**Cascadia Community College \* MATH 085 Elenentary Algebra**

**Winter 2014 \* Item 3430 \* Section 7\* 5 Credits \* CC1-250\*MW- 5:45-7:50pm\***

**i. Instructor Information:**

Instructor: Theodore (Ted) Panitz

Office Phone: (425) 352-8105

Office Number: CC1-350 station 5 E-mail: tpanitz@cascadia.eduOffice Hours: mw 4:45-5:40 or by Appointment

**ii. Course Description**

This course introduces algebraic thinking and manipulation. Real number properties are reviewed. Students will solve linear equations and application problems involving geometric formulas, motion, and money; graph linear equations; simplify, factor, and expand polynomials; add and subtract rational expressions; and work with exponents and scientific notation. Learners will develop study skills and habits, team skills, and the ability to express math in many forms while working with both abstract and real world applications. NOTE: Credits for this course are not transferable, nor do they apply to any college degree or certificate.

Prerequisite: Completion of MATH 075 with a grade of 2.0 or higher or placement by testing into MATH 085; and completion of ESL 060 or EFUND 040 or placement into ENGL 080 or above.

**iii. Textbook and Other Materials**

Lehmann, Jay. Elementary and intermediate Algebra: Functions & Authentic Applications. Upper Saddle River, New Jersey: Prentice Hall, 2011. This class will cover Chapters 5-9.

Calculator: A graphing calculator is required. I recommend the Ti-83 plus, the TI-84, or the TI-84plus. Any calculators that include a Computer Algebra System, such as the TI-89 or TI-92, are not permitted to be used on quizzes and tests. I can check the attributes of your calculator if you have a different brand to determine if it is acceptable.

Need help with your calculator? <http://www.prenhall.com/divisions/esm/app/calc_v2/>

Tutorial for TI-83 or TI-83 Plus <http://www.prenhall.com/divisions/esm/app/graphing/ti83/>

Tutorial for TI-86 <http://www.prenhall.com/divisions/esm/app/graphing/ti86/>

**IV. Course Assessment**

**Assignments–** There are three parts to the homework assessment which will be submitted as hardcopy. Part 1- preclass work will be handed in at the beginning of each class, part 2 will be handed in at the end of class. Part 3- section homework will he handed at the beginning of the class following the class it is covered.

**Part 1** is intended to encourage you prepare for class by completing a worksheet prior to class. Each worksheet asks you to explain the objectives of the section in your own words, address a few vocabulary words or concepts and then work some odd problems from the text. The odd problems are used so you may check your answers in the back of the book. I will collect these worksheets at the beginning of class. All the lines available in the writing section must be filled in with useful information of your choosing and the problems must be attempted. You must show or explain your work to get credit, not just give the answers. These assignments will be assessed with a check or minus depending upon your effort. **These assignments will count for extra credit** instead of being graded. If you complete all the assignments with checks you will get a grade increase at the end of the quarter. For example if you have a B your grade will be increased to B+, an A- grade will become A. etc. I do not expect you to teach yourself the material, but if you attempt this section you will definitely come to class in a much better position to learn the material covered and participate with your partners during class. The corollary is also true. (What is the corollary?)

**Part 2** will include assigned problems from the textbook and/or worksheets completed in groups (usually pairs or threes) during class. The worksheets will also serve as an attendance taking mechanism. The purpose of the class worksheets is to encourage cooperative learning as a teaching/learning strategy. Research is clear, when we work together cooperatively with our peers we are better able to learn difficult concepts, and practice routine math procedures more effectively, versus working alone or competitively. Cooperative learning will be the back bone of this class. I will collect assignments at the end of each class or after the worksheet has been completed. In class work will count for 20% of the course grade. **I expect to have 20 worksheet so each one will count 1% of your grade**.

**Part 3** consists of odd problems done after class for homework. These problems consist of almost all the odd problems that were not completed in part 1 or 2 above. I will collect these at the beginning of the next class after we have covered the material. There will be 20 worksheets here also for 20% or your grade, so how much will each worksheet contribute to your final grade?

