MATH 100: SURVEY OF MATHEMATICS (FS)
3 Credits
CRN: 64068
Online

INSTRUCTOR: Matthew Chasse
OFFICE: Mana'opono 110A
OFFICE HOURS: 1-2pm and 4:30-5:30pm Tuesday and Thursday, or by appointment
EMAIL: chasse@hawaii.edu
TELEPHONE: (808) 236-9276
EFFECTIVE DATE: Spring 2012

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.

Catalog Description

An introduction to quantitative and logical reasoning for the nonscience/nonmathematics major. The question, “What is mathematics?” is explored, while focusing on mathematical systems or models, cultivating an appreciation for mathematics as an aesthetic art, and developing skills in problem solving and analysis.
(3 hrs lecture)

PREREQUISITES: Grade of “C” or better in MATH 25 or equivalent, satisfactory math placement test score.

WCC: FS

Learning Resources and Materials

Required Texts: Thinking Mathematically custom edition for WCC 2nd ed. (based on the 4th ed.), by Blitzer, with MyMathLab access code.

or you can buy the access code separately, which gives you access to an electronic version of the text. In either case please consult the registration directions for setting up your MyMathLab account. The course ID is chasse88365.

MATH LAB: Manaopono 113
hours: M,Tu: 8:00am-6:00pm
W,Th: 8:00am-8:00pm
F: 8:00am-6:00pm

The WCC testing center works on a first come, first served basis. The other islands require that you make appointments several days in advance.

Other Islands:

<table>
<thead>
<tr>
<th>Institution</th>
<th>Address</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaua‘i CC</td>
<td>One Stop Center, Room 103A</td>
<td>245-8306</td>
</tr>
<tr>
<td>UH Maui College</td>
<td>Learning Ctr.</td>
<td>984-3240</td>
</tr>
<tr>
<td>UH Hilo</td>
<td>North Hawaii Education and Research Center</td>
<td>775-8890</td>
</tr>
</tbody>
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FOUNDATION HALLMARKS

Math 100 fulfills 3 credits of the General Education requirements (Foundations: Symbolic) for both an A.A. degree at WCC and a Bachelor’s degree at UH Manoa. 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.

STUDENT LEARNING OUTCOMES

1. Construct diagrams that will facilitate the visual conception of a phenomenon or problem.
2. Utilize basic properties and/or operations related to Set Theory, Logic, Statistics, Linear and Quadratic functions and Counting methods.
3. Employ symbolic/mathematical techniques to solve applied problems.
4. Utilize precise mathematical language and symbols to effectively communicate mathematics in written and/or oral form.

All SLO assessments are embedded in homework, quizzes, course activities or exams.
COURSE CONTENT

<table>
<thead>
<tr>
<th>Concepts or Topics</th>
<th>Skills or Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Linear Functions</td>
<td>1. understanding the fundamental concepts</td>
</tr>
<tr>
<td>• Quadratic Functions</td>
<td>2. analyzing the problem</td>
</tr>
<tr>
<td>• Set theory (universal, union, compliment, intersection, and empty set)</td>
<td>3. memorizing properties</td>
</tr>
<tr>
<td>• Logic (negation, conjunction, disjunction, and conditional statements, truth table, valid statement, Euler’s diagram)</td>
<td>4. developing similar problems</td>
</tr>
<tr>
<td>• Counting theory and probability (counting principle, permutation, combination, odds)</td>
<td>5. practical application</td>
</tr>
<tr>
<td>• Statistics (Normal distribution, standard normal distribution, percentile, z-score)</td>
<td>6. be able to explain to others</td>
</tr>
</tbody>
</table>

Activities Required at Scheduled Times Other Than Class Times

Homework; quizzes; exams. Exams must be taken at the test center. You will have a period of 4 or 5 business days during which you can schedule an exam.

It is expected that students spend at least 9 hours per week to read, study and do homework; to organize and summarize all course materials; and prepare well for this class.

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 carefully cogitating the course material;
3. Reading the text carefully and making use of other learning materials whenever necessary;

4. Seeking assistance from the instructor or tutors of 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.

Course Tasks and Grading Information

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

<table>
<thead>
<tr>
<th>Task</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 exams</td>
<td>55%</td>
</tr>
<tr>
<td>Homework and Quizzes</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25%</td>
</tr>
</tbody>
</table>

Not doing recommended assignments in a timely manner generally results in poor exam results and a lack of success in this course. Homework and quiz grade will be split equally: 10% for homework and 10% for on-line quizzes. The quizzes have 20-30 min. time limits.

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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<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>N or 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>
</tr>
</tbody>
</table>

“the N grade indicates that the student worked conscientiously, attended 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 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.

Additional Information

1. MAKE-UP POLICY: There are no make-up opportunities

2. There is NO RETEST for this course.

3. FINAL EXAM: The final exam is cumulative.

4. HOMEWORK and EXAMS:

   Homework and quizzes will be assigned on-line, through MyMathLab. You may attempt the homeworks as many times as you like before the due date. Exams will be written on paper and given through the WCC (or your island) testing center.

5. 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 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 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.

6. GRADING ON HOMEWORK, QUIZZES, OR EXAMS:

   To receive full credit for problems done on exams, you must show sufficient work in a clear, logical, and organized manner. On-line homework and quizzes will be automatically graded. For the homework, you may attempt the problems as many times as you like before the due date.

   It helps me 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. Your work must be neat and organized. "Messy" and/or disorganized work will not be accepted.

7. DON’T PROCRASTINATE
Mathematics is not a subject that you can consistently be successful in by "cramming" a day or two before the test. By "cramming" you don't develop proficiency in doing the problems, knowledge of what to do on a particular problem and long-term understanding of the process. Also, if you procrastinate, you may fall so hopelessly behind that it becomes impossible to catch up. It requires constant work to keep on top of the material.

8. Email

Check your email frequently for important information.

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.