COLLEGE OF THE MARSHALL ISLANDS

COURSE OUTLINE COVER SHEET

CIP No. 27.0501
MATH 160
Alpha Number

Course Description
Develops statistical literacy and the ability to think statistically. Emphasizes application of concepts of data gathering, variability, random sampling, statistical significance, interpretation of statistical results in context, and critique of stories and/or articles that include statistical results.

Course prepared by: Math/Science Department November 2008

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<th>Hours per Week</th>
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<td>Seminar</td>
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Total Credit Hours 3

Purpose of Course: Degree Requirement
Degree Elective X
Certification
Developmental
Other

Prerequisite(s)
MATH 95 or Placement into credit
level math

Signature, Curriculum & Assessment Committee Chairperson 2-25-09
Signature, Dean of Academic Affairs 2/23/09
Signature, Vice President for Academic and Student Affairs 2/23/09

Last Date reviewed or revised: 
I. Elementary Statistics  
Course Title: 

II. Course Objectives

A. General Outcomes

Students who complete this course will:
1. Collect and categorize data for statistical analyses (GE 3, 5) (LA 3, 4)
2. Calculate statistical measures and tests accurately (GE 3, 5) (LA 3, 4)
3. Analyze data appropriately to answer research questions (GE 3, 5) (LA 3, 4)
4. Interpret statistical measures and tests of significance (GE 1, 3, 5) (LA 1, 4)
5. Design, conduct, analyze and write a report of a community-based statistical research project. (GE 1, 2, 3, 4, 5, 6) (LA 1, 2, 3, 4, 5)

B. Student Learning Outcomes

Upon completion of this course, the student will be able to:
1. Collect, categorize, and prepare data for statistical analyses
2. Calculate statistical measures and tests of significance accurately by using
   a. Measures of central tendency
   b. Measures of variability
   c. Measures of correlation
   d. T-tests
   e. Chi-square
   f. Analysis of variance
3. Analyze and interpret appropriate statistical measures and tests for given research questions
4. Interpret statistical measures tests of significance
5. Design, conduct, analyze and write a report of a community based statistical research project.

III. Course Content

Elementary Statistics will introduce the student to both descriptive and inferential statistical methods of data analysis and will culminate in designing, conducting, analyzing, and reporting of a community-based statistical research project.

1. Measures of central tendency
2. Measures of variability
3. Correlation and regression
4. Normal and skewed distributions
5. Probability theory
6. Introduction to inferential statistics: T-tests
7. Statistical significance, hypothesis testing, confidence intervals
8. Chi-square tests
9. Analysis of variance
IV. Methods of Instruction

1. Lecture
2. Computer analysis of data
3. Group work
4. Audio-visual presentations
5. Data collection in field

V. Equipment and Materials

1. Overhead projector
2. Computers and statistical software
3. Statistical calculators

VI. Suggested Methods of Evaluation

1. Class participation
2. Homework
3. Class-work
4. Examinations
5. Quizzes
6. Projects

Letter grades will be assigned per CMI Grading System.
### Course History Summary

**Course Number:** MATH 160 Elementary Statistics (4cr)

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4 - 11 - 11 Approved