**The pre-class worksheets are required for you to receive HW credit**. However the pre-class worksheets do not adversely affect your grade. It is the effort you make that determines if you get credit on a pre-class worksheet

Summary: If you work on all three parts described above you will be extremely well prepared for the tests which count 10% each toward your final grade. Also, I expect the class will be more interesting if you come prepared and we may almost be able to have fun in class sharing our knowledge and approaches to solving algebra problems. Math by itself can be boring when we concentrate on process and basic skills. I hope the social aspects of the cooperative learning environment will make learning math interesting and much more personal.

**Tests –** You will have 5 tests and a final exam, of equal weight. If you wish to improve your grade or miss a test I will offer a makeup test that must be completed with 2 weeks of the original test . If you have a 90 average on the five chapter tests and you have completed the pre-class assignments on time plus the home work assignments, you may elect to exempt the final exam. If you exempt the final your grade will then be based upon the five chapter tests.

**Testing procedure -**  You will have sufficient time to complete each test. When you are finished you will need to place your answers on a separate sheet provided. I will check your answers and indicate which are correct with a check and which ones are incorrect by circling the problem number. Your mistakes may be minor arithmetic types or major conceptual ones. A circle does not indicate the degree or type of mistake made. You may make corrections to all the incorrect problems and resubmit the test. If you get above a 70 after corrections I may ask you to continue to attempt additional corrections. The test grade is based upon your last corrections. If you do not pass the test or wish to improve your grade you may take a makeup test within two weeks, usually outside of class. The final score on the original test or the higher score from the makeup test will be final grade on each test.

Course grades will be based upon the following percentages:

Five tests and final exam- 60%

Homework- 20% In class worksheets- 20%

Grades are assigned to the following schedule:

% GPA % GPA % GPA % GPA

95-100 4.0/A 89 3.4/B+ 79 2.4/C+ 68-69 1.4/D+

94 3.9/A- 88 3.3/B+ 78 2.3/C+ 67 1.3/D+

93 3.8/A- 87 3.2/B+ 77 2.2/C+ 66 1.2/D+

92 3.7/A- 86 3.1/B+ 76 2.1/C 64-65 1.1/D

91 3.6/A- 85 3.0/B 75 2.0/C 63 1.0/D

90 3.5/A- 84 2.9/B **74 2.0/C** 62 0.9/D

83 2.8/B 73 1.8/C- 61 0.8/D-

82 2.7/B- 72 1.7/C- 60 0.7/D-

81 2.6/B- 71 1.6/C- 0-59 0.0/F

80 2.5/B- 70 1.5/C-

In order to move to the next Math level, you must pass with at least a 2.0

**V. Course Outcomes:**

**Learn Actively** - Learning is a personal, interactive process that results in greater

expertise and a more comprehensive understanding of the world.

• Perform algebraic manipulations at a level that allows success in higher-level math

classes

• Investigate functions represented graphically, algebraically, numerically, geometrically

and verbally in real world settings

• Express and approach problem solving using and integrating various threads of

mathematics

**Think Critically, Creatively and Reflectively** -- Reason and imagination are fundamental

to problem solving and critical examination of ideas.

• Demonstrate proficiency in introductory algebra tools in the analysis of appropriate problems

• Develop competency in rational, radical, exponential, logarithmic expressions, equations and

functions, and systems of equations

• Choose appropriate functions to express relations between independent and dependent

variables, model authentic (real-world) problems, and analyze the reliability and validity of these relations and models

• Demonstrate use of rule-based thinking and development of logical approaches to problem

solving

• Reflect on process as well as solution, integrating thinking from various strands of math

**Communicate with Clarity and Originality** - The ability to exchange ideas and information is

essential to personal growth, productive work, and societal vitality.

• Listen, speak and write using mathematical vocabulary, notation, and graphical expression

• Compare, convert and create in words, graphs and formulas

• Refine communication with others about incorrect answers to be supportive of persons without

compromising accuracy of answers

**Interact in Diverse and Complex Environments** - Successful negotiation through our increasingly complex, interdependent and global society requires knowledge and awareness of self and others, as well as enhanced interaction skills.

