Math 103 - College Algebra
CRN 60443
Fall, 2021

CLASS INFORMATION
4 credits
In-person class meetings: M, W, F 11:30 - 1:20
Class Location: Mana’opono 113
Join class virtually:
https://hawaii.zoom.us/j/9528242751

INSTRUCTOR INFORMATION
Instructor: Amanda Zerr
Office: Mana’opono 112
Office Hours: M, F 10-11 & by appointment
E-mail: azerr@hawaii.edu
Phone: 236 - 9279

SYLLABUS CHANGE POLICY:
Information contained in the course syllabus may be subject to change with reasonable advance notice, as
deemed appropriate by the instructor. Updates to the syllabus will be communicated via email and posted
to Laulima.

ABOUT THE INSTRUCTOR

Welcome! My name is Amanda Zerr (Master’s of Arts in Teaching Mathematics). I am
passionate about math and teaching. I also love hiking, the outdoors, reading, and
being with loved ones. My family inspires and motivates me.

I have over 10 years of experience teaching college, high school & middle school aged
students in Oregon, California and Hawaii. I have also held a variety of other jobs such as
corporate trainer, high-ropes course guide, and outdoor science teacher. What I know
for sure is that if you are open to learning, willing to practice, and use good strategies,
you can succeed in math.

ABOUT THIS COURSE
Math 103 investigates 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)

Pre-Requisites: C or better in MATH 25, 26, 29, 82 or equivalent, satisfactory math placement test
score, or consent of instructor.
STUDENT LEARNING OUTCOMES (SLO)

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

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

FOUNDATION HALLMARKS

Math 103 fulfills 4 credits of the General Education requirements Foundations: Quantitative (FQ) for both an A.A. degree at WCC and a Bachelor’s degree at UH Manoa. The primary goal of FQ courses is to develop mathematical reasoning skills at the college level. Students apply mathematical concepts to the interpretation and analysis of quantifiable information in order to solve a wide range of problems arising in pure and applied research in specific disciplines, professional settings, and/or daily life. Consequently, this course meets the following hallmarks of the Quantitative Reasoning requirement:

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-teacher 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; and effectively communicate those results in a variety of appropriate formats.

COURSE FORMAT

This is a 16-week hybrid class. We will meet in-person M, W, F. (F class meeting is optional). Here’s how it will work:

- Prior to class, skim through the upcoming eBook section and try the example problems.
- Attend in-person class which will be a combination of lecture and group work.
- If needed, watch instructional videos in the MyOpenMath lesson.
- Do online homework and quizzes using MyOpenMath.
- Complete exams and the comprehensive final exam in-person during class.
- Stay organized, analyze errors and ask specific questions to clarify misunderstandings.

Specific due dates are listed in MyOpenMath. You should check your hawaii.edu email account regularly for course notifications and email your instructor as needed for additional information.
LEARNING MATERIALS

Required Materials
1. Students must have access to a computer, the Internet, and use their UH hawaii.edu e-mail account to participate in this class. Grades will be posted to Laulima.
2. MyOpenMath is our free online learning program for homework and quizzes. To access the program go to myopenmath.com. For instructions on how to enroll in MyOpenMath click here.
   Course ID: 113262
   Enrollment key: math103
   Course name: Math 103 - College Algebra
3. The free eBook OpenStax College Algebra, by Jay Abramson, is included with the online My Open Math program. If you prefer a hard-cover book, you can purchase one here.
4. Scientific calculators are allowed for homework, quizzes, and tests.
5. Smartphone or scanner to upload a pdf or picture of your written work.

Homework Notebook
I recommend that you keep an organized homework notebook in which you complete all your online assignments by hand, the same way you would complete paper assignments. You should write each problem in your notebook and neatly solve it, and then enter your answer online. This will help you prepare for your quizzes and exams which require that you submit written work.

Time
This is a college-level math class. If you want to succeed in this class, you will need to dedicate at least 8 hours per week studying and completing work.

The Learning Process & Growth Mindset
When learning new concepts, your brain is creating new synapse connections. Frustration and struggle are signs that you are in the middle of the learning process. Don’t give up! Continued practice and good strategies such as asking for help lead to stronger synapse connections that allow your brain to store the new concepts in long-term memory. You build your intelligence as you practice and learn new concepts. Click here to learn more about research into the growth mindset.

