# MATH 25    ELEMENTARY ALGEBRA II
3 Credits
TTh 8:30 AM – 9:45 AM

**INSTRUCTOR:**          **Kevin A. Takayama, Lecturer, Mathematics**

**OFFICE:**              **Hale Manaʻopono 110A**

**OFFICE HOURS:**        **MWF  10:00 AM – 11:00 AM;**
**TTh    11:15 AM – 12:15 PM;**
**or by appointment.**

**TELEPHONE:**    **236-9281**          **EMAIL:**    **ktakayam@hawaii.edu**

**EFFECTIVE DATE:**    **Spring 2014**

## WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

*Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawaiʻi and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide Oʻahu's Koʻolau region and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.*

## CATALOG DESCRIPTION

This course is a continuation of MATH 24 – Elementary Algebra I representing approximately the second half of a typical year course in algebra. Topics include exponents, polynomials, factoring, rational expressions and equations, radical expressions and equations, and quadratic equations.

*Prerequisite: Grade of "C" or better in MATH 24 or MATH 28 or equivalent, satisfactory math placement test score, or consent of instructor.*

**Activities Required at Scheduled Times Other Than Class Times**

Homework, Math Lab as needed.
Math Lab:  Hale Laʻakea

## STUDENT LEARNING OUTCOMES

The student learning outcomes for the course are:
1. Utilize precise mathematical language and symbols in written and/or oral form.
2. Demonstrate proficiency in performing operations with real numbers and variable expressions.
3. Interpret quadratic equations geometrically and identify key characteristics.

4. Employ algebraic techniques to find the solution for equations.
5. Use algebraic techniques to analyze and solve applied problems.
6. Demonstrate proficiency in the use of the rules of exponents and its applications to scientific notation.
7. Employ algebraic techniques to factor a polynomial.
8. Graph a linear equation in two variables, find slope and apply it to finding the equation of a line.

## COURSE CONTENT

*Concepts or Topics*

- **Exponents and Polynomials**

- **Factoring and Applications**

- **Rational Expressions and Applications**

- **Roots and Radicals**

- **Quadratic Equations**

- **Linear Equations in Two Variables**

*Skills or Competencies/Responsibilities of Students. Success in this course will be enhanced by:*
*1.* a positive, inquiring attitude towards mathematics;
*2.* setting aside adequate time for studying and working of problems;
*3.* reading the text carefully and making use of other learning materials whenever necessary;
*4.* seeking assistance from the instructor and the Math Lab personnel whenever necessary;
*5.* completing assignments by the designated date;
*6.* regular class attendance, participation and maintaining accurate class notes.

## COURSE TASKS

The mode of instruction is primarily discussion-problem solving where the initial portion of each class period may be utilized to discuss and clarify any questions from the preceding class meeting and/or assignment, and the remaining portion is used to discuss new material. Lectures, directed student explorations, group work, appropriate technologies, and projects will also be used as appropriate. After the completion of each unit, a review and an exam will be conducted.

## ASSESSMENT TASKS AND GRADING

The student will demonstrate competency in the objectives by participating in and completing all class activities, by completing and turning in all assignments as requested, by taking unit tests, and by taking a final exam over concepts and skill covered in the entire course. Class activities, weekly quizzes, unit tests, and the final exam are to be taken in the classroom and without any references unless otherwise stipulated by the instructor.

It is the student's responsibility to obtain and complete all assignments that are given in any class meeting for which the student is unable to attend. Unless permission is granted by the instructor beforehand, assignments and tests must be completed and submitted to the instructor at the specified date and time.

Points will be assigned to each graded assignment, class activity, weekly quiz, and tests as follows:
1. **Homework**. Homework sets will be graded on a 0 - 10 point scale. Assignments are due at the first class meeting of every week to the instructor. ***Late homework will not be accepted***.

2. **Weekly Quiz.** Weekly quizzes will be graded on a 0 - 5 point scale and will take place at the last meeting of every week. There is no make-up for a missed weekly quiz. Students must be present in class to participate.

3. **Chapter Test**. The five chapter tests are given in class at the end of each chapter. A chapter test will be 50 minutes in length and will be scored on a 100-point scale. **The student must achieve a minimum of 70% of the possible points for each unit test**. Without this minimum requirement, a passing grade for the course is not possible.

**Retests.** After each chapter test, a chapter retest deadline will be given. One retest is allowed without penalty for each chapter test if it is done by the specified chapter retest deadline. The better of the two test scores will count towards your grade. No retests will be given after the chapter retest deadline. Retests are arranged by appointments with your instructor.

To take a retest, all of the following must be met:
a)  All problems from the Chapter Test at the end of the chapter must be completed and shown to the instructor.
b)  The student must meet with the instructor to review mistakes made on the first form of the test taken.
c)  Additional math activities as designated by the instructor must be completed.
d)  The retest must be taken by the designated chapter retest deadline.

