UNIVERSITY of HAWAI'I
HAWAI'I COMMUNITY COLLEGE

Course Syllabus

COURSE TITLE: Statistics

COURSE IDENTIFICATION: Mathematics 115

CREDIT HOURS: 3

STUDENT LEARNING OUTCOMES:

Upon successful completion of Math 115, the student shall be able to...

- Read and interpret statistical information presented in graphical formats;
- Apply fundamental concepts and measures to quantitative data;
- Demonstrate awareness of the common limitations and misuses of statistics;
- Understand the diverse scope of statistical applications.

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DIVISION: Liberal Arts & Public Services

DEPARTMENT: Math & Natural Sciences

INSTRUCTOR: James A. Schumaker

OFFICE LOCATION: EKH-225

OFFICE PHONE: (808) 934-2626

OFFICE HOURS: see current semester information

DATE: January 2018

## COURSE DESCRIPTION:

Presents basic introduction to topics in statistics including: descriptive statistics, elementary probability theory, normal and binomial distributions, and methods of statistical inference. Emphasis is on interpretation and application.

**Prerequisites**: "C" or better in Math 27 or placement in Math 115; and "C" or better in Eng 21 or "C" or better in ESL 21 or Eng 22 or (ESL 22G and ESL 22W) or placement in Eng 100 or placement in Eng 102

## COURSE OBJECTIVES:

- Explain in writing and by example the difference between inferential and descriptive statistics.
- Derive and interpret various descriptive statistics, such as the mean, median, mode, range, variance, and standard deviation.
- Interpret data presented graphically.
- Organize and present data using a frequency distribution and graphs.
- Explain in writing and by examples the meaning of probability.
- Solve probability problems involving the concepts of independent events, mutually exclusive events and (if time permits) conditional events.
- Calculate probabilities involving binomial and normal distributed random variables.
- Test hypotheses involving binomial and normal distributed random variables.
- Explain in writing the meaning of statistical significance.
- Find and interpret in writing confidence intervals.
- Discern common abuses of statistics.
- Apply critical thinking and various problem solving strategies in meeting the demands of this course.
- In addition, as in most mathematical courses, *students will be presented with the challenge of utilizing critical thinking along with the development of communicating analyses (results) in a* ***legible/neat, ordered and cogent*** *fashion.*

## INSTRUCTIONAL MATERIALS:

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| Textbook(s): | Understandable Statistics – 12th Edition<br>by Charles Brase & Corrinne Brase / ISBN 978-1-337-11991-7 |
| Calculator(s): | Scientific/statistical calculator (any brand/model). |
| Recommended: | Student Solutions Manual<br>Graph paper or engineering pad;<br>A loose-leaf notebook for storing HomeWork, exams, and notes. |

**MISCELLANEOUS**:

Grading Policies (regarding course grades throughout the semester)

Course Calendar (regarding the class schedule throughout the semester)

Student Conduct Code (Policy: Haw 7.101)

Academic Grievances (Policy: Haw 5.101)

Discrimination & Harrassment Complaints/Grievances (Title IX Rights)

Disability Services (Americans with Disabilities Act)

- Haʻawi Kōkua Program (HawCC's PDF Brochure)

Family Educational Rights and Privacy Act