                          SYLLABUS

**Course**:          MAT 207 Elementary Statistics

**Text**:               Essentials of Statistics, 3rd Ed., 2008, Triola

**Calculator**:     Casio *fx*-300MS Plus **strongly** recommended

**Catalog Description:**

**MAT 207         Elementary Statistics                                                               Credit, 3 sem. hrs.**

Prerequisites: MAT 101, 210 or two years of high school algebra

A study of elementary statistics for non-majors with an introduction to probability.  Emphasis is placed on student understanding and interpretation of statistical data and computation using calculators and computers.  Mathematics majors should take MAT 253.

**Rationale for Course**: Statistics is the basic mathematical tool for drawing certainty from uncertainty. Public policy, the availability of new drugs, the development of new products, comparisons of teaching effectiveness, quality control in production, and even who gets the biggest contract in baseball are based on statistical analysis. The study of statistics develops a set of cognitive and technical skills which include thinking analytically, defining and solving problems, and collecting and analyzing and interpreting data. These understanding and skills are important in preparing students for a lifetime of learning and of service to God and others. This course helps college students understand the basic vocabulary and principles of statistics needed in order to skillfully discern truth in presentations of information.

**Learning Objectives**: Upon successful completion of this course, the student will be able to:

-correctly define and use statistical terms

-draw and interpret graphs of various types, including scatter diagrams

-compute measures of central tendency, dispersion and position

-use probability as a tool in statistical evaluation

-compute probabilities from a binomial probability distribution

-develop information from a normal probability distribution

-state and use the Central Limit Theorem

-make point and interval estimates

-test hypotheses

-compute correlation and regression

-explain how statistics are used in a variety of realistic situations

-evaluate statistical citations for correctness and completeness

**Academic Integrity**:  Honesty and integrity are basic virtues expected of all students at Mississippi College.  The*Mississippi College Tomahawk* lists the policies and penalties for plagiarism and cheating.  This information can also be found online by going to <http://www.mc.edu/publications/policies/> and following the link to Policy 2.19.

**Disability Accommodation**: If you need special accommodations due to learning, physical, psychological, or other disabilities, please contact Dr. Buddy Wagner in the Counseling and Career Development Center.  He may be reached by phone at 925-3354 or by mail at P. O. Box 4016, Clinton, MS 39058.

**Learning Environment**: The method of instruction will include lecture, group problem solving, individual problem solving, demonstrations, computer lab assignments, video and other library projects, quizzes and examinations.  Each student is expected to have a copy of the text, a calculator (Casio *fx*-300*W* **strongly** recommended), writing materials, and an open mind.

**Assessment**:  Assessment of the student's progress will be made through periodic examinations, quizzes, and the grading of other assignments as well as through classroom feedback.  There will be three periodic examinations (100 points each), daily work (quizzes and other projects for a total of 150 points), and a comprehensive final examination (150 points) for a total of 600 possible points.  Grades will be assigned as follows:

Total Points Earned                Grade

540-600                         A

480-539                         B

420-479                         C

360-419                         D

Below 360                     F

Makeups for tests are the responsibility of the student and should be cleared with the instructor in advance whenever possible.  There are no makeups for quizzes. Out-of-class assignments are to be turned in at the start of the class on the date they are due.  Late work will be accepted only until the next class period and with a grade penalty.  The College stipulates that the grade for the course is automatically an F in the event of missing 12 or more of the classes.

TENTATIVE ASSIGNMENT SCHEDULE (MWF)

Introduction to Statistics                                 3          class periods

Summarizing and Graphing Data                   3          class periods

Descriptive Statistics                                      4          class periods

Correlation and Regression                            2          class periods

Probability                                                       5          class periods

Discrete Probability Distributions                   3          class periods

Normal Probability Distributions                     6          class periods

Confidence Intervals and Sample Sizes        5          class periods

Hypothesis Testing                                         5          class periods

Tests and leeway                                            6          class periods