• Engage in work, study, and conversation on the topics of algebra with colleagues

• Practice teamwork and collaborative learning skills in problem-solving situations

• Respect individual ways of arriving at answers

**VI. Cascadia Community College Syllabus Learning Agreement**

**Academic Honesty:** The College regards acts of academic dishonesty, including such activities as plagiarism, cheating and/or/violations of integrity in information technology, as very serious offenses. In the event that cheating, plagiarism or other forms of academic dishonesty are discovered, each incident will be handled as deemed appropriate. Care will be taken that students’ rights are not violated and that disciplinary procedures are instituted only in cases where documentation or other evidence of the offense(s) exists. A description of all such incidents shall be forwarded to the Student Conduct Officer, where a file of such occurrences will be maintained. The Student Conduct Officer may institute action against a student according to the college’s disciplinary policies and procedures as described in the Student Handbook: http://www.cascadia.edu/about\_cascadia/student\_handbook.aspx

**Acceptable Use Policy on Information Technology:** In general, the same ethical conduct that applies to the use of all college resources and facilities applies to the use of Cascadia’s systems and technology. These systems may only be used for authorized purposes, using only legal versions of copyrighted software, and with consideration and respect for the conservations of resources and the rights of other users. For additional information, see the online version of the Student Handbook at http://www.cascadia.edu/about\_cascadia/student\_handbook.aspx or go to the Open Learning Center for assistance with any questions.

**Diversity:** Cascadia is committed to creating a supportive environment for a diverse student, faculty, and staff population. Individual differences are celebrated in a pluralistic community of learners. Cascadia does not discriminate on the basis of race, color, religion, gender and/or sex, sexual orientation, national origin, citizenship status, age, marital or veteran status, or the presence of any sensory, mental or physical disability, or genetic information, and is prohibited from discrimination in such a manner by college policy and state and federal law. The following office has been designated to handle inquiries regarding non-discrimination policies and can direct inquiries to the appropriate office for ADA-related requests: Director of Human Resources, Office CC2-280, 425-352-8880.

**Campus Closures and Inclement Weather:** In the event of inclement weather affecting morning classes, there will be notification on the local media by 5:30 a.m. You may also call the main campus number: 425-352-8000 to hear a message that will be updated with the latest Cascadia closure information. You may also go online to www.schoolreport.org and click on Cascadia Community College to get the latest report. Should the weather deteriorate during the day, you may check online, listen to the main campus message, check email or the media to hear news about closures or class schedule changes.

To sign up to receive campus alerts, including closures, on your home email, your mobile phone, or your home phone, log in at https://alerts.cascadia.edu/ Use your Cascadia user name and password and be sure to select the "Student" domain. Upon login, you will be re-directed to a web site maintained for Cascadia by a third party vendor. Rave Mobile Safety has partnered with Cascadia Community College to provide emergency notification services to the campus community.

**Course Backup Plan:** In the event of a campus closure, instruction for this class will continue in the following way:

**Email -** In the event of a campus closure, please check your email for announcements and instructions from me. Please make sure that you have the Cascadia.edu domain in your Safe Senders list.

**Emergency Procedures:** Emergency procedures are posted in each classroom. To reach campus security personnel, dial 425-352-5222. City of Bothell fire and police may be reached by dialing either 9-9-1-1 or 9-1-1 from any campus phone. Campus emergency phones are located on campus walkways and parking lots.

**Learning Assistance Options:** To support student success, Cascadia offers a variety of support services. The Open Learning Center, CC2-060, provides a computer lab where students can receive assistance with technology to support class assignments. Cascadia’s Math and Writing Center, CC2-080, provides tutorial support for students who seek additional assistance with their math and writing assignments. Tutoring is offered on a drop in basis, and is free and open to all Cascadia students.

**Online Tutoring and Writing Assistance:** Cascadia provides online access to live tutors in a variety of subjects, provided by the NW e-Tutoring Consortium. Tutoring is offered through live, interactive sessions and through an Essay Center. Many subjects have convenient tutoring hours late into the evening and 24 hours a day. To get started, visit the following address: etutoring.cascadia.edu.

**Disability Support Services:** Cascadia provides services to help students with disabilities successfully adapt to college life. Students who meet specific criteria may also qualify for academic accommodations. If you have or suspect you have a disability and need an accommodation please contact the front office in Kodiak Corner at 425-352-8860 to make an appointment with the Disability Support Services. Services and Accommodations through DSS are not retroactive.

**Counseling services:** If you have a personal problem or stress that is affecting your schoolwork and would like to talk with someone, please contact the Cascadia counselor. Counseling at Cascadia is confidential, professional and free. Visit the Kodiak Corner front desk or call 425-352-8860 for an appointment.

