# MATH 25 – Elementary Algebra II

3 Credits

**INSTRUCTOR:** Clayton K. Akatsuka, Professor, Mathematics

**OFFICE:** Mana 112

**OFFICE HOURS:** MW 11:15 am – 12:45 pm, TTh 11:15 am – 12:15 pm, Or by appointment.

**TELEPHONE:** 236-9279

**e-mail:** akatsuka@hawaii.edu

**EFFECTIVE DATE:** Fall 2014

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**WINDWARD COMMUNITY COLLEGE MISSION STATEMENT**

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

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**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 or visit [http://windward.hawaii.edu/Disabilities/](http://windward.hawaii.edu/Disabilities/)*

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**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.

Pre-Requisite(s): Grade of “C” or better in MATH 24 or MATH 28 or equivalent, satisfactory math placement test score, or consent of instructor.
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 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. Graph a linear equation in two variables, find slope and apply it to finding the equation of a line.
7. Employ algebraic techniques to factor a polynomial.
8. Demonstrate proficiency in the use of the rules of exponents and its applications to scientific notation.

COURSE CONTENT

Concepts or Topics

- Exponents and Polynomials
- Factoring and Applications
- Rational Expressions and Applications
- Root 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 learning 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, 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
Points will be assigned to each graded assignment, class activity, and tests as follows:

1. **Homework.** Homework sets will be graded on a 0 - 3 point scale. Assignments are due at the next class meeting to the instructor. Late homework may be accepted with grade penalty.

2. **Class Activity.** Class activities are done in class only. Class activities will be graded on a 0 - 3 point scale. There is no make-up for a missed class activity. 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 75 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 turned in 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.

4. **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.

No retesting for the final exam is available unless the 60% minimum is not met and the 60% minimum per chapter test was met. In that event, a retest of the final exam is possible, however, the maximum score 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.**

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

**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:
<table>
<thead>
<tr>
<th>GRADE</th>
<th>DEFINITION</th>
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<tbody>
<tr>
<td>A</td>
<td>90% - 100% of the total possible points</td>
</tr>
<tr>
<td>B</td>
<td>80% - 89% of the total possible points</td>
</tr>
<tr>
<td>C</td>
<td>70% - 79% of the total possible points</td>
</tr>
<tr>
<td>Cr</td>
<td>70% - 100% of the total possible points</td>
</tr>
<tr>
<td>NC</td>
<td>Less than 70% of the total possible points</td>
</tr>
<tr>
<td>D</td>
<td>60% - 69% of the total possible points</td>
</tr>
<tr>
<td>F</td>
<td>Less than 60% of the total possible points</td>
</tr>
</tbody>
</table>

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**


**Learning Resources:**

- **Supplemental Instruction Leader:** TBA
- **Testing Center:** La`akea (Library Learning Commons) Room 228  
  Phone number: 235-7498  
- **WCC Math Lab:** La`akea (Library Learning Commons) Room 222  
  [http://windward.hawaii.edu/Math_Lab/](http://windward.hawaii.edu/Math_Lab/)
- **Brainfuse Online Tutoring:** [http://windward.hawaii.edu/brainfuse/](http://windward.hawaii.edu/brainfuse/)
- **OLA (UH Online Tutoring):** [http://manoa.hawaii.edu/ola/](http://manoa.hawaii.edu/ola/)
- **Kahn Academy Videos:** [http://www.khanacademy.org](http://www.khanacademy.org)

**Additional Information**

1. Grading on Homework, Class Activities 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 can have a negative impact on your success in this course.
# Tentative Calendar – Fall 2014

**MATH 25 (CRN 62530/62587)**  
Elementary Algebra II  
**TTh 10:00 am – 11:15 am**  
Mana 101  

Instructor: Clayton K. Akatsuka  
Office: Manao 112  
Office Phone: 236-9279  
e-mail: [akatsuka@hawaii.edu](mailto:akatsuka@hawaii.edu)

