Math 100 - Survey of Mathematics (3 credits)

(CRN 64568 - MW 10:00 AM to 11:15 AM Mana’o 114)

INSTRUCTOR: Gretel S. Sia
OFFICE: Mana’opono 110A
OFFICE HOURS: 1:00 pm - 2:30 pm MW, and by appointment
TELEPHONE: To be announced
EMAIL: gsia@hawaii.edu
EFFECTIVE DATE: Fall 2013

WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawaii and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide Oahu’s Koolau region and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment - inspiring students to excellence.

COURSE 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. lect.)

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

WCC: FS

TOPICS COVERED IN THIS COURSE:

Functions (linear and quadratic)* Set Theory (Universal, union, compliment, intersection, and empty set)* Logic (negation, conjunction, disjunction, and conditional statements, truth tables, valid statements, Euler’s diagram)* Counting Theory and Probability (counting principle, permutation, combination, odds)* Statistics (Normal distribution, standard normal distribution, percentile, z-score).

LEARNING RESOURCES & MATERIALS
Required Textbook: Thinking Mathematically, 5th edition by Blitzer

Learning Resources:
1) Supplemental Instruction Leader (SIL): Melissa Butler
2) Math Lab: La‘akea (Library Learning Commons) Room 226
3) Testing Center: La‘akea (Library Learning Commons) Room 228
   Phone number 235-7498
4) Smarthinking Online Tutors: http://windward.hawaii.edu/smarthinking/
5) OLA (UH online tutoring program): http://manoa.hawaii.edu/ola/
7) Khan Academy Videos: http://www.khanacademy.org

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.

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

FOUNDATION HALLMARKS

Math 100 fulfills the three credits General Education requirement (Foundations: Symbolic) for both the A.A. degree at WCC and a bachelor’s degree at UH Manoa as well as UH West Oahu. Consequently, it meets the hallmarks of symbolic reasoning requirement listed in the catalog.

COURSE TASKS & GRADING

A student’s grade for this course will be based on the following course tasks:

- Exam 1 15%
- Exam 2 15%
- Exam 3 15%
- Homework/Quizzes 15%
- In-Class Activities 15%
- Final Exam 25%

Total = 100%
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>
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<tr>
<td>N</td>
<td>See below</td>
</tr>
<tr>
<td>CR</td>
<td>70% or above of the cumulative points</td>
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<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>See below</td>
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</tbody>
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Note: The N grade indicates that 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.

The N grade is an optional grade that instructors do not have to give. All requests for the N grade must be submitted by the student in writing and is contingent upon the instructor’s approval.

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,N) will be assigned for the course.

Note: The W grade is given only when the student officially withdraws from the course by the posted deadline.

Note: The I grade is a temporary grade given at the instructor’s option when a student has failed to complete a small part of a course because of circumstances beyond his or her control.

A student may qualify for the I grade if (a) s/he is unable to take the final exam and (b) taking the final exam could possibly raise his/her course grade. The I grade is given by student request and must be approved by the instructor.
ADDITIONAL INFORMATION

Make-up Work: No late Homework will be accepted. Homework is due on a specified date and must be turned in at the beginning of class on that day. If a student fails to submit his/her homework, he/she gets a score of zero. Also, under any and all circumstances, no make-up quiz or make-up in-class activity shall be given. However, a student’s two lowest scores in the Homework and two lowest scores in the Quizzes (which may be announced or unannounced and which lowest scores include the score of zero) will be dropped in the computation of his/her final grade. Only under extraordinary circumstances such as a medical emergency (as when a student gets hospitalized) or death of a family member, may a special exam be given for a student who would miss to take Exam 1 or Exam 2. In this regard, the instructor may demand from the student some specific proofs to support his/her claim, absent of which, no special exam may be allowed. No special exam shall be given or administered more than one week from the date it is given.

Special Condition: Notwithstanding a student’s good performance in the other course tasks, no student will obtain a grade of "C" or higher if he/she should fail to take the comprehensive final exam.

Academic Honesty: Cheating, in any form, will not be tolerated in this class. It is the student’s responsibility to ensure that he/she does not copy from another student or let another student copy from him/her. He/she can, however, do a collaborative work on a homework with another student, but simply copying his/her classmate’s homework is considered cheating. Academic dishonesty will be dealt with accordingly.

Respect: Every student should try to respect the personal space of others, i.e., while inside the classroom, he/she should refrain to act in a way that will irritate or distract the attention of his/her classmates and that of the instructor. All cellphones must be set to a silent mode while the class is ongoing. All computing devices must be closed and must not be used during lecture. Tablet PCs will be allowed only for note-taking. The instructor can disallow such use upon a finding that the same is being used for something else.

Attendance: Attendance is mandatory. My experience tells me that there is a strong correlation between a student’s attendance and his/her performance in a course.