

UPPER IOWA UNIVERSITY
External Degree Program
MATH 220-07 ELEMENTARY STATISTICS

COURSE DESCRIPTION:

An introduction to the simpler problems of statistical inference: descriptive statistics, probability distributions, estimation of parameters and level of significance, regression and correlation. This course may not be completed for additional credit by students who have completed MATH 226. Three semester credits.

COURSE OBJECTIVES:

1. Employ logic, reasoning, critical thinking skills, and problem solving strategies to address situations that require knowledge of statistical terminology and concepts.
2. Determine measures of central tendency and measures of dispersion.
3. Construct meaningful charts and display data graphically.
4. Calculate the probability of the occurrence of a given random variable.
5. Identify a representative sample for the purpose of conducting a survey or interpreting the results of a published survey.
6. Apply hypothesis testing and confidence intervals to determine what the findings are and whether such findings support or cause rejection of hypothesis.
7. Perform correlation and regression analysis and make predictions.
8. Interpret data as provided in professional surveys, magazines, journals and other publications.
9. Apply concepts and terminology of statistics to future courses or situations at home or work.

REQUIRED COURSE MATERIALS:

Text: Bluman, Allan (2007). Elementary Statistics, A Step by Step Approach, (6th ed). McGraw Hill.

Calculator, preferably with statistical analysis functions (for example TI-30X II)

You may purchase your textbook through MBS Direct by calling their toll free number at: 800-325-3252 or through the UIU homepage: www.uiu.edu. Click on the link called Resources for Center, External Degree and Online Program learners. Follow the link and select External Degree for your location.

COURSE OVERVIEW:

In almost every area of today's employment opportunities, some knowledge of statistics can further your success. Data is being collected in many places. But this data has very little value, unless it can be organized and interpreted correctly. This course is designed to provide you with

the basic essentials needed to properly interpret data and to review a statistical claim performed by someone else.

You are encouraged to work as many problems from the book as possible. Each unit includes a homework assignment that must be handed in to receive full credit for the unit. The answers to many are found in the back of the textbook. Your instructor is also available to assist if necessary. When completing the assigned units for this course, you **must** submit all of your math work. Submitting just the answers to homework problems without the work is not acceptable. The use of a calculator is required. The course is divided into 4 units and a final examination. The purpose of this course is to teach you statistical analysis methodology, not to stump you. You will not be required to memorize formulas. The use of your text, notes, and calculator should provide you with a simulated setting that you would face everyday at your job or home. Do not let these aides fool you into thinking that this will be a simple course - because it is not. Determining the setup and method used to solve a problem will still have to be performed before your calculator or notes can assist you.

Please submit each unit as it is completed. **Each unit includes assigned homework and a unit exam. Both must be submitted in order to receive credit for the unit.** A unit will not be corrected until the exam and homework are completed and forwarded to the instructor. All work must be shown on the homework and the unit exam. Since most of your work will be mathematical calculations, you will not be required to type any assignment. Please make sure that any work submitted is legible and follows a logical order. Additionally, this course requires exceptional precision. Please show all work to at least two decimal places, and more when applicable. Every effort will be made to grade and return your work in a timely fashion. You will be given an opportunity to evaluate the course and the instructor upon its completion.

ASSIGNMENTS & GRADING:

The course will consist of four (4) Units, a mid-term exam and a final exam.

Unit Assignment 1 -	12.5% of your final grade
Unit Assignment 2 -	12.5% of your final grade
Mid-term exam -	25.0% of your final grade
Unit Assignment 3 -	12.5% of your final grade
Unit Assignment 4 -	12.5% of your final grade
Final Exam -	25.0% of your final grade

Each assignment will consist of homework problems and an exam. The homework problems were selected because of their relevance and for the fact that the answers for them are in the back of the book. These answers should not be used as a crutch, but as a way to determine whether or not you understand the material the textbook is covering. The homework problems will be checked for completeness and accuracy, however, the grade you will receive on each assignment will be the percentage you score on the assignment exam. **Since it is essential to practice mathematics in order to learn it, the homework must be completed and submitted for grading.** Both the mid-term and final examinations will be proctored.

