MATH 100, SURVEY OF MATHEMATICS
3 CREDITS CRN 64134
DISTANCE LEARNING

INSTRUCTOR: KIMLYNNE SLAGEL
OFFICE: MANA‘OPONO 110A
OFFICE HOURS: SUNDAY and THURSDAY, 7:00-8:00 PM via LAULIMA Chat Room
TELEPHONE: (808) 236-9281 EMAIL: kimlynne@hawaii.edu
EFFECTIVE DATE: Fall 2018

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 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.

CATALOG DESCRIPTION

An introduction to quantitative and logical reasoning for the non-science/non-mathematics majors. 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.

Activities Required at Scheduled Times Other Than Class Times

Although this course is online, Mid-terms and the Final Exam must be written at one of the institutions listed on http://www.hawaii.edu/dl/testcenters.

STUDENT LEARNING OUTCOMES

As a result of taking this course, students can expect to attain the following outcomes:

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

Foundation Symbolic Reasoning 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 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 rule 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.

**FOUNDATIONS Quantitative Reasoning HALLMARKS**

Math 100 also fulfills 3 credits of the General Education requirements (Foundations Quantitative) for both the AA degree at WCC and a Bachelor’s degree at UH Manoa. Consequently, it meets the hallmarks of the quantitative reasoning requirement.

The course will:

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-teaching 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;
   e. Effectively communicate those results in a variety of formats.

**COURSE CONTENT**

**Concepts or Topics** *(What students should know or understand)*

- Personal Finance: Annuities, Methods of Savings, Investments, Cars, Cost of Home Ownership, Credit Cards. *(FQ)*
- Logic: Statements, compound statements, truth values, truth tables and applications, Euler diagrams and applications *(FS & FQ)*
- Graphs, linear functions, quadratic functions *(FS & FQ)*
• Counting and Probability: Combinations, permutations, Fundamental Counting Principle, odd \((FS & FQ)\)

• Statistics: Sampling, graphs, measures of central tendency, measures of dispersion, normal distributions and applications \((FS & FQ)\)

**COURSE TASKS**
The mode of instruction will be focusing on problem solving, logical and analytical thinking. The new material will be introduced by the instructor in every lecture, and then the student will apply the new material to text book problem sets. However, the goal for this procedure is not just getting the correct answer but to build the ability to explain how to obtain the solution and why the solution is correct. Students will be expected to work both independently and cooperatively in small groups.

**ASSESSMENT TASKS AND GRADING**
The student will demonstrate competency in the course objectives via weekly problem sets, and exams. Exams are to taken at a Grades will be determined by the following weighted categories.

<table>
<thead>
<tr>
<th>Course Work</th>
<th>30% (of semester grade)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterms (3)</td>
<td>50% (of semester grade)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20% (of semester grade)</td>
</tr>
</tbody>
</table>

The overall semester grade is determined by the following scale.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage of Total Points Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90-100%</td>
</tr>
<tr>
<td>B</td>
<td>80-89%</td>
</tr>
<tr>
<td>C</td>
<td>70-79%</td>
</tr>
<tr>
<td>D</td>
<td>60-69%</td>
</tr>
<tr>
<td>F</td>
<td>below 60%</td>
</tr>
<tr>
<td>CR</td>
<td>70-100%</td>
</tr>
<tr>
<td>NC</td>
<td>below 70%</td>
</tr>
<tr>
<td>W</td>
<td>Official withdrawal (must meet April 3, 2017 deadline)</td>
</tr>
<tr>
<td>N</td>
<td>The “N” grade indicates that the student has worked conscientiously, attended class regularly, and finished all work, fulfilled course responsibilities, and has made measurable progress. However, either the student has not archived 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 lass due to extenuating circumstances, such as major health, personal or family emergencies.</td>
</tr>
<tr>
<td>I</td>
<td>The “I” grade will be given only to students who are achieving passing grades and are very close to completing the course. In addition, the student must have a very good reason for not being able to complete all the work on time. Grade related excuses are unacceptable. Examples of extreme or unusual circumstances include a certified medical reason or a death of an immediate family member.</td>
</tr>
</tbody>
</table>

