# MATH 103 - COLLEGE ALGEBRA - 4 credits

**MTRF 8:00 a.m. – 9:50 p.m.**

<table>
<thead>
<tr>
<th>INSTRUCTOR:</th>
<th>Jean Okumura</th>
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<tbody>
<tr>
<td>OFFICE:</td>
<td>Mana'opono 112</td>
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<tr>
<td>OFFICE HOURS:</td>
<td>MTRF 12:30 – 1:00 p.m.</td>
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<td></td>
<td>Other Hours by Appointment</td>
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<tr>
<td>TELEPHONE:</td>
<td>236-9282</td>
</tr>
<tr>
<td>FAX NUMBER:</td>
<td>247-5362 Attention: Jean Okumura</td>
</tr>
<tr>
<td>EMAIL ADDRESS:</td>
<td><a href="mailto:jokumura@hawaii.edu">jokumura@hawaii.edu</a></td>
</tr>
<tr>
<td>EFFECTIVE DATE:</td>
<td>Summer 2009</td>
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## Windward Community College Mission Statement

*Windward Community College is committed to excellence in the liberal arts and career development; we support and challenge individuals to develop skills, fulfill their potential, enrich their lives, and become contributing, culturally aware members of our community.*

## Catalog Description

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

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

**WCC:** FS

## Suggested Basic Skills

Good study skills and habits; Competency with Elementary Algebra

## Learning Resources and Materials

**Required Text:** *College Algebra*, 9th ed. by Gustafson and Frisk, A Custom Edition for the Windward Community College Mathematics Department

**Optional Material:** *Student Solutions Manual for College Algebra*, 9th ed. by Gustafson and Frisk

**THE LEARNING CENTER (TLC):** Manaleo 113 – phone number 235-7498
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.

Foundations Hallmarks

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 not focus solely on computational skills.
6. Instructors will build a bridge from theory to practice and show students how to traverse this bridge.
Math 103 Course Outline

Course Goals

1. To provide the student with mathematical background necessary to pursue advanced work in mathematics and in other areas.

2. To provide the student with fundamental concepts, properties, and applications of college algebra.

3. To provide the student with an introduction to functions.

4. To extend the student’s understanding and ability to apply algebraic concepts beyond the level of elementary algebra.

5. To promote greater student appreciation and awareness of the role of algebra in the environment and culture.

Activities Required at Scheduled Times Other Than Class Times

Homework; possibly quizzes; consultation with instructor.

It is expected that students spend, at the minimum, 12 hours per week outside of class time studying and doing homework and readings for this class.

Email and Laulima Website

Students are responsible for checking their UH email regularly for important announcements. Students are also expected to check the Math 103 Laulima site for important resources for the course.

Cell phones and Pagers

Cell phones or pagers that ring during class time disturb the entire class so please turn cell phones and pagers off or put them on silent mode at the beginning of the class.
Grades for this course are based on the following course tasks:

<table>
<thead>
<tr>
<th>Course Task</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 exams @100 pts</td>
<td>400</td>
<td>64%</td>
</tr>
<tr>
<td>Course Activities</td>
<td>100</td>
<td>16%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>125</td>
<td>20%</td>
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<tr>
<td>Total points</td>
<td>625</td>
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</table>

Course activities may include but are not limited to:
- Quizzes (announced)
- Journal entries (writing assignments)
- Reports or Presentations
- In-Class Problems
- Math Resource Activities
- Graded Homework Problems

Most course activities will be graded homework problems and in-class or other additional problems. Although there are points associated only with graded problems for the course activities portion of the grade, it is expected that students do suggested problems that are problems from the text or on handouts that have answers provided as a way to practice the strategies learned. Not doing suggested problems and/or waiting to work on suggested problems until right before an exam generally results in poor exam results and a lack of success in this course.

Each letter grade for the course will be assigned according to the level of achievement as provided in the table below:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>90% - 100% of the cumulative points possible</td>
</tr>
<tr>
<td>B</td>
<td>80% - 89% of the cumulative points possible</td>
</tr>
<tr>
<td>C</td>
<td>70% - 79% of the cumulative points possible</td>
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<tr>
<td>D</td>
<td>60% - 69% of the cumulative points possible</td>
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<tr>
<td>F</td>
<td>Less than 60% of the cumulative points possible</td>
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<tr>
<td>Cr</td>
<td>70% - 100% of the cumulative points possible</td>
</tr>
<tr>
<td>NC</td>
<td>Less than 70% of the cumulative points possible</td>
</tr>
<tr>
<td>W</td>
<td>Official Withdrawal</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete - given when a student has failed to complete a SMALL part of the course due to circumstances beyond his/her control.</td>
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</table>

Note: Cr/NC grades require written instructor consent. Students must apply for Cr/NC grading option at the Admissions Office by the posted deadline. If a student does not apply for Cr/NC grading option at the Admissions Office by the required deadline and if s/he does not withdraw, a letter grade (A, B, C, D, F) will be assigned for the course.

