graphical, and numerical strategies. An important, required tool introduced in Mth 95 is a graphing calculator. The symbolic, numerical, and graphical representations of the mathematical concept of a function will be introduced and explored.

Mth 95 has the competencies from Mth 60 and Mth 65: Elementary Algebra I and II as prerequisites; the course is not college-transferable. Mth 95 is a 4 credit hour (quarter system) course.

Performance Based Outcomes in Mathematics

Students who successfully complete any mathematics course at COCC will be able to:

1. *Work independently to explore mathematical applications and models, and to develop algebraic/symbolic, graphical, numerical, and narrative skills in solving mathematics problems.*

2. *Work as a member of a group/team on projects or activities that are designed to explore mathematical applications and models.*

3. *Use both written and oral skills to communicate about mathematical concepts, processes, complete mathematical solutions and their implications.*

4. *Use a variety of problem solving tools including symbolic/algebraic notation, graphs, tables, and narratives to identify, analyze, and solve mathematical problems.*

5. *Develop mathematical conjectures and use examples and counterexamples to examine the validity and reasonableness of those conjectures.*

6. *Create and analyze mathematical models of real world and theoretical situations, including the implications and limitations of those models.*

7. *Use appropriate technologies to analyze and solve mathematics problems, and verify the appropriateness and reasonableness of the solution(s).*

Specifically, students who complete Math 95: Intermediate Algebra will be able to:

• model and solve applied, real-world, and theoretical mathematical problems requiring the solution of linear and quadratic equations; use narrative, symbolic, graphic and numeric strategies and translate among them.

• use a graphing calculator to create appropriate graphs that represent mathematical models, determine appropriate viewing windows and accurately interpret and draw inferences regarding the meaning, implications and limitations of the graphical solution to a problem.

• solve equations involving quadratic, polynomial, radical, rational, and absolute value expressions both algebraically and graphically and be able to explain the relationship between the algebraic and graphical methods and solutions.

• examine a variety of relationships stated in narrative, symbolic, graphical, or tabular form and determine which represent functions; determine what the domain and range of functions are; and draw inferences regarding the meaning, implications and limitations of the given functional representation of the problem.

• investigate and solve one-variable linear and absolute value inequalities by coordinate graphing and algebraic means and explain the relationship between the methods and solutions.

Week	Tuesday	Thursday
1	Syllabus, Some Calculator Basics Solving Linear Equations (review) Non-lecture Review: Dist. Rule, §1.6a, §1.6b, §1.7, §2.1b, §2.1c, §5.5	Solving Linear Equations §2.5, §3.1, §3.4 (bonus), §3.5a (bonus) Lab 1-Solving Linear Equations
2	Linear Inequalities Graphing Lines (w/ and w/o TI): §4.3 Jimmy the Cat Activity, Graphing on the TI	Building Linear Models, Lab 2-Linear Models Building a Linear Eqn: §4.4a, §4.4b
3	Systems of Equations: §8.1, §8.2, §8.3, §A.3	Linear Regression, Lab 3
4	DRT, Business Applications: §3.3, §8.4, §8.5 (bonus)	Applications Lab (bonus) Hawkes Web Quiz (Review for Exam 1) Assigned
5	Review Activity for Exam (Key) Programming the TI (Heron's Formula)	Exam 1 Outcomes Exam 1 Study Guide (Key a, Key b) Web Quiz 1 Due; Exam 1 (in class)
6	Radical Expressions: §9.1, §9.2, §9.7 The Quadratic Function: §10.5	Solving Quadratics: §6.6, §10.1a, §10.1b (bonus), §10.2 Programming the QF on the TI w/ problem set Lab 4
7	Quadratic Applications: §6.7, §10.3 (bonus) Non-numeric Quadratic Eqns (activity)	Wrap up Quadratics, Introduction to Functions §4.5, §7.4a, §11.1; 5.2a, Lab 5 **Fri: Last day to drop w/o W**
8	More with Functions: In Class Activity w/ Functions Hawkes Web Quiz (Review for Exam 2) Assigned	Rules for Exponents §9.3, §9.4c (bonus), §9.5 (bonus) Lab 6
9	Rational Functions Rational Functions Activity (Golden Rectangle)	Review Activity for Exam 2 (w/key)
10	Exam 2 Study Guide Web Quiz 2 Due; Exam 2 (in class)	Review for Final Exam **Wed: Last day to drop class (signature req'd)**
Finals	Final Exam Tuesday 1:00-3:00	