Vulnerability
Picture yourself as a baby learning to walk. Think of how many times you fell and had to get back up and try again. Being vulnerable is part of learning new things because we are opening ourselves to struggle and failure. Emotions such as shame, anxiety, fear, and uncertainty are very common when learning something new. It is understandable to react with resistance (anger, procrastination, numbing, blaming) but that shuts down learning. Instead, try to get curious about what you are feeling and the story you are telling yourself. (ie “I didn’t do well on that quiz. I don’t belong here. They’re going to find out I’m not smart enough. Who do I think I am?”) Then fact-check yourself and revise your story (ie “I thought the way I studied was going to help, but there were still concepts I didn’t really understand.”). Focus on your goals and make a realistic plan (“I need to know this to pass the class, get my degree and have the life I want. Next time I’ll get help from the Math Lab.”) Click here to learn more about research into the connection between vulnerability and learning.

Additional Learning Resources
- Ka Piko Math Lab - Free online drop-in tutoring with WCC students who have been successful in Math 140 and above.
- TRIQ Student Support Services - Free individual and/or small group tutoring, financial assistance, computer lab & printing, early class registration, income tax services, food, and so much more!
- Tutor.com- Free online, on-demand tutoring. Sign in to myUH for free access to the program.
- Testing Center- La’akea Room 228. Phone number (808)235-7498
COURSE POLICIES

Safe Space
At WCC we strive to treat each other with respect and I welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, races, sexual orientations, ability, and other visible and nonvisible differences. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class. However, while it might not be intentional, we can all make mistakes. If you feel continuously disrespected even after you have asked the perpetrator to stop please email me and/or file a grievance with the Vice Chancellor of Student Affairs. If you witness a classmate being harassed, please stand up for them and offer support.

Contacting the Instructor
The best way to contact me is via your UH email. I will be available Mon - Fri and will reply to any questions and posts within 24 hours, or within 48 hours on weekends. When contacting me with questions or concerns, please include your full name & MATH 103 in the title of the message. For specific homework questions, please post your questions to the Forum on My Open Math so that everyone benefits from my explanations.

Alternative Contact
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. Email: wccaa@hawaii.edu Phone: 808-235-7422

ASSESSMENT TASKS

High Quality Written Work
The student will demonstrate competency in the objectives by completing assignments, discussions, and special projects as well as taking quizzes, tests, and a comprehensive final exam. Math 103 fulfills 4 credits of the General Education requirements of Foundations Quantitative (FQ). This means that students’ written work on exams and quizzes must clearly and logically explain the mathematical concepts being addressed. Messy, incomplete and/or disorganized work will not receive full credit.

Homework
- Homework will be completed online via the My Open Math program as well as additional activities that must be completed and turned in to the instructor. Most successful students need to do additional problems and study their lecture notes and quizzes in order to succeed.
- You can retry My Open Math problems an unlimited number of times until you get them correct. You have one 20 late passes for this class. Each late pass extends the due date by 72 hours. If circumstances in your life are preventing you from staying caught up with the work and/or succeeding, please contact your instructor as soon as possible.

Quizzes
- In order to give you feedback on your progress learning the material, short quizzes will be given regularly on My Open Math. You will have 2 tries for each question. You can retake the entire quiz once and the highest score will be kept.
- Quiz scores are generally a good indication of the grade you will receive on the unit test. If you don’t do well on a quiz, take action! Get extra help in my Zoom office hours, the math lab, or from one of WCC’s free TRiO tutors.

Tests and Final Exam
Due to COVID-19, exams will be taken online during the test taking period (typically one week) under strict time guidelines with randomized questions. Students must submit a pdf or image of their written work to earn credit. This is an FQ designated course and the written work you show is your answer. There are no re-tests on exams.

Bonus Points
There may be a small number of extra credit assignments offered throughout the term. Extra credit points are used at the end of the term to enable the professor to round a student’s overall grade up by 0.5% if warranted.
Experience Points (XP)
Grades are posted on the Laulima XP tab and are based on the following weighted categories:
- 60% 4 Unit Exams (100 points each, the lowest exam score can be replaced by final exam score)
- 20% Final Exam (100 points)
- 15% Homework (about 35 assignments, points vary per assignment)
- 5% Quizzes (6 quizzes worth 10 points each, lowest score is dropped)

You will receive a letter grade based on the following scale. Grades are rounded up so that 89.5% = A, whereas 89.4% = B.
- A 90%-100%
- B 80%-89%
- C 70%-79%
- D 60%-69%
- F Less than 60%
- W Official Withdrawal (by posted deadline)

INSTITUTIONAL INFORMATION

WCC 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.

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 Disability Specialist Counselor to discuss reasonable accommodations that will help you succeed in this class. Roy Inouye can be reached at 235-7453, royinouy@hawaii.edu, or you may stop by Hale Kāko’o 106 for more information.