**Advising:** Students should schedule an appointment to meet with an advisor to create a tentative education plan. They can call 425-352-8860 or come to the Kodiak Corner to make an appointment. Appointments are not made via email. At the time of the appointment, they need to indicate which degree they are pursuing. See the Cascadia website http://www.cascadia.edu/contact/offices\_facilities/academic\_advising.aspx for information about Drop-In Advising hours.

**Online Advising:** Email advising is available at advising@cascadia.edu. Our distance advisor can answer most questions via email, but we don’t schedule advising appointments via email. See the Cascadia website http://www.cascadia.edu/contact/offices\_facilities/academic\_advising.aspx for information about Instant Messenger advising.

**Family Education Rights and Privacy Act (FERPA):** Cascadia Community College complies with the Family Education Rights and Privacy Act (FERPA) of 1974 concerning the information that becomes a part of a student’s permanent educational record and governing the condition of its disclosure. Under FERPA, students are protected against improper disclosure of their records.

**Group Norms:**

\* We respect the seriousness of the enterprise we are pursuing. We will participate fully; we will not have side discussions during class sessions, make or take cell phone calls, listen to personal stereo equipment, read newspapers, or engage in any similar activity during class.

\* We may have coffee, water, soda and similar beverages during class; we may have power bars, candy bars, pastries, and other low-impact foods during class. We will not attempt to consume any food or drink that is messy, smelly, noisy, or which otherwise disrupts the class or requires too much attention.

\* We will bring our supplies to every class and come ready to work.

\* We will shut off our cell phones whenever class is in session.

\* We may leave unobtrusively for physical needs during class time, respecting the learning activities of others. We will wait for scheduled breaks to take care of non-essential business.

**MATH 085 Essentials of Intermediate Algebra:** **Class Schedule MW Winter 2015**

M 1/5 Introductions/ Review HW\* PC\*

W 1/7 5.1- Graphing linear equations/ 5.2- Functions 5.1/5.2 PC

M 1/12 5.3- Function notation/ 5.4- finding linear equations 5.1/5.2 HW 5.3/5.4 PC

W 1/14 5.5- Linear models/ 5.6- Functions as models 5.3/5.4 HW 5.5/5.6 PC

M 1/19 HOLIDAY

W 1/21 5.7- Linear inequalities/ chapter 5 review test 5.5/5.6 HW 5.7 PC

M 1/26 **Chapter 5 test**  5.7 HW

W 1/28 Systems of equations/ 6.1- Graphing /6.2 substitution/

6.3- Elimination 6.1/6.2/6.3 PC

M 2/2 6.4- Modeling data/ 6.5- Applied word problems 6.1/6.2/6.3 HW 6.4/6.5 PC

W 2/4 6.6- Linear inequalities/ chapter 6 practice test 6.4/6.5 HW 6.6 PC

M 2/9 **Chapter 6 test** 6.6 HW

W 2/11 Polynomials- 7.1- adding/7.2- multiplying/7.3-powers and binomials 7.1/7.2/7.3 PC

M 2/16 HOLIDAY

W 2/18 7.4- Properties of exponents/ Chapter 7 practice 7.1/7.2/7.3 HW 7.4 PC **Chapter 7 test** given out as take home test 7.4 HW

M 2/23 10.1-Integer Exponents/ 10.2- Rational Exponents 10.1/10.2 PC

W 2/25 10.3- Graphing Exponents/ 10.4- Finding equations 10.1/10.2 HW 10.3/10.4 PC

M 3/2 **Test Chapter 10**  10.3/ 10.4 HW

W 3/4 11.1- Inverse Functions/ 11.2- Logarithmic Functions/

11.3- Properties of Logarithms 11.1/11.2/11.3 PC

M 3/9 11.5-More Properties of Logs/ Review chapter 11 11.1/11.2/11.3 HW 11.5 PC

W 3/11 **Test chapter 11** 11.5 HW

M 3/16 Makeup tests completed

W 3/18 TAKE HOME FINAL DUE

\*HW- homework assignments

\*PC – pre-class homework assignments

**WORK SHEET ASSIGNMENTS**  Class Preparation (CP) + Inclass Group Work (IGW) + Homework (HW)

5.1 CP- 1, 5, 9, 17, 25, 35, 41, 47, 53, 59, 71, 75, IGW- 7, 13, 19, 23, 27, 31, 37, 39, 45, 51, 55, 61, 63, 67, 68, 73, 81, 83, 85 HW- 3, 11, 15, 21, 29, 33, 38, 40, 43, 49, 57, 65, 69, 70, 77

