Math 25 – Elementary Algebra II

3 Credits (CRN: 63426) TR 5:30 – 6:45 pm

**INSTRUCTOR:** David W.K.W.L. DONLIN, Lecturer, Mathematics

**OFFICE:** Hale Mana'opono 102

**OFFICE HOURS:** TR 5:00 - 5:30 pm, or by appointment

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**EFFECTIVE DATE:** Spring 2015

#### 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.

#### 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, <a href="lemke@hawaii.edu">lemke@hawaii.edu</a>, or you may stop by Hale 'Akoakoa 213 for more information or visit <a href="http://windward.hawaii.edu/Disabilities/">http://windward.hawaii.edu/Disabilities/</a>.

## **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 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 <u>student's responsibility</u> 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, and tests as follows:

1. **Homework**. Homework sets will be assigned after every class meeting. Homework assignments are worth up to 3 points and are graded on completeness, neatness and accuracy.

Homework assigned during any given week will be due at the first class meeting on the following week; typically this will be on a Tuesday. Late homework may be submitted, but will receive one less point per day late.

- 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 chapter test. Without this minimum requirement, a passing grade for the course is not possible.

<u>Note</u>: A completed Chapter Test Review Assignment is the best way to prepare for the test at the end of each chapter. The assigned Chapter Test Review Assignment must be completed and turned in to the instructor in order to sit for the chapter test. The completed Chapter Test Review Assignment is your "ticket" to take the Chapter Test! If the Chapter Test Review Assignment is not completed or not turned in, a score of 0 will be recorded for the Chapter Test. In this case, the student will have only the retest opportunity to earn a passing grade for this Chapter Test.

**Retests.** After each Chapter Test, a Retest Deadline will be given. One Retest is allowed without penalty for each module 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, and Retests are taken in the WCC Testing Center in the Library.

# <u>To take a retest, all of the following must be met:</u>

- a) All problems from the Chapter Test at the end of the chapter must be completed and turned in to the instructor.
- b) The <u>student must meet with the instructor</u> 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 1 hour, 50 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 70% 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.
- 6. **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
В	80% - 89% of the total possible points
C	70% - 79% of the total possible points
Cr*	70% - 100% of the total possible points
NC*	Less than 70% of the total possible points
D	60% - 69% of the total possible points
F	Less than 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.

Note: The N grade is given at the discretion of the instructor and only when the criteria for the N grade is met by the student. Consult the WCC Catalog for the criteria of the N grade.

#### LEARNING RESOURCES

**Required Text**: <u>Beginning Algebra 11<sup>th</sup> Edition</u>, by Lial, Hornsby and McGinnis. The Student Solution Manual is optional.

## **Supplemental Student Resources:**

- Math Lab: La`akea (Library Learning Commons) Room 222 (Hours of Operation TBA)| <a href="http://windward.hawaii.edu/Math\_Lab/">http://windward.hawaii.edu/Math\_Lab/</a>
- Brainfuse Online Tutoring: <a href="http://windward.hawaii.edu/brainfuse/">http://windward.hawaii.edu/brainfuse/</a>
- OLA (UH Online Tutoring): http://manoa.hawaii.edu/ola/
- Testing Center: La`akea (Library Learning Commons) Room 228 Phone number: 235-7498
  - http://windward.hawaii.edu/Testing\_Center/index.php
- Kahn Academy Videos: http://www.khanacademy.org

## **ADDITIONAL INFORMATION**

**Grading**. To receive full credit for problems done on exams or graded homework, you must show sufficient work in a clear and organized manner. Your work must be neat and organized. "Messy" and/or disorganized work will not receive full credit.

**Absences**. It is your responsibility to attend class. If you are absent, you are responsible for any important announcements or assignments given during the class you missed. It is your responsibility to meet with your instructor to review any missed lecture material. You may drop

in during posted office hours or make an appointment to meet one-on-one. Please do not send email requests for missed lecture material.

**Disruptive Behavior**. Please respect your fellow students and act accordingly. If a student takes part in disruptive behavior, the instructor reserves the right to exclude the student immediately from the class meeting.

