**MATH 103 - COLLEGE ALGEBRA - 4 credits**
MWF 11:30 a.m. – 12:45 p.m.  CRN 64072
Mana‘opono 115

**INSTRUCTOR:**  Michael Joyce

**OFFICE:**  Mana‘opono 110A

**OFFICE HOURS:**  MWF 9:45 – 11:30 a.m.
Or By Appointment

**TELEPHONE:**  To Be Announced

**FAX NUMBER:**  247-5362  Attention: Michael Joyce

**EMAIL ADDRESS:**  michaeljoyce217@gmail.com, joycem@hawaii.edu

**WEBSITE:**  http://www.math.hawaii.edu/~mikejoyc/

**EFFECTIVE DATE:**  SPRING 2012

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**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.*

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**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

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**Suggested Basic Skills**

Good study skills and habits; Competency with Elementary Algebra

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**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 (HIGHLY RECOMMENDED)

**MATH LAB:**  Mana‘opono 113 (provides drop-in tutorial assistance)

**THE TESTING CENTER (TTC):**  Alaka‘i 106 – 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

Math 103 fulfills the 3 credits General Education requirement for Foundations: Symbolic for both the A.A. degree at WCC and a Bachelor’s at UH Manoa and UH West Oahu. Consequently, it meets the following 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 not focus solely on computational skills.
6. Instructors will build a bridge from theory to practice and show students how to traverse this bridge.
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. There will be a quiz at the start of almost every class so you must review the material from the previous class the night before. In addition, this is a 4 credit class and it is expected that students spend, at the minimum, 20 hours per week outside of class time studying and doing homework and readings for this class. If not, success is unlikely.

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 and working on problems;

3. Reading the text carefully and making use of other learning materials;

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.

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 announcements and occasionally additional resources. Students will also be referred to my website frequently (as it is often easier to navigate in my estimation):

http://www.math.hawaii.edu/~mikejoyc/
**Course Tasks and Grading Information**

Grades for this course are based on the following course tasks:

<table>
<thead>
<tr>
<th>Task</th>
<th>Points</th>
<th>Percentage of Possible Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 exams @100 pts</td>
<td>400</td>
<td>(50% of possible pts)</td>
</tr>
<tr>
<td>Quizzes &amp; HW</td>
<td>200</td>
<td>(25% of possible pts)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>200</td>
<td>(25% of possible pts)</td>
</tr>
<tr>
<td>Total points</td>
<td>800</td>
<td></td>
</tr>
</tbody>
</table>

Only a selection of the homework questions will be graded. However, if the non-graded homework problems are not completed and handed in, points will be deducted. In addition, not doing suggested problems and/or waiting to work on recommended 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 listed below:

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Definition</th>
</tr>
</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>
</tr>
<tr>
<td>D</td>
<td>60% - 69% of the cumulative points possible</td>
</tr>
<tr>
<td>F</td>
<td>Less than 60% of the cumulative points possible</td>
</tr>
<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>N</td>
<td>See Below</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>
</tr>
</tbody>
</table>

N Grade Definition: The student has worked conscientiously, attended class regularly, finished all work, fulfilled course responsibilities, and has made measurable progress. However, either the student has not achieved the minimal student learning objectives and is not yet prepared to succeed at the next level, or the student has made consistent progress in the class but is unable to complete the class due to extenuating circumstances, such as major health, personal, or family emergencies.

Note: Cr/NC grading may be selected online at the time when the student registers for the class. Otherwise, students must apply for Cr/NC grading option by submitting the proper and completed form (that requires instructor consent) to the Admissions Office by the posted deadline.

Note: W grade is given only when the student officially withdraws from the course by the posted deadline.
Note: Students who stop attending class, stop participating in the class, do not discuss their situation with the instructor (essentially disappear from the course), and do not withdraw or select the CR/NC grading option will receive an F grade for the course.

Note: All SLOs assessment are embedded in class activities, homework, quizzes, or Exams.

**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.

**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. Study these and your book and then seek help from your instructor or the math lab tutors. 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 or long absences can negatively affect your grade. It is strongly recommended that you not take personal trips that will cause you to miss class.

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. Of course, some absences are legitimate. As a result, I will consider 3 quizzes as extra credit per semester, i.e., if you take every quiz you may get better than 100 out of 100 for your semester quizzes grade. There are 920 possible HW points but I will mark this out of 800 so you may also get better than 100 out of 100 for your semester HW 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 (430PM). EMAIL JOYCEM@HAWAII.EDU OR MICHAELJOYCE217@GMAIL.COM. 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 will require 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 PER SEMESTER.