5. **Final Exam**. The final exam will cover the concepts and skills in the entire course. The final exam is one hour, fifty minutes in length and will be scored on a 200-point scale. The student must achieve a minimum of 60% of the possible points for the final exam. Without this minimum requirement, a passing grade for the course is not possible.

Retesting for the final exam is available if the 60% minimum is not met and the 70% minimum per chapter test was met. In that event, a retest of the final exam is possible, however, the maximum score of the retest is 60% of the possible points for the final exam.

**Make-up.** Make-up opportunity for a chapter test or final exam will be possible only upon a timely presentation of a serious and justified explanation of the student's absence from the class test. The instructor has the right to request documentation of the student's absence from the class and to determine if the absence from the class test is justified. A make-up test must be taken within one week of the in-class test unless otherwise specified by the instructor. **No more than one test may be taken by a student on a make-up basis.**

**Course grade**. If the student has achieved a minimum of 70% of the possible points for each unit test and a minimum of 60% of the possible points for the final exam, then a letter grade for the course will be assigned according to the level of achievement as provided in the table below:

| GRADE | DEFINITION |
|---|---|
| A | 90% - 100% of the total possible points |
| B | 80% - <90%  of the total possible points |
| C | 70% - <80%  of the total possible points |
| Cr | 70% - 100% of the total possible points |
| NC | <70% of the total possible points |
| D | 60% - <70%  of the total possible points |

F          < 60% of the total possible points

Note:  Students must apply for the Cr/NC grading option at the Admissions Office.  Consult the WCC Catalog for deadlines.

Note: W grade is given only when the student officially withdraws from the course at the Admissions Office.  Consult the WCC Catalog for deadlines.

## LEARNING RESOURCES

**Required Text**:  Beginning Algebra, 11th edition, by Lial, Hornsby and McGinnis.
The Student Solution Manual, MyWorkBook and the MATHXL Access Code are optional.

UH Manoa Online Learning Academy: manoa.hawaii.edu/ola/

## Additional Information

1. **Grading on Homework, Class Activities, Weekly Quizzes or Tests.** To receive full marks for problems done on any graded activity, you must show your work neatly and completely as well as provide clear written explanations when it is asked for. Partial credit may be awarded.

2. **Absences.** It is your responsibility to attend every class meeting. Even if you are absent, you are responsible for those topics and examples covered in class that you missed. Furthermore, you are responsible for obtaining any important announcements and assignments given during the class you missed. If you are absent frequently or for an extended period of time, contact the instructor as soon as possible to discuss your situation. Absences and tardiness to class will have a negative impact on your success and overall grade in this course. You are allowed 2 absences without consequence. **If you are absent 3 times, your overall grade will drop by 10%, one letter grade.** You will be deducted 10% of your overall grade for every 3 absences thereafter. You are considered tardy if you come to class between 5-20 minutes after class has started. **Two tardy attendances are worth 1 absence.**

3. **Homework.** For each chapter, as you read through each section, it is recommended that you write down the words, phrase or math symbols and their meanings, formulas, and properties/rules that are important for each section. It is important for you to know these.

After reading through each section carefully, try the suggested odd numbered problems in each section. The answers to the odd numbered problems are available at the back of the textbook. Do as many as you feel is necessary to help you learn and understand the material and become comfortable with the concepts and/or properties. If you have difficulty solving problems in the section, review the material in the text and your class notes. Many examples are solved. Review the solutions to these problems. If, after checking these sources and trying to find your mistakes, you are still unable to solve a problem correctly, make a note of the exercise number so that you can ask someone for help with that problem.

Mathematics is not a spectator sport. To succeed in mathematics, you must do problems. It is often necessary to practice a skill more than the instructor requires. For example, a textbook may provide 50 practice problems in a section and the instructor may assign only 25 of them. However, some students may need to do 30, 40, or all problems. If you are an accomplished

athlete, musician, or dancer, you know that long hours of practice are necessary to acquire a skill. Do not cheat yourself of the practice you need to develop skills taught in this course.

4. **Laulima.** The syllabus, course calendar, homework schedule, grades, etc. are all viewable through Laulima. Check Laulima regularly to stay up to date.

5. **Calculators.** Calculator use is not allowed on quizzes, tests and exams.

6. **Communication.** It is your responsibility to stay in communication with the instructor. If you will be unable to make it to class for any reason, please inform your instructor so it may be determined if the absence is excused. The instructor may need to contact you throughout the semester and will do so via email. It is your responsibility to check your student email on a regular basis.

### DISABILITIES ACCOMMODATION STATEMENT

*If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the Disability Specialist Counselor to discuss reasonable accommodations that will help you succeed in this class.  Ann Lemke can be reached at 235-7448, lemke@hawaii.edu, or you may stop by Hale ʻAkoakoa 213 for more information.*

Revised May 25, 2011