# **TENTATIVE SCHEDULE**

**DONLIN - Spring 2015**; TR 5:30 - 6:45 PM (CRN 63426)

Academic Calendar: http://windward.hawaii.edu/academics/Calendar/

Date	Class	Assignment
1/13	Syllabus, Rules of Exponents	- p. 311 #1-39 odds, 40 (write out the answers, <b>don't</b> just write down the matching letters) - pp. 316-317 #13, 19, 25, 33, 47, 59.
1/15	5.4, 5.5	<b>5.4</b> – pp. 325-323 #1-8, 39, 43, 49, 59, 69, 75, 77, 87 <b>5.5</b> – pp. 333-334 #3, 7, 9, 11, 13, 15, 21, 23, 27, 37, 41, 49, 55, 63, 65, 71, 77
1/20	5.6, 5.7	<b>5.6</b> – p. 338 #3, 5, 23, 27, 31, 35, 37, 39, 43, 45 <b>5.7</b> – pp. 346-348 #1-7 all, 23, 43, 49, 61, 71, 73
1/22	Chapter 5 Review	<b>Chapter 5 Test</b> , pp. 355-356 #1-8 all, 10, 11, 13-25 all
1/27	Chapter 5 Test	
1/29	6.1	<b>6.1</b> – pp. 365-367 #7, 9, 11, 35, 47, 55, 57, 59, 67, 69, 71, 79, 85
2/3	6.2, 6.3	<b>6.2</b> – pp. 371-373 #25-43 odds, 45, 51, 55, 59 <b>6.3</b> – pp. 378-380 #23-41 odds, 43, 47, 49, 53, 55, 57
2/5	6.4, 6.5	<b>6.4</b> – pp. 387-389 #7-13 odds, 17, 21, 27, 43, 51, 58, 65, 69, 83, 85 <b>6.5</b> – pp. 397-399 #17, 19, 21, 25, 30, 35, 39, 41, 45, 55, 63
2/10	6.6	<b>6.6</b> – pp. 405-410 #7, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 35
2/12	Chapter 6 Review	<b>Chapter 6 Test</b> , pp. 416 #1-14, 17-27
2/17	Chapter 6 Test	
2/19	7.1, 7.2	<b>7.1</b> – pp. 426-428 #3-19 odds, 23, 27, 31, 37, 41, 43, 49, 51, 56, 61, 65, 67, 85 <b>7.2</b> – pp. 433-434 #5, 17, 23, 29, 31, 35, 41, 51, 57
2/24	7.3, 7.4	<b>7.3</b> – pp. 438-440 #7, 11, 17, 23, 31, 39, 43, 47, 51, 53, 55, 63, 67 <b>7.4</b> – pp. 445-447 #9, 15, 21, 31, 37, 43, 47, 51, 53, 57, 63, 67
2/26	7.5, 7.6	<b>7.5</b> – pp. 453-455 #9-19 odds, 23, 29-35 odds <b>7.6</b> – pp. 462-464 #17, 21, 29, 33, 41, 43, 53, 57, 59, 67, 73, 79, 83, 85, 91

3/3	7.7	<b>7.7</b> – pp. 471-475 #3, 7, 9, 19, 21, 25, 27, 31, 33, 35, 37
3/5	Chapter 7 Review	<b>Chapter 7 Test</b> , pp. 490-491 #1-24
3/10	Chapter 7 Test	Graded Homework Assignment: Ch. 7.2, p. 433 #36; Ch.7.4, p. 446 #48; Ch. 7.5, p. 454 #16; Ch. 7.6, p. 464 #72
3/12	8.1, 8.2	<b>8.1</b> – pp. 500-504 #7, 9, 17, 21, 25, 27, 85, 89, 95, 97, 99, 109, 111 <b>8.2</b> – pp. 510-512 #13, 17, 25, 29, 41, 45, 51, 63, 65, 71, 79, 8, 91, 93, 103, 107
3/17	8.3, 8.4	<b>8.3</b> – pp. 515-516 #1, 3, 7, 15, 19, 23, 29, 33, 41, 47, 49, 51, 55, 59, 67, 69, 71, 75 <b>8.4</b> – pp. 521-522 #3, 5, 10, 30, 31, 47, 55, 61, 65, 71, 81, 83
3/19	8.5, 8.6	<b>8.5</b> – pp. 527-529 #5, 11, 15, 17, 23, 27, 31, 39, 45, 53, 61, 67, 71, 77, 81 <b>8.6</b> – pp. 536-539 #5, 13, 15, 19, 23, 33, 39, 43, 45, 53, 57
3/24	Spring Break	
3/26	Spring Break	
3/31	8.7	<b>8.7</b> – pp. 543 #5, 11, 21, 25, 29, 31, 37, 41, 47, 53, 57
4/2	Chapter 8 Review	<b>Chapter 8 Test</b> , pp. 549-550 #1-15 all, 17-30
4/7	Chapter 8 Test	
4/9	9.1, 9.3	<b>9.1</b> – pp. 557-558 #11, 19, 27, 37, 43, 49, 51 <b>9.3</b> – pp. 572 #15, 19, 31, 37, 43-51 odds
4/14	9.5	<b>9.5</b> – pp. 585 #1, 7, 9, 11
4/16	Chapter 9 Review	<b>Chapter 9 Test</b> , pp. 593-594 #2, 3, 7, 8, 10-13 all, 15, 21, 22, 23
4/21	3.2, 3.3, 3.4	3.2 - pp. 195-199 #13, 15, 19, 21, 25, 27, 33-39 odds, 47-53 odds 3.3 - pp. 206-209 #1-7 all, 15-20 all, 29, 31, 33, 35, 41-53 odds, 57, 59, 63 3.4 - pp. 218-221 #9-25 odds, 29-35 odds, 53, 57, 59, 61, 65-71 odds {part (a), slope-intercept form, only}
4/23	Chapter 3 Review	<b>Chapter 3 Test</b> , pp. 244-245 #4-16 all
4/28	Chapter 9/3 Test	
4/30	Final Exam Review	

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5/5	Final Exam Review	
5/14	Final Exam	5:30 – 7:30 pm