NOTE: HOMEWORK IS MANDATORY. FAILURE TO SUBMIT ALL REQUIRED HOMEWORK AND UNIT EXAMS WILL RESULT IN ZERO POINTS FOR THE ENTIRE UNIT.

GRADING SCALE:

A	90% to 100%
B	80% to 90%
C	70% to 80%
D	60% to 70%
F	59% and below

UPPER IOWA UNIVERSITY USES A STANDARD GRADING SYSTEM

A = All work is excellent, shows exceptional understanding of materials; logical, clear, and insightful written and oral work, incorporates knowledge from other sources and moves easily to the next level of understanding, works well beyond minimum requirements.

B = Understanding material is good to very good, demonstrates good grasp of material, good oral and written skills, produces more than the minimum requirements, quality of all work is high.

C = Satisfactory understanding of the material, submits only the minimum requirements, communicates adequately in oral and written formats, displays an adequate understanding of all basic concepts.

D = Quality and quantity written and oral work is below average and barely acceptable.

F = Quality and quantity written and oral work is unacceptable.

EXAMINATION INFORMATION:

You will be allowed to use your textbook, calculator, and notes during the examination. You will be allowed 3 hours to complete each examination. The mid-term will cover the material presented in assignments 1 & 2. The final exam will cover the material presented in assignments 3 & 4.

CHEATING, ACADEMIC DISHONESTY AND PLAGIARISM:

Because cheating, academic dishonesty and plagiarism are affronts to the University community as a whole and a denial of the offender's own integrity, they will not be tolerated. Cheating includes but is not limited to:

- the use of unauthorized books, notes or other sources in the giving or securing of help in an examination or other course assignments,
- the copying of other students' work or allowing others to copy your work,
- the submission of work that is not your own or allowing others to submit your work as theirs,
- the submission of the same work for two or more classes without the approval of any instructors involved.

Academic dishonesty includes, but is not limited to:

- sharing academic materials knowing they will be used inappropriately,

- having access to another person's work without permission,
- providing false or incomplete information on an academic document,
- changing student records without approval.
- obtaining and using texts intended for instructor use only.

Plagiarism includes, but is not limited to:

- the presentation of another's published or unpublished work as one's own,
- taking words or ideas of another and either copying them or paraphrasing them without proper citation of the source,
- using charts, graphs, statistics or tables without proper citation.

Detected cheating, academic dishonesty, or plagiarism will result in consequences that may, at the instructor's discretion, include course failure. In addition, an offender may be reported to the Senior Vice President for the Extended University, the Dean of the Extended University, or designee for possible disciplinary action, which may include suspension or dismissal from the University. Upper Iowa University may make use of various plagiarism detection services. Individuals, by enrolling in courses offered by the University, consent to submission by the University of course-related assignments to such services and the retention of a copy of such assignments by the service.

Cheating, academic dishonesty and plagiarism infractions are tracked by the Dean of the Extended University, and cumulative evidence collected from multiple incidents will be considered when making suspension or dismissal decisions.

Extended University Catalog 2006/07 page 94.

http://www.uiu.edu/catalogs/eu/html/univ_policies.html#cheating

ATTENDANCE:

Even though a student does not attend a regular classroom in the traditional sense and keep up with a set schedule of assignments, it should be pointed out how important it is to keep yourself on a regular timely schedule if possible to complete and send in units. It is too easy to set work aside and decide to do it later. Suddenly, the need to complete assignments and get them in by deadlines can become stressful and, at times, impossible. The key would be to set time aside on a regular basis and submit work in a timely manner.

LIBRARY RESOURCES:

As a student of Upper Iowa University, you have access to the resources of the Henderson-Wilder Library on the Fayette campus. If travel to the campus is not feasible, you can access the library through the University's website. Go to: www.uiu.edu and click on the Library option located on the left side of the home page. To use the InfoTrac, type in the user name of uiu, and the password is peacocks. Be sure to use all lower case as the both items are case sensitive.

WITHDRAWAL:

If you wish to withdraw prior to the last day of the enrollment period you must contact the External Degree office by phone or in writing. After your original six month enrollment period

you no longer have the option to withdraw from the course. You must finish the course or have a final grade assigned based on the coursework submitted.

SPECIAL NEEDS:

If you require accommodation for special needs, please provide documentation to: Director of External Degree.

This syllabus is tentative and subject to change.