



UNIVERSITY of HAWAII®
WINDWARD
COMMUNITY COLLEGE

Math 103 College Algebra

4 Credits (CRN 62123 or 62075)

Asynchronous

INSTRUCTOR: Robert Garry

OFFICE: Online Zoom

OFFICE HOURS: MWF 10 am

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EFFECTIVE DATE: Summer 2022

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 the Ko'olau region of O'ahu and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.

CATALOG 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.

Pre-Requisite(s): "C" or better in MATH 25, 26, 29, 82 or equivalent, co-requisite enrollment in MATH 88, satisfactory math placement test score, or consent of instructor.

WCC: FS/FQ

Activities Required at Scheduled Times Other than Class Times

MyLab Math is an online learning resource. Every week you will be assigned online assignments through MyLab Math. Most exercises include learning aids, such as guided solutions, sample problems, and extra help as you're working through them, and they offer helpful feedback when you enter incorrect answers. A variety of multimedia resources are also available in the homework exercises. You can link to the ebook, video clips, and animations to improve your understanding of key concepts. Videos are captioned in English, and several courses are also captioned in Spanish.

This course will be participating in the Bookstore's Interactive Digital Access Program (IDAP). Through this program, you will access your course material digitally, and it will be available to you by the first day of class. Use **garry72802** for our class.

A charge for the digital course material through IDAP will be added to your MyUH account.

You have the option to opt-out of receiving your course material through IDAP. By opting-out, you will lose access to the course material and the charge will be refunded on your MyUH

account. If you do not opt-out, the charge will stay on your MyUH account. Any unpaid charges on your MyUH account will turn into a hold. Holds on your account will prevent you from accessing various services within the University.

You may opt-out by visiting your unique Inclusive Access Student Portal, which can be found in your IDAP welcome email (Subject Line: “IMPORTANT: You have enrolled in an IDAP Course”).

For more information regarding IDAP, please contact your campus bookstore.

GETTING STARTED WITH THIS ONLINE COURSE

1. Enter your Lualima course and locate the VitalSource app. The name and location of the app may vary based on the set up of the course. Select **VitalSource for UH Windward CC IDAP**.
2. Under My Courses Home, your Pearson materials tied to this course will appear.
 - If you are currently *Opted In* for course material access, the “I am opted-in to this resource” checkbox is selected. To access your course materials, select the **Launch Courseware** button.
3. Select the **Open MyLab & Mastering** button to launch your Pearson course.
4. If prompted, select **I Accept** to agree to Pearson’s End User License Agreement.
5. Link your Lualima user account to either an existing Pearson account by entering your Pearson Username and Password or to a new user Pearson account by selecting the Create button.
6. After linking your accounts, select **Go to My Courses** select **garry72802**
7. More detailed instructions can be found in the Resources of Lualima

STUDENT LEARNING OUTCOMES

As a result of taking this course, students can expect to attain the following outcomes:

1. Graph or interpret algebraic relations that are relevant to the topics in this course
2. Employ algebraic techniques to find the solutions to equations or inequalities, or systems of equations or inequalities appropriate to the level of this course
3. Use algebraic techniques to analyze and solve applied problems
4. Utilize precise mathematical language and symbols to effectively communicate mathematics in written and/or oral form

FOUNDATION Quantitative Reasoning HALLMARKS

Math 103 also fulfills 3 credits of the General Education requirements (Foundations Quantitative) for both the AA degree at WCC and a Bachelor’s degree at UH Manoa. Consequently, it meets the hallmarks of the quantitative reasoning requirement.

The course will:

1. Provide students with theoretical justifications for, and limitations of, mathematical or statistical methods, and the formulas, tools, or approaches used in the course.
2. Include application of abstract or theoretical ideas and information to the solution of practical quantitative reasoning problems arising in pure and applied research in specific disciplines, professional settings, and/or daily and civic life.

3. Provide opportunities for practice and feedback that are designed to help students evaluate and improve quantitative reasoning skills by including a course component at least once per week with a maximum 30:1 student-to-teaching ratio.
4. Be designed so that students will be able to
 - a. Identify and convert relevant quantitative information into various forms such as equations, graphs, diagrams, tables, and/or words;
 - b. Select appropriate techniques or formulas, and articulate and evaluate assumptions of the selected approaches;
 - c. Apply mathematical tools and perform calculations (including correct manipulation of formulas);
 - d. Make judgments, create logical arguments, and/or draw appropriate conclusions based on the quantitative analysis of data, the assumptions made, the limitations of the analysis, and/or the reasonableness of results;
 - e. Effectively communicate those results in a variety of formats

COURSE TASKS

This is an asynchronous course. Students independently watch the lecture videos found on our Lualima page in order to complete homework sets and quizzes. Discussion forums are a part of this course. 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 completing and turning in all assignments, by taking unit exams, and by taking a comprehensive final exam. Unit exams and the final exam are open book and notes.

