

MATH 103 College Algebra Essentials

INSTRUCTOR: Robert Garry

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OFFICE: Mana'opono 110a

OFFICE HOURS: Tuesday and Thursday 3:00 – 5:30 or by Appointment

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EFFECTIVE DATE: Spring 2018

CRN 62174 Days TR Time 5:30 – 7:20 Room Manoa 115

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.

Course Description

Linear equations, inequalities, systems of equations, polynomials, functions, fractional expressions and equations, exponents, powers, roots, quadratic equations and functions; rational, exponential and logarithmic functions. (4 hours lecture).

PREREQUISITES: Grade of "C" or better in MATH 25 or MATH 29 or equivalent, or satisfactory placement test score, or consent of instructor.

Foundational Hallmarks

Math 103 fulfills 4 credits of the General Education requirements (Foundations: Symbolic) for both the A.A. degree at WCC and a Bachelor's degree at UH Manoa. Consequently, it meets the hallmarks of the symbolic reasoning requirement.

1. Students will be exposed to the beauty, power, clarity and precision of formal systems.
2. Instructors will help students understand the concept of proof as a chain of inferences.
3. Instructors will teach students how to apply formal rules or algorithms.
4. Students will be required to use appropriate symbolic techniques in the context of problem solving, and in the presentation and critical evaluation of evidence.
5. The course will include computational and quantitative skills development.
6. Instructors will build a bridge from theory to practice and show students how apply the theory to solve practical problems.

Student Learning Outcomes

1. Demonstrate proficiency in writing math expressions into different forms.
2. Employ algebraic techniques to find the solutions to equations and/or inequalities, using complex numbers where appropriate.
3. Use algebraic techniques to analyze and solve applied problems.
4. Interpret equations geometrically and use geometrical information to obtain the equation of lines and circles.
5. Utilize introductory function concepts and draw the graphs of selected functions.
6. Utilize the definition of a logarithm and the properties of logarithms to simplify logarithmic expressions or to solve logarithmic and exponential equations.
7. Demonstrate proficiency in solving systems of linear and second degree equations and inequalities.
8. Utilize precise mathematical language and symbols to effectively communicate mathematics in written and/or oral form.

Note: All SLO assessments are embedded in class activities, homework, quizzes, or Exams.

Required Materials

Text: College Algebra Essentials Julie Miller
Calculator (optional): TI-83 or TI-84 (any model)

Course Content

- Review of Prerequisites
- Ch. 1 Equations and Inequalities
- Ch. 2 Functions and Graphs
- Ch. 3 Polynomial and Rational Functions
- Ch. 4 Exponential and Logarithmic Functions
- Ch. 5 Systems of Equations and Inequalities

Assessment

- Homework and quizzes 40%
- Midterms 40%
- Final Exam 20% Thursday May 10th at 5:30

Letter Grade Definition

A 90% - 100% of the cumulative points possible

B 80% - 89% of the cumulative points possible

C 70% - 79% of the cumulative points possible
D 60% - 69% of the cumulative points possible
F Less than 60% of the cumulative points
CR/NC CR requires 70% or better of the cumulative points
W Official Withdrawl
I See: College Policies.
N grade: not given

Learning Resources:

- Math Lab: La'akea (Library Learning Commons) Room 220
http://windward.hawaii.edu/About_WCC/Math_Lab/index.php
- Testing Center: La'akea (Library Learning Commons) Room 228
Phone: 235-7498
http://windward.hawaii.edu/Testing_Center/index.php
- Brainfuse Online Tutors: <http://windward.hawaii.edu/Brainfuse/>
- OLA (UH online tutoring program): <http://manoa.hawaii.edu/ola/>
- TRiO: <http://windward.hawaii.edu/TRIO/index.php>
- WolframAlpha: <http://www.wolframalpha.com>
- Kahn Academy Videos: <http://www.khanacademy.org>

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

*'Akoakoa 213 for more information.
or visit <http://windward.hawaii.edu/Disabilities>*