Course Description
Develops statistical literacy. 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.

Math/Science Departments November 2008

Purpose of Course:
Degree Requirement
Degree Elective
General Education
Certification
Developmental
Other

Prerequisite(s)
Math 090s or Placement Into Credit
English 90s or Placement into Credit
C or Better in ICS 101

Signature, Chair Curriculum and Assessment Committee

Signature, Dean of Academic Affairs

Signature, Vice President of Academic and Student Affairs

Last Date reviewed or revised: November 2012
I. **Elementary Statistics**

**Course Title** MATH 160

Alpha Number

II. **Course Outcomes**

A. **General Learning Outcomes**

The student will:

1. Prepare data for statistical analyses (GE 3, 5) (LA 3, 4)
2. Use appropriate representations to picture sample data (GE 3, 5) (LA 3, 4)
3. Calculate probabilities and understand independence of events (GE 3, 5) (LA 3, 4)
4. Select appropriate statistical measures and models for the underlying conditions of a given research question (GE 3, 5) (LA 3, 4)
5. Summarize results of statistical analyses in response to a research question (GE 1, 3, 5) (LA 1, 3, 4)

B. **Student Learning Outcomes**

Upon completion of this course, the student will be able to:

1. Collect and categorize data for statistical analyses
2. Draw graphs and charts to picture sample data
3. Calculate probabilities of dependent and independent events
4. Calculate and interpret statistical measures and models
5. Report results of statistical analyses

III. **Course Content**

This course will develop statistical literacy.

1. Measures of central tendency
2. Measures of variability and exception
3. Correlation and regression
4. Normal distributions
5. Probability theory
6. Introduction to inferential statistics
7. Statistical significance, p-values, hypothesis testing and confidence intervals

IV. **Methods of Instruction**

1. Lecture
2. Computer analysis of data
3. Group work
4. Audio-visual presentations
5. Case studies and case analyses

V. **Equipment and Materials**

1. Overhead projector
2. Computers and statistical software
3. Statistical calculators
4. Community-based statistical data
VI. Suggested Methods of Evaluation

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

Letter grades will be assigned per CMI Grading System.