Instructor:  J. Malkeet Singh
E-mail:  malkfleet@hawaii.edu
Class Time and Room:  Tuesday/Thursday 11:15am – 12:30pm (Mana’opono 103)
Office Location:  Mana’opono 110A
Office Phone No:  x373
Office Hours:  Tuesday 12:30pm – 1:00pm (or by appointment)

WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

Windward Community College is committed to excellence in the liberal arts and career development; we support and challenge individuals to develop skills, fulfill their potential, enrich their lives, and become contributing, culturally aware members of our community.

Required Custom Package (Available at the bookstore in Binder)

Required Technology
Anyone of the following: TI-83, TI-83+, TI-84 or TI-84+ graphing calculator

Course
This is a one-semester course covering basic statistical methods. The three major objectives are:
1. Descriptive Statistics and Experimental Design
2. Fundamentals of Probability and Probability Distributions
3. Inferential Statistics

Prerequisite
1. A grade of “C” or better in Math 25 or equivalent, satisfactory placement test score, or consent of instructor. No prior knowledge about statistical methods is required.
2. Motivation to learn, diligence, and persistence are required.

Course Description
This is an introduction to topics in statistics, with a brief look at elementary probability. It is a valuable course for business, natural science, social science, health science and computer science majors. (The following topics will be covered in depth: measures of central tendency and variation; sampling distributions; normal distributions; central limit theorem; calculating and use of standard error; estimating population mean and proportion; hypothesis testing; one–sample, two-sample, and paired-sample means testing; calculating effect size; linear regression; correlation coefficient; chi-square statistic; and analysis of variance. The emphasis of this course is in calculating sample statistics; inferential statistics, assessing the use of appropriate statistical procedures for different types of statistical questions.)
Student Learning Outcomes
Participation in the course will allow the student to discover and appreciate the value of statistics in everyday life. The student will be adequately prepared for applying statistics within the business, natural sciences, social science, health science and computer science majors.

Student will be able to:
(1) Demonstrate proficiency in graphing, statistical data, calculating measures of central tendency, measures of variation, percentiles, correlation coefficients, and regression line.
(2) Interpret statistical information provided in graphs, in summary measures (central tendency, dispersion, percentile), and in the correlation coefficient.
(3) Solve probability problems involving compound events, independent events, mutually exclusive events, and conditional probability.
(4) Calculate and interpret probabilities for normal or binomial distributions, including the use of the Central Limit Theorem.
(5) Demonstrate the use of inferential statistics.
(6) Utilize appropriate statistical terminology and mathematical symbols to effectively communicate mathematics in written and/or oral form.

Course Requirements

Attendance and Participation
Students are expected to be on time, attend every class, and stay for the entire period. Should it be absolutely necessary to miss a class, it is the STUDENT’S responsibility to make up any missed material and collect any homework assignments given.

Class Decorum
Out of respect for your fellow classmates and the instructor, please abide by the following guidelines:

- Please put your cell phones on silent mode before entering class.
- Please show up on time.
- Please avoid unnecessary, disrupting conversations with your neighbors.
Homework, Exams and Grading

Homework assignment is a significant part of your grade: (30%)
You will be required to complete 15 homework assignments in total. Each homework assignment will be 4 points. If you miss a class, please be prepared to turn in your homework assignment for checking purposes, help can be rendered with the homework assignment through appointment with me. The homework assignments are due the following class period. Usually, assignments will be given on a Thursday and it will be due the next class period, i.e. Tuesday. There are no make-up opportunities for missed graded assignments after a one week period of the submission deadline. Late submission of an assignment within a week of the submission deadline will receive a 2 point penalty.

Exams
There will be three unit exams which will be held on a Thursday and one final cumulative exam as shown below. Please note that there are NO RETESTS.