Note: W grade is given only when the student officially withdraws from the course at the Admissions Office by the posted deadline.
Responsibilities of Students

Success in this course will be enhanced by:

1. A positive, inquiring attitude toward mathematics;
2. Setting aside adequate time for studying, working on problems, and careful cogitation of the material;
3. Reading the text carefully and making use of other learning materials whenever necessary;
4. Seeking assistance from the instructor and the Math Lab whenever necessary;
5. Regularly attending class and, notifying the instructor of an absence and responsibly obtaining and completing assignments by the designated date.

Additional Information

1. ABSENCES:

   It is your responsibility to attend class. If you are absent, borrow a classmate's notes and copy them for the day you were absent. You are responsible for those topics and examples discussed on the day of your absence. Furthermore, you are responsible for any important announcements or homework assignments given during the class you missed. Frequent absences can negatively affect your grade.

2. MAKE-UP POLICY:

   There are no make-up opportunities for any quizzes, graded assignments, or graded in-class activities that you miss due to absences or tardiness. Some extra credit opportunities are available for the course activities portion of your grade.

   If you are unable to attend class on an exam day, discuss your situation with the instructor as soon as possible before the exam day. It may be possible for you to take the exam earlier than the specified day/time. IF YOU UNEXPECTEDLY MUST BE ABSENT ON AN EXAM DAY, NOTIFY THE INSTRUCTOR BY THE END OF THAT EXAM DAY. YOU CAN LEAVE A VOICE MAIL MESSAGE FOR THE INSTRUCTOR (236-9282). BE SURE TO STATE THE REASON FOR THE ABSENCE. If no notification is received by the day of the exam or if the reason is not justified, then you will receive a 0 for that exam and no make-up will be allowed. If notification is received and the reason is justified then a make-up exam will be scheduled. You must take the make-up exam as soon as possible after you return to school. The instructor has the right to request documentation of the student’s absence and determine if the reason for the absence is justified. FOR EACH STUDENT, NOT MORE THAN ONE MAKE-UP EXAM MAY BE TAKEN.
3. There are NO RETESTS for this course.

4. FINAL EXAM: The final exam is cumulative.

5. HOMEWORK:

Read the sections to be covered in a class session prior to that class session. As you read each section, write down terminology or symbols and its definition and properties/rules that are important and that are not already listed in the in-class notes. This will become helpful additional notes. Do the self-check problems. Try to do as much of the recommended homework problems as possible.

After the class lecture/discussion on a section, you complete the recommended homework problems from those sections. Those problems and concepts that you still do not understand or need further clarification should be asked about on the class meeting after the section is discussed in class. Seek further assistance from the instructor if you are still having difficulties. Complete, review, and analyze all of the recommended homework problems to help you learn and get a better understanding of the material. You may need to do more than the recommended problems to become comfortable with the concepts and skills.

After the section(s) are covered in class, graded homework that count towards the course activities (CA) portion of your grade will be given with a due date. This graded homework must be turned in on time and at the beginning of the class, unless otherwise specified. LATE GRADED HOMEWORK WILL NOT RECEIVE ANY POINTS. You may turn in your graded homework before the due date and/or time without losing points. Otherwise, there will be opportunities to earn some earn extra credit points towards your course activities portion of your grade.

Course activities may also include other activities such as announced quizzes, journals (writing assignments), oral presentations, etc. Any item collected for grading purposes for the course activities portion of your grade are due at the BEGINNING OF CLASS unless otherwise specified by the instructor and WILL NOT RECEIVE ANY POINTS IF TURNED IN LATE.

Be sure to review and analyze your graded homework and other course activities after it is returned to you. This will help you to get a better understanding of the material and concepts.

6. CALCULATOR:

No calculator is allowed for quizzes or exams. A calculator may be used for homework as needed.
7. **HELP:**

Your instructor is your primary human resource for help when you are lost or having trouble. Seek help immediately if you are encountering problems even after reading and re-reading the textbook(s) and listening to/thinking about the discussion in class on that section(s). See the instructor during office hours, make an appointment, email or call. Don’t wait too long to get help!! The Math Lab tutor is also available for drop-in assistance on the course material.

If a crisis comes up that interferes with the class, communicate with your instructor in a timely manner. Too many students wait until it is too late to inform their instructor about their crisis and that reduces the options that students may have to complete the course with a grade of C or better.