5.2 CP- 1, 7, 15, 19, 29, 31, 39, IGW- 3, 9, 13, 16, 21, 25, 33, 45, 47 HW- 5, 11, 17, 23, 27, 35, 41

5.3 CP- 1, 7, 13, 21, 29, 35, 43, 45, 51/73, IGW- 3, 9, 15, 23, 31, 37, 39,40, 41, 52, 57, 61, 63, 69, 70, 71, 72, 75, HW- 5, 11, 19, 25, 33, 38, 47,53, 55, 59, 65, 67, 68, 77, 79

5.4 CP-1, 7, 15, 19, 41, 45, 50, 57 IGW- 3, 9, 13, 17. 21, 27, 42, 47, 51, 53, 55, 59, 65, 67, 73 HW- 5, 11, 23, 29, 43, 49, 61, 69, 75

5.5 CP- 1, 7, 13, 21 IGW- 3, 9, 11, 15, 22 HW- 5, 10, 17, 23, 27

5.6 CP- 1, 7, 13, 17 IGW- 3, 9, 15, 19 HW- 5, 11, 21

5.7 CP- 1, 3, 9, 11, 15, 19, 25, 31, 37, 47, 51, 61, 71, 79 IGW- 5, 13, 17, 21, 27, 33,39, 45, 55, 63, 73, 81 HW- 7, 18, 23, 29, 35, 41, 49, 53, 57, 65, 75, 83

6.1 CP- 1, 5, 11, 21, 27, 33, IGW- 2, 6, 10, 15, 19, 23, 29, 35, 38, 41, 48 HW- 3, 7, 9, 13, 17, 25, 31, 37, 39, 43, 47,

6.2 CP- 1, 7, 15, 21, 25, 35, IGW- 3, 9, 13, 17, 22, 29, 39, 45, 51 HW- 5, 11, 19, 23, 33, 43,

6.3 CP- 1, 7, 13, 19, 23, 27, 37, 41, 47,55 IGW- 3, 9, 15, 21, 26, 29, 43, 49, 57 HW- 5, 11, 17, 23, 25, 31, 39, 45, 51, 59

6.4 CP- 1, 5, 11, 17 IGW- 2, 8, 9, 13, 19 HW- 3, 7, 15, 21

6.5 CP- 1, 9, 17, 23, 27,43, 45, 49 IGW- 3, 11, 19, 26, 29, 44, 51 HW- 5, 13, 21, 25, 31, 48, 53

6.6 CP- 1, 5, 13, 19, 29, 37, 43, 49 IGW- 2, 7, 11, 23, 31, 39, 45,51, HW- 3, 9, 15, 25, 27, 41, 47, 53,65, 71, 73

7.1 CP- 1,7,13, 19, 25, 29, 37, 45, 55, 61, 69, 77, 85 IGW- 3, 9, 15, 21, 27, 31, 35, 39, 57, 63, 71, 79, 87 HW- 5, 11, 23, 33, 41, 59, 65, 73, 75,81, 83, 89

7.2 CP- 1, 7, 13, 21, 29, 39, 47, 53, 59, 65, 71, 77, 81, 87 IGW- 9, 17, 23, 31, 41, 45, 51, 55, 61, 67, 73, 77, 83, 89 HW- 5, 11, 19, 25, 33, 43, 49, 57, 63, 69, 79, 85,90

7.3 CP- 1, 7, 13, 19, 29, 39, 47, 53, 59, 63, 69, 75 IGW- 3, 9, 15, 21, 27, 31, 37, 41, 49, 55, 61, 65, 71, 79, 83, 84, 85 HW- 5, 11, 17, 23, 33, 43, 51, 57, 62, 67, 73, 81

