

Math 115 Introduction to Statistics and Probability

Spring 2026

3 Credits | CRN 63246

INSTRUCTOR: Cristian Farias
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EFFECTIVE DATE: Spring 2026

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.

Course Information

Catalog Description: Utilizes basic statistical topics including measures of central tendency and dispersion, classification of variables, sampling techniques, elementary probability, normal and binomial probability distributions, tests of hypothesis, linear regression and correlation in order to solve problems.

Prerequisites: Grade of "C" or better in Math 25, 26, 28, 29, 75X or higher or equivalent, satisfactory math placement test score, or consent of instructor.

Activities Required at Scheduled Times Other than Class Times MyOpenMath is an online learning resource. Every week you will be assigned online assignments through MyOpenMath. Most exercises include learning aids, such as guided solutions, sample problems, and extra help as you're working through them, and they offer helpful feedback when you enter incorrect answers. A variety of multimedia resources are also available in the homework exercises. You can link to the ebook, video clips, and animations to improve your understanding of key concepts.

Student Learning Outcomes (SLO)

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

1. Calculate and interpret statistical information.
2. Calculate and interpret probabilities for binomial or normal distributions, including the use of the Central Limit Theorem.
3. Demonstrate the use of inferential statistics.
4. Utilize appropriate statistical terminology and mathematical symbols to effectively communicate mathematics in written and/or oral form.

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

Foundations Quantitative Reasoning Hallmarks

Math 115 fulfills 3 credits of the General Education requirements (Foundations Quantitative Reasoning) for both an A.A. degree at WCC and a Bachelor's degree at 4 year UH institutions. Consequently, it meets the following hallmarks of the Quantitative Reasoning requirement:

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.

Windward Community College is an equal opportunity, affirmative action institution.

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-teacher 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; and
 - e. Effectively communicate those results in a variety of appropriate formats.

Learning Resources

Symbolab: <https://www.symbolab.com>

Wolfram Alpha: <http://www.wolframalpha.com>

Desmos Graphing Calculator: <https://www.desmos.com>

Khan Academy Videos: <http://www.khanacademy.org>

Tutor.com: <https://windward.hawaii.edu/tutor.com/>

Academic Support on the WCC Campus

The Math Lab offers free peer tutoring to WCC students and is located in La'akea 220.

<https://windward.hawaii.edu/services-for-students/tutoring/ka-piko/>

TRiO Student Support Services (TRiO SSS) is a federally funded program with the purpose of increasing retention, graduation, and transfer rates from two-year to four-year colleges/universities for low-income, first-generation, and/or disabled college students.

<https://windward.hawaii.edu/services-for-students/tutoring/trio-sss/>

Course Format

This is a 16-week online asynchronous course. Students independently watch lecture videos and read lecture notes in order to complete homework sets and tests. Discussion forums are also a part of this course. Students post within the discussion forums and are expected to reply to their classmates' posts.

Required Materials

MyOpenMath free account, Internet, computer, TI-84 graphing calculator, lecture notes.

Course Technology

TI-84 Graphing Calculator is required for this course.

Regular Substantive Interaction

Online courses at Windward Community College follow these guidelines for ensuring quality instruction: RSI Definition-WCC.

Participation Verification

Campuses are required by federal regulations to verify the participation of students in their classes. In accordance with Executive Policy 7.209, all students in the University of Hawai'i system are required to establish "participation" to ensure that they are not dropped from their class(es). Students who fail to participate by the late registration period for a class will be administratively dropped from that class. Students may also be dropped from dependent prerequisite and/or corequisite classes if both courses do not establish participation.

Course Tasks

MyOpenMath Homework: Computer-based homework is due through the MyOpenMath (MOM) program. You have unlimited attempts at homework problems and your highest score will be saved. Homework will be worth 20% of your final grade. **Assignments need to be completed by the due date since there will be no extensions on assignments.**

Worksheets: There will be weekly worksheets throughout the semester which are located on Lamaku assignments each week. The assignments need to be completed by hand and uploaded as a PDF file to Lamaku under assignments. Worksheets will be worth a total of 10% of your overall grade. **There will be no extensions on assignments.**

Quizzes: There will be chapter quizzes throughout the semester which will be announced ahead of time. The quiz questions will be similar to examples that we complete in class. **No make-up quizzes will be given.** Quizzes will be worth a total of 20% of your overall grade.

Tests: There will be 3 exams this semester as noted on the course calendar. Exams will be worth 30% (10% each) of your overall grade. **No make-up exams will be given. No exceptions.**

Final Exam: There will be one cumulative final exam. The final exam is worth 20% of your overall grade. *Note: You must achieve a minimum of 60% on the final exam to pass this course.*

The grade breakdown will be as follows:

A = 90%-100%

B = 80%-89%

C = 70%-79%

D = 60%-69%

F = 0%-59%

CR 70% or above of the cumulative points possible

NC Less than 70% of the cumulative points possible

W Official Withdrawal

I Incomplete

Note: CR/NC grades require written instructor consent. Students must apply for CR/NC grading option at the WCC Admissions Office by the posted deadline.

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 discretion 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) they are unable to take the final exam and (b) taking the final exam could possibly raise their course grade.

