

EDUCATIONAL STATISTICS -- EDP 557-- Fall 2000

Instructor: Doris Stilwell, Ph.D.

Office: # 13 Dickey Hall (Basement)

Office Hours: Wednesday 1 - 3

Thursday 2:15 - 3:45

Immediately after class: T-Th @ 1:45 & 5:15; and by appointment

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I. Nature of the course:

EDP 557 is designed to provide students with a working knowledge of basic techniques in statistics. The course is not designed to produce the sophistication in statistics, computer programming, or psychometric applications needed by a producer of research. Rather it is an introductory course intended to develop students' competence in the application of the basic statistical techniques used in summarizing and analyzing research data. The course is designed so that students can become reflective decision makers when using and reading about statistical techniques that are used in research. At the completion of this course, you should be able to critically examine basic statistical techniques for use in your own research. You also should be able to critically read research that uses these techniques.

II. Competency goals of the course:

1. An understanding of the concepts, methods and symbols of elementary statistics;
2. The ability to read, understand and critique research statistics;
3. The ability to plan and carry out simple statistical analyzes; and
4. A beginning understanding of some of the assumptions, limitations and abuses of statistics.

III. Course activities:

1. Read and study the textbook and assigned readings;
2. Do homework and computer assignments and be prepared to discuss in class;
3. Work out the problems in Mastery Tests at the end of each chapter and keep in a Notebook to be turned in at the time of each test and at final exam.
4. Take a two tests and a final examination.

IV. Grading: A = 90 and above, B = 83 - 89, C = 76 - 82, D = 70 - 75

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| 1. Tests I and II @ 15% each | - 30% |
| 2. Final examination | - 40% |
| 3. Homework (4 assignments - 2 points each) * | - 8% |
| 4. Mastery Test Notebook * | - 10% |
| 5. Computer Activities* | - 12% |

*** Points will be deducted for late or incomplete work**

One-half point will be subtracted from your final grade for each Absence.

Note: The use of a calculator is encouraged - in class, for homework and for exams.

EDP 557 -- EDUCATION/AL STATISTICS -- Fall '00 -- Tuesday/Thursday

V. Required Text: Glass, G. V. and Hopkins, K. D. (1996). Statistical methods in education and psychology (3rd ed.). Boston: Allyn and Bacon.

Other readings as assigned

VI. Course outline:

Introduction, preview of the course/syllabus; and Summation Notation	Handout
Homework I	
	<u>Text</u>
Variables, Measurement, Scales (Mastery Test 2: all)	Chapters 1 & 2
Frequency Distributions and Visual Displays of Data (Mastery Test 3: skip 13-16))	Chapter 3
Measures of Central Tendency (Mastery Test 4: all)	Chapter 4
Measures of Variability (Mastery Test 5: all)	Chapter 5

Test I -- Approximate Date -- September 21

The Normal Distribution & Standard Scores (Mastery Test 6: 1 thru 21, Ans. # 12 = 71.675)	Chapter 6
Correlation: Measurement of Relationship Between Two Variables Homework II (Mastery Test 7: 1-22)	Chapter 7
Regression and Prediction (thru 8.11) (Mastery Test 8: 1-21)	Chapter 8
Probability - Homework III (Mastery Test 9: all)	Chapter 9

Test II -- Approximate Date -- October 26

Statistical Inference: Sampling and Interval Estimation (Mastery Test 10: 1-27)	Chapter 10
Introduction to Hypothesis Testing Homework IV (Mastery Test 11: 1-33)	Chapter 11
Inferences about the Differences between means (Mastery Test 12: 1 thru 23)	Chapter 12
Statistics for Categorical Dependent Variables....	Chapter 13
Catch-up and Review for Final	

FINAL EXAM

For Tuesday/Thursday at 12:30 -- Tuesday 12/12 @ 1:00 PM as per exam schedule
For Tuesday/Thursday at 4:00 -- Thursday 12/14 @ 3:30 PM as per exam schedule

