

## **LEAD 873-01 – Doctoral Statistics II (CRN 93132)**

**Cohen 190 / Tuesday 7-9:30 pm**

(3 graduate semester credit hours)

Instructor: Dr. Michael Flick  
Phone: 513-745-3225  
Email: flick@xavier.edu

Office Location: Cohen 198  
Office Hours: By Appointment  
745-3477

### **Required Materials/Text**

Statistics for the Behavioral Sciences (*9<sup>th</sup> Edition* - © 2013)

Frederick J. Gravetter and Larry B. Wallnau

Hewlett Packard 35s Calculator

### **Course Description:**

This course is intended for doctoral students and is a continuation of topics studies in LEAD 825. The course covers (1) the concepts and procedures used in one-way and factorial analysis of variance (ANOVA) with between-subjects designs as well as ANOVA models for within-subjects (randomized-blocks) and mixed (split-plot) designs (2) correlation, (3) regression, (4) The Chi-Square Test and its application, (5) Binomial Testing, and (6) Tests to be applied to ordinal data. Emphasis is on the conceptual understanding of statistics within the context of research and the interpretation of statistical results. Calculators and computer data analysis are required.

### **Course Learning Outcomes (Course Objectives/Goals):**

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

- Use all objectives/topics covered in LEAD 825
- Compute and interpret certain inferential statistics
  - a. Repeated-Measures ANOVA
  - b. Two-Factor ANOVA
  - c. Correlation
  - d. Regression
  - e. Chi-Square Test
  - f. Binomial Test
  - g. Hypothesis test for ordinal data (Mann-Whitney, Wilcoxon, Kruskal-Wallis)
- Students will be able to interpret the results of statistical output (computations) and draw appropriate conclusions with respect to the research hypothesis.
- identify the appropriate statistical analyses for given research questions and sets of data
- Use data analysis software to solve problems

## **Course Requirements:**

**Academic Integrity Policy:** The University Rules, including the Student Code of Conduct, and other documented policies of the department, college, and university related to academic integrity will be enforced. Any violation of these regulations, including acts of plagiarism or cheating, will be dealt with on an individual basis according to the severity of the misconduct.

**Special Needs Policy:** If you have any special needs related to your participation in this course, including identified visual impairment, hearing impairment, physical impairment, communication disorder, and/or specific learning disability that may influence your performance in this course, you should meet with the instructor to arrange for reasonable provisions to ensure an equitable opportunity to meet all the requirements of this course. At the discretion of the instructor, some accommodations may require prior approval by Disability Services.

**Assignments:** Assignments are suggested with each section. Solving and understanding problems is how to learn the material. Work as many of the problems as you need to master the topics. Don't get behind--it is usually fatal! Work problems daily rather than a weekly 'cram' session.

**Required Study Group:** Students will be assigned to study groups during the first class session. Study groups are expected to meet regularly to solve homework problems. Groups may be asked to evaluate member participation.

*Turn Cell Phones OFF during class.*

## **Course Assessment:**

**Grading:** Your grade will be the average of three tests and the final exam. Attendance is mandatory. The exam will be weighted at twice that of tests. Class work, homework, and participation may also affect your grade. Be prepared for each class. Attendance is mandatory and poor attendance carries a grade penalty.

### **GRADING SCALE:**

<b>A</b>	<b>A-</b>	<b>B+</b>	<b>B</b>	<b>B-</b>	<b>C+</b>	<b>C</b>	<b>F</b>
100-94	93-90	89-86	85-82	81-80	79-76	75-70	<69

## Course Content/Schedule:

WEEK	CHAPTER	ASSIGNMENT	WEEK	CHAPTER	ASSIGNMENT
1 August 25	ONE-ELEVEN Review	Worksheet	9 October 20	FIFTEEN Correlation	Page 552 13 – 23 ODD
2 September 1	TWELVE ANOVA	Page 428 1 – 23 ODD	10 October 27	SIXTEEN Regression	Page 586 1 – 11 ODD
3 September 8	TEST 1		11 November 3	SIXTEEN Regression	Page 586 11 – 23 ODD
4 September 15	THIRTEEN ANOVA <small>REPEATED MEASURES</small>	Page 460 1 – 9 ODD	12 November 10	TEST 3	
5 September 22	THIRTEEN ANOVA <small>REPEATED MEASURES</small>	Page 460 11 – 21 ODD	13 November 17	SEVENTEEN Chi-Square	Page 626 1 – 252 ODD
6 September 29	FOURTEEN ANOVA <small>Two-Factor</small>	Page 499 1 – 23 ODD	14 November 24	THANKSVIGING HOLIDAY	
7 October 6	TEST 2		15 December 1	SEVENTEEN Chi-Square	Page 626 13 – 25 ODD
8 October 13	FIFTEEN Correlation	Page 552 1 – 11 ODD	16 December 8	EIGHTEEN Binomial Test and	Page 650 1 – 231 – 15 ODD Ordinal tests
FINAL EXAM: December 15, 2015					