Unless permission is granted by the instructor, assignments and tests must be completed and submitted to the instructor at the specified date and time. **Due dates for section assignments and quizzes are found on your MyLab Math Website.** The only exception is the last week where the final exam must be completed by Monday, August 1st.

Points will be assigned to each graded assignment, class activity, and tests as follows:

MyLab Math. Homework sets will be graded on a 0 - 15 point scale. Assignments are to be completed by the designated date. Total 550 pts

Discussions. Every week there will be a discussion through Lualima. Each discussion will be graded on a 0 - 10-point scale. You will need to reply to the main discussion topic. Total 50 pts

Unit Exams. There are three unit exams. A unit exam will be approximately 100 minutes in length and will be scored on a 100 point scale. Each exam must be completed by the assigned due date. Total 300 pts

Showing and Submitting Work for Exams. On paper, in a notebook, or digitally, please show all your work in an organized, orderly fashion and number each question. After you submit an exam

through MyLab Math, you must immediately upload your work as a single pdf to Laulima's Drop Box. You're welcome to use a scanner. There are also many apps that can create pdfs using your phone. This needs to be done within 10 minutes of submitting your test online. Doing so allows me to give you partial credit for problems. Your work is also what earns you credit. If you don't show meaningful work, points may be deducted even if you get the answer correct.

Retake Retake opportunity for exams will be possible. Check with the instructor about retake requirements.

Final Exam. The final exam will cover the concepts and skills in the entire course. The final exam is double the length in time of a unit exam and will be scored on a 100-point scale. There is no retest or make-up. Total 100 pts

Course grade. 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

Percentage Breakdown

MyLab Math HW	55%
Discussions	5%
Unit Exams	30%
Final Exam	10%

Total: 100%

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.

COURSE CONTENT

Concepts or Topics

A Review of Basic Algebra including rational exponents, radicals, rational expressions, and factoring (*FS & FQ*)

Equations and Inequalities including solving quadratic equations, complex numbers, linear and compound inequalities, absolute value equations and inequalities, and applications (*FS & FQ*)

The Rectangular Coordinate System and Graphs of Equations including circles, linear functions, and algebra of functions (*FS & FQ*)

Polynomial and rational functions (*FS & FQ*)

Exponential and Logarithmic Functions (*FS & FQ*)

Linear Systems (*FS & FQ*)

Skills or Competencies

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.

LEARNING RESOURCES

Required Text: Algebra for College Students, 9th edition, by Lial, Hornsby, & McGinnis

Calculators: Desmos Scientific and Graphing Calculators

Online Instructor Tutoring: Zoom meeting TBA

TRiO: Hale Kāko‘o 116

The Math Lab: La‘akea 220 <https://windward.hawaii.edu/services-for-students/tutoring/ka-piko/>

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

Tutor.com: 24/7 online tutoring that connects students one-to-one with a subject expert tutor

ADDITIONAL INFORMATION

1. **Grading on Homework or Exams.** 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. Partial credit may be awarded.
2. **Homework.** For each chapter, as you read through each section and watch each lecture video, 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. MyLab Math HW may be repeated to improve your score.
3. **Laulima.** The syllabus, course calendar, course videos, announcements and homework schedule are all viewable through Laulima. Check Laulima regularly to stay up to date.
4. **Communication.** It is your responsibility to stay in communication with the instructor. If you are unable to complete assignments for any reason, please inform your instructor so it may be determined if extensions are needed. 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 ACCOMMODATIONS

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 Accessibility Counselor to discuss reasonable accommodations that will help you succeed in this class. Roy Inouye can be reached at (808) 235-7448, royinouy@hawaii.edu, or you may stop by Hale Kāko‘o 106 for more information.

STUDENT BASIC NEEDS

Basic needs include food and housing, childcare, mental health, financial resources and transportation, among others. Student basic needs security is critical for ensuring strong academic performance, persistence and graduation and overall student well-being. If you or someone you know are experiencing basic needs insecurity, please see the following resources: [UH System Basic Needs](#).

SEX DISCRIMINATION AND GENDER-BASED VIOLENCE RESOURCES (TITLE IX)

Windward Community College is committed to providing a learning, working, and living environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking.