Exam 1: (15%) - 9 Sep 2010 (9/9/10)
Exam 2: (15%) - 12 Oct 2010 (10/12/10)
Exam 3: (15%) - 16 Nov 2010 (11/16/10)
Final Exam: (25%) - 14 Dec 2010 (14/12/10)
*The final exam is cumulative

Grading
In order to achieve a passing grade and receive credit for this course, students must earn a semester average of 60%. Each final letter grade will be assigned according to the level of achievement provided in the scale below:

| 90 – 100% | A |
| 80 – 89%  | B |
| 70 – 79%  | C |
| 60 – 69%  | D |
| 70 – 100% | CR |
| *N        |   |

below 70% NC
Official Withdrawal W
Incomplete *I

* Incomplete – given when a student has failed to complete a small part of the course due to circumstances beyond his/her control.
* The “N” grade indicates that the student has 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 of family emergencies.

**Note:** CR/NC grades require written instructor consent. Students must apply for CR/NC grading option at the Admissions office by the 10th week of classes. 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.

**Note:** W grade is given only when the student officially withdraws from the course at the Admissions Office by the 10th week of classes.

**Testing Regulations**

- If it is absolutely necessary that you be absent on a test 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 date. If you unexpectedly must be absent on an exam day, notify the instructor by voicemail prior to the hour of the exam. Be sure to state the reason for your absence. **If no notification is received prior to the exam date, or if the reason for absence is not justified, you will receive a score of zero for the exam and no make-up will be allowed.** If the absence is justified, then a make-up test will be scheduled as soon as you return to class. The instructor has the right to require documentation of the student absence and determine if the absence is justified.

**Additional Information**

*Please check your WCC e-mail account frequently for important announcements. Note this syllabus is subject to change in extenuating circumstances. For additional academic information refer to WCC website [www.windward.hawaii.edu](http://www.windward.hawaii.edu) or go to [www.hawaii.edu](http://www.hawaii.edu) for system wide information.

* Tutorial assistance is provided at the Math Lab located in Mana’opono 113.
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

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<th>Week</th>
<th>Topic and Readings</th>
<th>HW</th>
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<td>1</td>
<td>Introduction and Chapter 1: Data Collection (Section 1.1-1.3) (Section 1.3-1.6)</td>
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<tr>
<td>2</td>
<td>Chapter 2: Organizing and Summarizing Data (Section 2.1-2.2) Sec 2.2 -2.3</td>
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<td>3</td>
<td>Chapter 3: Numerically Summarizing Data (Sec 3.1-3.3) Sec 3.4-3.5</td>
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<td>Chapter 5: Probability (Section 5.1-5.2) Review and Exam 1</td>
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<td>#</td>
<td>Chapter 5: Probability (Section 5.3-5.4) Section 5.4-5.5</td>
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<td>6</td>
<td>Chapter 6: Discrete Probability Distributions (Section 6.1) Section 6.2</td>
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<td>7</td>
<td>Chapter 7: The Normal Probability Distribution (Section 7.1-7.3) Section 7.3-7.5</td>
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<td>Chapter 8: Sampling Distribution (Section 8.1) Review and Exam 2</td>
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<td>9</td>
<td>Section 8.2 Chapter 9: Estimating the Value of a Parameter Using Confidence Intervals (Sections 9.1-9.2)</td>
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<td>Section 9.2-9.4 Hypothesis Tests Regarding a Parameter (Section 10.1-10.2)</td>
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<td>Chapter 10: Sections 10.3-10.4 Section 10.4-10.5</td>
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<td>Chapter 11: Inference on Two Samples (Section 11.1) Review and Exam 3</td>
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<td>Chapter 4: Describing the Relation between Two Variables (Section 4.1- 4.2)</td>
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<tr>
<td>14</td>
<td>Chapter 4: Describing the Relation between Two Variables (Section 4.2 -.4.3)</td>
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<td>15</td>
<td>Chapter 12: Additional Inferential Statistics (Section 12.1) Section 12.2</td>
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<td>16</td>
<td>Final Exam (11:30pm - 1:20pm) on 14 December 2010 (12/14/2010)</td>
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