## Important Dates

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug 25</td>
<td>Last day to register/add/drop and to receive 100% refund of tuition</td>
</tr>
<tr>
<td>Sept 8</td>
<td>Last day for 50% refund of tuition and to withdraw without a “W” grade</td>
</tr>
</tbody>
</table>
| Nov 4  | Last day to withdraw with a “W” grade or choose CR/NC grade option  
Last day to make up “I” grade from previous semester                                    |

## Tuesday

| Aug 25 | In Class:  
• Introduction  
• Review of Exponents  
Assignment: Exponent Review  
p. 311 #1-39 odds, 40; and  
|---------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Sept 2  | In Class:  
• Review/Collect Assignment  
• 5.6, 5.7  
Assignment:  
5.6 p. 538 #23, 27, 31, 35, 37, 39, 43; and  
5.7 pp. 346-348 #1-7, 23, 49, 61, 71. |
| Sept 9  | In Class:  
• Collect Assignment  

**Chapter 5 Test** |

## Thursday

| Aug 28 | In Class:  
• Review/Collect Assignment  
• 5.4, 5.5  
Assignment:  
5.4 pp. 325-323 #1-8, 39, 43, 49, 59, 69, 75, 77, 87, 91; and  
5.5 pp. 333-334 #3, 7, 9, 11, 13, 15, 21, 23, 27, 37, 41, 49, 55, 63, 65, 71, 77. |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Sept 4  | In Class:  
• Review/Collect Assignment  
• Review for Chapter 5  
Assignment:  
Chapter 5 Test pp. 355-356 #1-8, 10, 11, 13-25. (Must complete and submit before testing.) |
| Sept 11 | In Class:  
• Review Ch 5 Test results  
• 6.1  
Assignment:  
<table>
<thead>
<tr>
<th>Date</th>
<th>In Class:</th>
</tr>
</thead>
</table>
| Sept 16 | • Review/Collect Assignment  
6.2, 6.3 Assignment:  
6.2 pp. 371-373 #25-43 odds, 45, 51, 55, 59; and  
6.3 pp. 378-380 #23-41 odds, 43, 47, 49, 53, 55, 57. | Sept 18 | • Review/Collect Assignment  
6.4, 6.5 Assignment:  
6.4 pp. 387-389 #7, 9, 11, 13, 17, 21,  
27, 43, 51, 83, 85; and  
6.5 pp. 397-399 #17, 19, 21, 25, 30, 35,  
39, 41, 45, 55, 63. |
| Sept 23 | • Review/Collect Assignment  
6.6 Assignment:  
6.6 pp. 405-410 #7, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 35; and  
Chapter 6 Test p. 416  
#1-14, 17-27. (Must complete and submit before testing.) | Sept 25 | • Review/Collect Assignment  
• Review for Chapter 6 |
| Sept 30 | In Class:  
Chapter 6 Test | Oct 2   | • Review Ch 6 Test results  
• 7.1, 7.2 Assignment:  
7.1 pp. 426-428 #3, 5, 7, 10, 13, 15, 19, 23, 27, 31, 37, 41, 43, 49, 51, 55, 61, 65, 67, 85; and  
| Oct 7   | • Review/Collect Assignment  
• 7.3, 7.4 Assignment:  
7.3 pp. 438-440 #7, 11, 17, 23, 31, 39, 43, 45, 47, 63, 65; and  
• 7.5, 7.6 Assignment:  
7.5 pp. 453-455 #9, 11, 13, 15, 17, 19, 23, 29, 31, 33, 35; and  
| Oct 14  | • Review/Collect Assignment  
• 7.7 Assignment:  
7.7 pp. 471-475 #3, 7, 9, 19, 21, 25, 27, 31, 33, 35, 37; and  
Chapter 7 Test pp. 490-491  
#1-24. (Must complete and submit before testing.) | Oct 16  | • Review/Collect Assignment  