The grade breakdown will be as follows:

Assignment	Percentage
MyOpenMath - Final Exam	20%
MyOpenMath - Quizzes	20%
MyOpenMath - Homework	20%
MyOpenMath - 3 Tests	30%
Worksheets - Lamaku	10%
Total	100%

ADDITIONAL INFORMATION

1. Grading on Homework, Quizzes, or Exams. To receive full marks for problems done on any graded activity, you must show your work neatly and completely as well as provide clear written explanations when it is asked for. Partial credit may be awarded.

2. Homework. For each chapter, as you read through each section and watch each lecture video, it is recommended that you write down the words, phrases or math symbols and their meanings, formulas, and properties/rules that are important for each section. It is important for you to know these.

3. Lamaku. The syllabus, course calendar, homework schedule, grades, etc. are all viewable through Lamaku. Check Lamaku regularly to stay up to date.

4. Communication. It is your responsibility to stay in communication with the instructor. If you will be unable to complete the assignments for any reason, please inform your instructor so it may be determined if an extension is acceptable. The instructor may need to contact you throughout the semester and will do so via email. It is your responsibility to check your student email on a regular basis.

5. MySuccess. At Windward community college we want every student to be successful. MySuccess is a system wide effort that seeks to support students early in the semester when they first begin experiencing difficulty in class. If I feel that you're having difficulty in my class within the first few weeks of the semester (e.g. missing class, missing assignments, or low test scores) and working together to address your challenges shows that you would really benefit from being connected to resources outside of the classroom, I may refer you to your assigned counselor. Once referred, MySuccess will:

- Call you and send an email to your Hawaii.edu account to let you know about my referral; and
- have the MySuccess team follow up with you by phone or email to find out what kinds of help you might need and connect you with the necessary resources to help you devise a strategy for success.

I will not refer to you without telling you. However, if I do refer you, know that I am doing so in an effort to connect you with all of the help you may need to do well this semester as your success is important to me.

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.

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: Alaka'i 121
- Phone: (808) 235-7422

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 Accessibility Counselor to discuss reasonable accommodations that will help you succeed in this class.

Jodi Asato, Disabilities Counselor, Hale Kako‘o 105, 808-235-7472, jodiaka@hawaii.edu

SEX DISCRIMINATION AND GENDER-BASED VIOLENCE RESOURCES (TITLE IX)

Windward Community College is committed to providing a learning, working, and living environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking.

If you or someone you know is experiencing any of these, WCC has staff and resources to support and assist you. To report an incident of sex discrimination or gender-based violence, as well as receive information and support, please contact one of the following:

Mykie Ozo-Aglugub, Title IX Coordinator/Confidential Advocate,
Phone: 808-235-7468,
Email: mozoa@hawaii.edu
Office: Hale Kako‘o 109,

Desrae Kahale, Mental Health Counselor & Confidential Resource
Phone: (808) 235-7393
Email: dkahale3@hawaii.edu
Office: Hale Kāko‘o 101

Karen Cho, Deputy Title IX Coordinator
Phone: (808) 235-7404
Email: kcho@hawaii.edu
Office: Hale ‘Alaka‘i 120

As a member of the University faculty, I am required to immediately report any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title IX Coordinator and I cannot guarantee confidentiality, you will still have options about how your case will be handled. My goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need.

For more information regarding sex discrimination and gender-based violence, the University’s Title IX resources and the University’s Policy, Interim EP 1.204, go to manoa.hawaii.edu/titleix/

Student Responsibilities

- Have access to a reliable high-speed internet connection
- Have adequate computer skills
- Check Lamaku daily
- Check school emails regularly

- Be self-motivated
- Set aside adequate study time
- Students may check the Student Notifications page on the website for canceled classes

Etiquette Guidelines

- Be courteous in discussions
- Avoid offensive language
- Acknowledge diverse perspectives
- Watch this video for specific expectations on engagement, responding to peers, and maintaining a positive learning environment.

Proposed Schedule

Jan 12	Orientation	Chapter 1	Worksheet 2.1
Jan 19	Worksheet 2.2	Worksheet 2.3	Homework Chapter 2
Jan 26	Quiz Chapter 1 & 2	Worksheet 3.1	Worksheet 3.2
Feb 2	Worksheet 3.3	Worksheet 3.4	Quiz - Chapter 3
Feb 9	Homework Chapter 3	Exam 1	Worksheet 4.1
Feb 16	Worksheet 4.2	Worksheet 4.3	Worksheet 4.4
Feb 23	Homework Chapter 4	Quiz - Chapter 4	Worksheet 5.1
March 2	Worksheet 5.2	Worksheet 5.3	Worksheet 5.4
March 9	Quiz - Chapter 5	Homework Chapter 5	Exam 2
March 16	Spring Break	Spring Break	Spring Break
March 23	Worksheet 6.1	Worksheet 6.2	Worksheet 6.3
March 30	Homework Chapter 6	Quiz - Chapter 6	
April 6	Homework Chapter 7	Worksheet Chapter 7	Quiz - Chapter 7
April 13	Homework Chapter 8	Worksheet Chapter 8	Quiz - Chapter 8

April 20	Homework Chapter 9	Worksheet Chapter 9	Quiz - Chapter 9
April 27	Exam 3		
May 4	HW - Chapter 10 - Review		
May 11	Final Exam		