If you or someone you know is experiencing any of these, WCC has staff and resources to support and assist you. To report an incident of sex discrimination or gender-based violence, as well as receive information and support, please contact one of the following:

Kaahu Alo, Student Life Counselor & Designated Confidential* Advocate for Students
 Phone: (808) 235-7354
 Email: kaahualo@hawaii.edu
 Office: Hale ‘Ākoakoa 232
**confidentiality is limited*

Desrae Kahale, Mental Health Counselor & Confidential Resource
 Phone: (808) 235-7393
 Email: dkahale3@hawaii.edu
 Office: Hale Kāko‘o 101

Karla K. Silva-Park, Title IX Coordinator
 Phone: (808) 235-7468
 Email: karlas@hawaii.edu
 Office: Hale ‘Ākoakoa 220

As a member of the University faculty, I am required to immediately report any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title IX Coordinator and I cannot guarantee confidentiality, you will still have options about how your case will be handled. My goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need.

For more information regarding sex discrimination and gender-based violence, the University's Title IX resources and the University's Policy, Interim EP 1.204, go to manoa.hawaii.edu/titleix/

ACADEMIC INTEGRITY

Work submitted by a student must be the student's own work.

In this class, students who commit academic dishonesty, cheating or plagiarism will have the following consequence(s):

Students will receive a failing grade for plagiarized assignments.

All cases of academic dishonesty are referred to the Vice Chancellor for Student Affairs.

ALTERNATE CONTACT INFORMATION

If you are unable to contact the instructor, have questions that your instructor cannot answer, or for any other issues, please contact the Academic Affairs Office:

- Location: Alaka'i 121
- Phone: (808) 235-7422

MATH 103 TENTATIVE SUMMER SCHEDULE

The following schedule is subject to change. Should changes occur, you will be notified via email.

**** Please note the final exam for this course is August 1st**

UNIT 1

Week 1 and 2 (Jun 6 - 17)

- R.2 - Algebra Fundamentals
- R.4 - Exponents, Roots and Order of Operations
- 1.1 - Linear Equations
- 1.5 - Linear Inequalities
- 1.6 - Set Operations and Compound Inequalities
- 1.7 - Absolute Value Equations and Inequalities

- 2.1 - Linear Equations in Two Variables
- 2.2 - The Slope of a Line
- 2.3 - Writing Equations of Lines
- 2.4 - Linear Inequalities in Two Variables
- 2.5 - Introduction to Relations and Functions
- 2.6 - Function Notation and Linear Equations

- 3.1 - Systems of Linear Equations (2 variables)
- 3.2 - Systems of Linear Equations (3 variables)
- 3.3 - Applications of Systems of Linear Equations

Exam 1 Review

- **Exam 1 (Chapters 1, 2 and 3)**

UNIT 2

Week 3 and 4 (Jun 20 - jul 1)

- 4.1 - Integer Exponents
- 4.2 - Scientific Notation
- 4.3 - Adding and Subtracting Polynomials
- 4.4 - Polynomial Functions, Graphs and Composition
- 4.5 - Multiplying Polynomials
- 4.6 - Dividing Polynomials

- 5.1 - Greatest Common Factors and Factoring by Grouping
- 5.2 - Factoring Trinomials
- 5.3 - Special Factoring
- 5.5 - Solving Quadratic Equations Using the Zero-Product Property

- 6.1 - Rational Expressions
- 6.2 - Adding and Subtracting Rational Expressions
- 6.3 - Complex Fractions
- 6.4 - Solving Rational Equations and Graphs
- 6.5 - Applications of Rational Expressions
- 6.6 – Variation

- Exam 2 Review

- **Exam 2 (Chapters 4, 5, and 6)**

UNIT 3

Week 5 and 6 (jul 5 - 15)

- 7.1 - Radical Expressions and Graphs
- 7.2 - Rational Exponents
- 7.3 - Simplifying Radicals, the Distance Formula, and Circles
- 7.4 - Adding and Subtracting Radical Expressions
- 7.5 - Multiplying and Dividing Radical Expressions
- 7.6 - Solving Equations with Radicals
- 7.7 - Complex Numbers

- 8.1 - Solving Quadratic Equations using Square Root Property and Completing the Square
- 8.2 - Quadratic Formula
- 8.3 - Equations that Lead to Quadratic Methods
- 8.4 - Formulas and Further Applications
- 8.5 - Polynomial and Rational Inequalities

- Exam 3 Review

- **Exam 3 (Chapters 7 and 8)**

UNIT 4

Week 7 and 8 (jul 18 - 29)

- 9.1 - Review of Function Operations and Composition
- 9.3 - More About Parabolas and their Applications
- 10.2 - Exponential Functions
- 10.3 - Logarithmic Functions
- 10.4 - Properties of Logarithms
- 10.5 - Common and Natural Logarithms
- 10.6 - Exponential and Logarithmic Equations; Further Applications

- 11.4 - Graphs and Applications of Rational Functions
- 12.1 - Circles Revisited
- 12.3 - Nonlinear Systems of Equations
- 12.4 - Second Degree Inequalities and Systems of Inequalities

FINAL EXAM

- **Final Exam August 1st**

Week 8- All the Assignments must be completed by July 31)