**LEARNING RESOURCES and MATERIALS**

**REQUIRED MATERIALS:**

*Windward Community College is an equal opportunity, affirmative action institution.*
• MyMathLab (MML) an Access Code required
  o Register online at [http://www.mathxl.com/login_mml.htm](http://www.mathxl.com/login_mml.htm). Use course ID: slagel31686
  o Thinking Mathematically 6th ed, by Robert Blitzer and its student solution manual are included with the purchase of MML. (Note: The eTextbook is included when you purchase the access code. Use [https://www.pearsonmylabandmastering.com/northamerica/mymathlab/students/get-registered/index.html](https://www.pearsonmylabandmastering.com/northamerica/mymathlab/students/get-registered/index.html) to purchase the access code.)

• Calculator (Scientific or Graphing). No specific make or model is required, however the instructor is best versed in the use of the Texas Instrument brand specifically the models, TI-30a, TI-30XS, TI-83, TI-84 family or TI NSpire CX).

### ADDITIONAL INFORMATION

• Expectations

  Students must pace their studies in a timely manner in order to prepare for the scheduled mid-terms and final exam.

  All mid-terms and the final exam must be written in the prescribed time-framed outlined in the course calendar. (See “Schedule” tab on Laulima)

  All mid-terms and the final exam will be taken at the testing center identified by the individual student at the beginning of the semester. Please choose a testing center listed at [https://www.hawaii.edu/dl/testcenters](https://www.hawaii.edu/dl/testcenters) and identify the center to the instructor within the first 2 weeks of the semester. Students studying Math 100 out-of-state, are responsible for securing a testing center to be approved by the instructor, at least 2 weeks prior to the first midterm. Students are responsible for all proctoring costs.

  Students are to complete all problems sets with material covered in the upcoming mid-term/final BEFORE the day of the exam. Assignments will NOT be available to complete for credit after the midterm.

  Students must seek out additional help via email or during the instructors office hours (via Laulima chat room). Face-to-face office hours are available by appointment. Each campus offers additional tutoring services. It is the student’s responsibility to find out what services are provided by his/her home campus.

• MySuccess: Students may be referred for extra help or advising through MySuccess. Students can also explore resources at MySuccess.Hawaii.edu and [windward.hawaii.edu/MySuccess](http://windward.hawaii.edu/MySuccess)

### 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. Ann Lemke can be reached at 235-7448, [lemke@hawaii.edu](mailto:lemke@hawaii.edu), or you may stop by Hale ʻĀkoakoa 213 for more information.
TITLE IX
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. For more information regarding your rights under Title IX, please visit: https://windward.hawaii.edu/Title_IX/.

Windward Community College is committed to the pursuit of equal education. If you or someone you know has experienced sex discrimination or gender-based violence, Windward CC has resources to support you. To speak with someone confidentially, contact Karla Silva-Park, Mental Health Counselor, at 808-235-7468 or karlas@hawaii.edu or Kaahu Alo, Designated Confidential Advocate for Students, at 808-235-7354 or kaahualo@hawaii.edu. To make a formal report, contact the Title IX Coordinator at 808-235-7393 or wcctix@hawaii.edu.

ACADEMIC INTEGRITY
Work submitted by a student must be the student’s own work. The work of others should be explicitly marked, such as through use of quotes or summarizing with reference to the original author.

Students can upload papers to http://www.TurnItIn.com to have papers checked for authenticity, highlighting where the paper potentially fails to appropriately reference sources.

In this class, students who commit academic dishonesty, cheating or plagiarism will have the following consequence(s):

Students will receive a failing grade for plagiarized assignments.

All cases of academic dishonesty are referred to the Vice Chancellor for Student Affairs.

ALTERNATE CONTACT INFORMATION
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:

Location: Alakai 121
Phone: 808-235-7422
Email: wccaa@hawaii.edu