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. These will become helpful additional notes. You should also redo the example problems in the sections read so that you understand what the authors did in the problem. Do the self-check problems.

Only a selection of the homework questions will be graded. However, if the non-graded homework problems are not completed and handed in, points will be deducted. In addition, not doing suggested problems and/or waiting to work on recommended problems until right before an exam generally results in poor exam results and a lack of success in this course.

Seek further assistance from the instructor or the Math Lab tutor(s) if you are still having difficulties. Complete, review, analyze, and redo the problems you've done incorrectly to help you get a better handle on the concepts and strategies.

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 on Laulima. 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.

Please note: Although late homework is not accepted, this is factored in. There are 925 homework points available but I only mark this out of 800.

Be sure to analyze your graded homework errors after it is returned to you. Redo those problems following the correct methodology and notation. This will help you to better learn the material, concepts, and the proper way to show your work.

6. CALCULATOR:

No calculator is allowed for quizzes or exams. A calculator may be used for homework as needed. However, it is recommended that students avoid this as much as possible. You'll need the practice for your tests.
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 text section(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 or to not complete the course and get a N or NC grade.

8. GRADING ON HOMEWORK AND 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. **Correct answers without work shown will receive zero points.**

**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.*
### TENTATIVE SCHEDULE MATH 103 SPRING 2012 MIKE JOYCE

<table>
<thead>
<tr>
<th>Jan 9</th>
<th>MONDAY</th>
<th>Jan 11</th>
<th>WEDNESDAY</th>
<th>Jan 13</th>
<th>FRIDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation</td>
<td></td>
<td>0.1, 0.2</td>
<td></td>
<td>0.2, 0.3</td>
<td>LAST DAY FOR 100% REFUND</td>
</tr>
</tbody>
</table>

| Jan 16 | HOLIDAY    | Jan 18 | 0.4       | Jan 20 | 0.5                           |

| Jan 23 | 0.6        | Jan 25 | 1.1       | Jan 27 | 1.2                           |

| Jan 30 | 1.3        | Feb 1  | 1.4       | Feb 3  | Review for Exam 1             |
|        | LAST DAY OF ERASE PERIOD AND 50% REFUND |        |           |          |                               |

| Feb 6  | Exam 1     | Feb 8  |          | Feb 10 | 1.5                           |
|        | CH. 0, 1.1, 1.2 |        |           |        |                               |

| Feb 13 | 1.6        | Feb 15 | 1.7       | Feb 17 | 1.8, 2.1                      |

| Feb 20 | HOLIDAY    | Feb 22 | 2.1, 2.2  | Feb 24 | 2.3                           |

| Feb 27 | 2.4        | Feb 29 | Review for Exam 2 | Mar 2 | NON-INSTRUCTIONAL DAY |

| Mar 5  | Exam 2     | Mar 7  |          | Mar 9  | 7.1                           |
|        | 1.3-1.8, 2.1 |        |           |        |                               |

| Mar 12 | 2.5        | Mar 14 | 3.1       | Mar 16 | 3.2                           |

| Mar 19 | 3.5        | Mar 21 | 3.6       | Mar 23 | 4.1                           |

| Mar 26 | SPRING BREAK | Mar 28 | SPRING BREAK | Mar 30 | SPRING BREAK |

| Apr 2  | 4.3        | Apr 4  | 4.5       | Apr 6  | HOLIDAY                      |
|        | LAST DAY TO WITHDRAW WITH A W |        |           |        |                               |

| Apr 9  | Review for Exam 3 | Apr 11 | Exam 3 | Apr 13 |                             |
|        |                   |        | 2.2-2.5, 7.1, Ch. 3 |        |                               |

| Apr 16 | 4.6        | Apr 18 | 6.1       | Apr 20 | 6.7                           |

| Apr 23 | 7.4        | Apr 25 | Review for Exam 4 | Apr 27 | Exam 4 Ch. 4, 6.1, 6.7, 7.4   |

| Apr 30 | Final Exam Review | May 2  | Final Exam Review |        |                               |

| THE    | FINAL EXAM IS ON | Wed    | May 9, 11:30-1:30 |        |                               |