7.4 CP- 1, 7, 13, 19, 25, 31, 37, 43, 49, 55, 61, 67, 73 IGW- 3, 9, 15, 21, 27, 33, 39, 45, 51, 57, 63, 69, HW- 5, 11, 17, 23, 29, 35, 41, 47, 53, 59, 65, 77, 78, 79

10.1 CP- 1, 3, 7, 9, 13, 17, 23, 43, 51, 59, 67, 77, 81, 87, 89, 93, 95, 101, 103, 111 IGW- 5, 11, 15, 19, 21, 29, 37, 39, 47, 49, 57, 73, 79, 85, 91, 105, 109, 112, 112, 118, 119 HW- 25, 27, 31, 35, 41, 45, 53, 55, 61, 63, 65, 69, 83, 97

10.2 CP- 5, 11, 17,23, 25,27,29, 31, 35, 43, 45, 53, 57, 67, 71, IGW- 3, 13, 19, 28, 33, 39, 41, 47, 51, 61,63, 72, HW- 1, 7, 15, 21, 37, 49, 55, 65, 69, 73, 75

10.3 CP- 1, 3, 5, 9, 13, 17, 19,21,23, 31, 37, 39, 43, 61, 63, 69, 71, IGW- 7, 11, 15, 25, 29, 35, 41, 45, 49, 53, 65, 73, 75, 85 HW- 9, 27, 33, 47, 53, 55, 59, 67, 77, 79, 83

10.4 CP- 5, 9, 15, 17, 27, 39, 41, 51, 55, IGW- 3, 7, 13, 19, 23, 29, 35, 43, 49, 53, 57, HW- 1H,1K, 11, 21, 25, 31,37,45,59

11.1 CP- 1, 3, 5, 15, 17, 23, 37, 39, 41, 49, 55, 67, 81 IGW- 7, 9, 11, 25, 29, 33, 43, 45, 47, 51, 57, 65, 79, HW- 13, 27, 31, 35, 53, 59, 63, 69, 75, 77, 83,85

11.2 CP- 1, 9, 17, 25, 39, 43, 51, 53, 67, 73, 77, 80, 83 IGW- 5, 13, 19, 21, 45, 47, 55, 57, 75, 79, 79 HW- 3, 7, 15, 23, 31, 35, 37, 41, 49, 63, 65

11.3 CP- 1, 3, 9, 13, 17, 23, 25, 39, 51, 53, 57, 63, 65, 69, 97A, 97D IGW- 5, 7, 11, 15, 19, 21, 29, 33, 37, 41, 43, 47, 59, 61, 67, 71, 73, 77, 79, 81, 83 HW- 27, 31, 35, 45, 49, 55, 75, 85, 87, 89, 91, 93, 95

11.4 CP- 1, 3, 7, 17, 23, 29 IGW- 5, 19, 25, HW- 9, 13, 21, 27, 31, 35

11.5 CP- 1, 3, 5, 7, 9, 13, 17, 25, 37, IGW- 11, 23, 33, 35, 39, 41, 47, 49, 51 HW- 21, 29, 43, 45

11.6 CP- 1, 3, 5, 7, 17, 25, 31, 37, 41, 43, 59, 60 IGW- 11, 15, 19, 23, 29, 33, 35, 45, 49, 51, 55, 57, 61, 63, 65 HW- 21, 27, 39, 47, 53, 67, 71

**WAMAP and Study Skills**

WAMAP stands for Washington Mathematics Assessment and Placement and we’ll be using the WAMAP site in this class. The site address is www.wamap.org, and you first need to register as a new student unless you’ve already registered into WAMAP from a previous class. You will be asked to submit a user name and a password. These are unique to you and don’t need to follow any particular format. Please provide a valid email address so that I may have a class email list. After you’ve registered, you need to login with your username and password and enroll in the course.

We will use WAMAP as course homepage: http://wamap.org/. Check the webpage regularly to see updates for the course.

**It is important that you practice on WAMAP**. I have provided practice/ review materials for each chapter plus practice tests for each chapter. You may download and print out anything provided on WAMAP. Also, all the class worksheets, Pre-class, in-class, and homework are provided via WAMAP so if you misplace any handouts or need in-class worksheets you may obtain them through WAMAP.

**Homework Discussion Forum on WAMAP:**

Post your math questions and learning tips on the forum whenever you have problems.

**Message Board on WAMAP:**

We will communicate through the WAMAP message board.