• Review for Ch 7 |
| Oct 21 | In Class:  
|        | • Collect Assignment |
| Oct 23 | In Class:  
|        | • Review Ch 7 Test results  
|        | • 8.1, 8.2  
|        | Assignment:  
|        | 8.1  pp. 500-504  #9, 13, 17, 21, 25, 27, 45-54, 63, 71, 85, 89, 93, 95, 97, 99, 109, 111; and  
|        | 8.2  pp. 510-512  #13, 17, 25, 29, 41, 45, 51, 55, 63, 65, 71, 73, 81, 91, 93, 103, 107. |
| Oct 28 | In Class:  
|        | • Review/Collect Assignment  
|        | • 8.3, 8.4  
|        | Assignment:  
|        | 8.3  pp. 515-516  #1, 3, 7, 15, 19, 23, 29, 33, 41, 47, 49, 51, 55, 59, 69; and  
|        | 8.4  pp. 521-522  #3, 5, 10, 30, 31, 47, 55, 61, 65, 71, 81, 83. |
| Oct 30 | In Class:  
|        | • Review/Collect Assignment  
|        | • 8.5, 8.6  
|        | Assignment:  
|        | 8.5  pp. 527-529  #5, 11, 15, 17, 23, 27, 31, 39, 45, 53, 61, 67, 71, 77, 81; and  
|        | 8.6  pp. 536-539  #5, 13, 15, 19, 23, 33, 39, 43, 45, 53, 57. |
| Nov  4 | Holiday  
|        | Election Day |
| Nov  6 | In Class:  
|        | • Review/Collect Assignment  
|        | • 8.7  
|        | Assignment:  
|        | 8.7  p. 543  #5, 11, 21, 25, 29, 31, 37, 41, 47, 53, 57; and  
|        | Chapter 8 Test  pp. 549-550  #1-15(a), 17-30. (Must complete and submit before testing.) |
| Nov 11 | Holiday  
|        | Veterans’ Day |
| Nov 13 | In Class:  
|        | • Review/Collect Assignment  
|        | • Review for Chapter 8 |
| Nov 18 | In Class:  
|        | • Collect Assignment  
| Nov 20 | In Class:  
|        | • Review Ch 8 Test results  
|        | • 9.1, 9.3  
|        | Assignment:  
|        | 9.1  pp. 557558  #11, 19, 27, 37, 43, 49, 52; and  
|        | 9.3  p. 472  #15, 19, 31, 45, 51. |
| Nov 25 | In Class:  
|        | • Review/Collect Assignment  
|        | • 9.5  
|        | Assignment:  
|        | 9.5  p. 585  #1, 7, 9. |
| Nov 27 | Thanksgiving Recess |
| Dec 2  | In Class:  
|        | • Review/Collect Assignment  
|        | • Review of Lines  
|        | Assignment:  
|        | 3.2  pp. 195-199  #13, 16, 19, 20, 25, 28, 34, 36, 37, 51, 54;  
|        | 3.3  pp. 206-209  #2-7, 17, 20, 33, 35, 42-47, 54-55, 57, 63; and  
|        | 3.4  pp. 218-221  #4-16. |
| Dec 4  | In Class:  
|        | • Review/Collect Assignment  
|        | • Review for Ch 9 and Ch 3  
|        | Assignment:  
|        | Chapter 9 Test  pp. 593-594  #3, 7, 10-13, 15, 21, 22; and  
|        | Chapter 3 Test  pp. 244-245  #4-16.  
|        | (Must complete and submit before testing.) |
| Dec 9  | In Class:  
|        | • Collect Assignment  
|        | Chapter 9/3 Test  
|        | Assignment:  
|        | Final Exam Review Sheet |
| Dec 11 | In Class:  
|        | • Review Ch 9/3  Test results  
|        | • Review for Final Exam |
| Dec 16 | Final Exam  
|        | 10:00 am – 12:00 pm |
| Dec 18 | |