Title IX
Windward Community College is committed to the pursuit of equal education. Title IX prohibits discrimination on the basis of sex in education programs and activities that receive federal financial assistance. Specifically, Title IX prohibits sex discrimination; sexual harassment and gender-based harassment, including harassment based on actual or perceived sex, gender, sexual orientation, gender identity, or gender expression; sexual assault; sexual exploitation; domestic violence; dating violence; and stalking. If you or someone you know has experienced sex discrimination or gender-based violence, WCC has resources to support you. To speak to a UH Confidential Advocate call (808) 348-066 or email advocate@hawaii.edu. You can also contact:
- 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 Kāko’o 128

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 manoahawaii.edu/titleix/
Student Conduct & Academic Honesty
Students are required to comply with the UH Student Conduct Code including policies that prohibit Academic Dishonesty. Do not cheat yourself of an opportunity to learn. Doing the work yourself gives you a chance to master new material and further your education. See the WCC Catalog and the WCC Student Conduct Policy for more information.
The following schedule is subject to change. Should changes occur, you will be notified via email. Specific due dates are listed in MyOpenMath.

** Please note that the final exam for this course is Wednesday, Dec 15th**

<table>
<thead>
<tr>
<th>Important Dates</th>
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<tbody>
<tr>
<td>Monday, Aug 23 - First day of instruction, Add/Drop fees begin</td>
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<tr>
<td>Tuesday, Aug 31 – Last day to register. Last day to drop &amp; receive 100% refund.</td>
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<tr>
<td>Tuesday, Sep 14 – Last day to drop &amp; receive 50% refund (No “W” on transcript).</td>
</tr>
<tr>
<td>Monday, Nov 1 – Last day to withdraw from class (with a “W” on transcript).</td>
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### Week 1 (Aug 23 - 30)
- Intro Quiz (Covers how to enter answers in MyOpenMath, retakes are ok)
- 1.1 Simplify Algebraic Expressions with Order of Operations
- 1.2 Exponents & Scientific Notation

### Week 2 (Aug 30 - Sept 6)
- Quiz 1 (covering sections 1.1, 1.2)
- 1.3 Rational Exponents and Operations with Radicals
- 1.4 Polynomials

### Week 3 (Sept 6 - 13)
- **No School Monday Sep 6 for Labor Day**
- Quiz 2 (covering section 1.3, 1.4)
- 1.5 Factoring
- 1.6 Rational Expressions

### Week 4 (Sept 13 - 20)
- **Test 1** (covering CH 1)
- 2.1 Graphing Equations and Circles
- 2.2 Solving Linear and Rational Equations (1 variable)

### Week 5 (Sept 20 - 27)
- 2.3 Solving Linear Applications
- 2.4 Complex Numbers
- 2.5 Solving Quadratic Equations

### Week 6 (Sept 27 - Oct 4)
- Quiz 3 (covering sections 2.1-2.5)
- 2.6 Other Types of Equations (Radical, Absolute Value, Quadratic Form, and Rational Exponents)
- 2.7 Linear Inequalities and Absolute Value Inequalities

### Week 7 (Oct 4 - 11)
- **Test 2** (covering CH 2)
- 3.1 Functions and Difference Quotient
- 3.2 Domain/Range
Week 8 (Oct 11 - 18)
- Quiz 4 (covering sections 3.1 and 3.2)
- 3.3 Rates of Change
- 3.4 Composition of Functions
- 3.6 Absolute Value Functions

Week 9 (Oct 18 - 25)
- Quiz 5 (covering sections 3.3-3.6)
- 4.1 Linear Functions
- 4.2 Applications of Linear Functions

Week 10 (Oct 25 - Nov 1)
- **Test 3** (Covers CH 3 and 4)
- 5.1 Quadratic Functions
- 5.4 Dividing Polynomials

Week 11 (Nov 1 - 8)
- Monday, Nov 1 – Last day to withdraw from class (with a “W” on transcript),
- 5.6 Rational Functions
- 5.8 Modeling Using Variation
- CH 5 Supplement - Solving Polynomial and Rational Inequalities

Week 12 (Nov 8 - 15)
- **No School Thursday Nov. 11th for Veteran’s Day**
- Quiz 6 (covering CH 5)
- 6.1/6.2 Exponential Functions and Graphs
- 6.3/6.4 Logarithmic Functions and Graphs

Week 13 (Nov 15 - 22)
- 6.5 Properties of Logarithms
- 6.6 Exponential and Logarithmic Equations

Week 14 (Nov 22 - 29) - **No School Th/Fri Nov 25 & 26**
- **Test 4** (Covers CH 5 and 6)
- 7.1 Systems of Linear Equations (2-variables)

Week 15 (Nov 29 - Dec 6)
- 7.2 Systems of Linear Equations (3-variables)
- 7.3 Systems of Nonlinear Equations and Inequalities

Week 16 (Dec 6 - Dec 13)
- Review

Wednesday, Dec 15 - **Final Exam**