8. **GRADING ON HOMEWORK, QUIZZES, OR EXAMS:**

To receive full credit for problems done on exams, on quizzes, or for graded homework, you must show sufficient work in a clear and organized manner. You are trying to convince me that you know the material/strategies involved with that problem. However, you must remember that you are showing the work for someone else to read so it needs to be clearly labeled, neat, and organized. Showing your work also helps me to determine where your error is (hence, you might be able to obtain partial credit) and if you are logically applying the mathematical tools learned to solve the given problem. "Messy" and/or disorganized work will not receive full credit.

**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.
Grading Information
Math 103 - Okumura

Grades for this course are based on the following:

- 4 exams @100 pts = 400 pts = (64% of possible pts)
- Course Activities = 100 pts = (16% of possible pts)
- Final Exam = 125 pts = (20% of possible pts)
- Total points = 625 pts

Course activities may include but are not limited to:

- Quizzes (announced)
- In-Class Problems
- Journal entries (writing assignments)
- Math Resource Activities
- Reports or Presentations
- Graded Homework Problems

Course activities that are turned in late will not receive any points (no matter what the reason). All assignments are due at the beginning of class unless otherwise specified by the instructor. The "beginning of class" means that assignments must be given to the instructor by 5 minutes after the start of class. For example, if the class meets 1:30 - 2:20 then, the assignment must be turned in by 1:35. The clock of the classroom is used to determine the time.

There are no make-up opportunities for missed assignments, quizzes or in-class activities or other activities that are graded for the course activities portion of your grade. Because of this, about 125 points of course activities will be assigned and the maximum number of points that you can receive for the course activities portion of your grade is 100 points. This will give students who missed a few course activities especially for legitimate absences or tardiness to "make-up" the points lost.

In addition, extra credit quizzes from each unit will be used as a form of extra credit for unit exams. The points earned for these extra credit quizzes for a unit will be called the Unit Extra Credit Quizzes Score. A maximum of 30 points can be earned for the Unit Extra Credit Quizzes Score. In calculating your unit exam score, I will follow the given formula:

\[
\text{Raw Score on Unit Exam + Unit Extra Credit Quizzes Score} \div 100 + \text{Unit Extra Credit Quizzes Score}
\]

This number will be rounded to the nearest whole percent to determine your score for the unit exam.

The aforementioned scoring procedure will not be used for the final exam.

Instructor: Jean Okumura
Office: Mana`opono 112
Office Hrs: MTRF: 12:30 pm – 1:00 pm
Office Phone: 236-9282
Email: jokumura@hawaii.edu
Other hours by appointment
School Fax Number: 247-5362
Attention: Jean Okumura
<table>
<thead>
<tr>
<th></th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
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<tr>
<td>June 15</td>
<td>0.2, 0.3, 0.4</td>
<td>June 16</td>
<td>0.4, 0.5, 0.6</td>
<td>June 18</td>
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<td>June 19</td>
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<tr>
<td>June 22</td>
<td>1.3, 1.4</td>
<td>June 23</td>
<td>1.4, Review for Exam 1</td>
<td>June 25</td>
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<td>EXAM 1 on Ch 0, 1.1, 1.2, 1.5</td>
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<tr>
<td>June 29</td>
<td>1.7</td>
<td>June 30</td>
<td>1.8, 2.1</td>
<td>July 02</td>
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<td></td>
<td></td>
<td>2.2, 2.3</td>
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<tr>
<td>July 06</td>
<td>2.3, Review for Exam 2</td>
<td>July 07</td>
<td>EXAM 2 on 1.3-1.8, 2.1, 2.4/7.1</td>
<td>July 09</td>
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<td>2.4/7.1</td>
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<td>July 13</td>
<td>3.1</td>
<td>July 14</td>
<td>3.2, 3.5</td>
<td>July 16</td>
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<td>3.5</td>
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<td>July 20</td>
<td>4.1, 4.3</td>
<td>July 21</td>
<td>4.5, Review for Exam 3</td>
<td>July 23</td>
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<td>EXAM 3 on 2.2-2.5, Ch 3 4.5</td>
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<tr>
<td>July 27</td>
<td>6.1, 6.7</td>
<td>July 28</td>
<td>7.4</td>
<td>July 30</td>
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<td></td>
<td>Review for Exam 4</td>
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<td>Aug 3</td>
<td>Final Exam Review</td>
<td>Aug 4</td>
<td>Final Exam 8:00 – 9:50 am</td>
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Last Day for 100% Refund: June 13, 2009

Drop Deadline (no "W" on Transcript) and Last Day for 50% Refund: June 19, 2009

Withdrawal Deadline: July 13, 2009

Cr/NC Grading Option Deadline: July 13, 2009

Instructor: Jean Okumura  
Office: Mana`o`ono 112  
Office Hrs: MTRF: 12:30 – 1:00 pm  
Other hours by appointment  
Fax Number: 247-5362  
Attention: Jean Okumura