

**Youngstown State University**  
**Department of Mathematics Statistics**

**STAT 5857, Statistical Consulting**  
**Fall 2016**

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**Instructor:** Dr. Lucy X. Kerns

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**Office Hours:** 8:00am – 9:00am, T Th, 1:00pm to 3:00pm MW, or by appointment

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**Textbook:** *Statistical Consulting: A Guide to Effective Communication*, by Janice Derr, Duxbury Press (2000).

**Course Objectives:** The goals of this course are to:

- gain experience with appropriate statistical methods on real data resulting through various projects with clients, some through the Statistical Consulting Center
- develop effective data management and processing skills
- develop written and verbal communication skills for statistical consulting to potential clients and collaborators

**Course Topics:** Tentative course topics may include:

- About Consulting
- Statistical Methodology
  - Repeated Measures Designs
    - The Single-Factor Within-Subjects Design
    - The Mixed Within-Subjects Factorial Design
    - The Two-Factor Within-Subjects Design
  - Regression
    - Logistic Regression
  - Cluster Data Analysis
  - Principle Component Analysis
  - Factor Analysis
  - Missing data
- Case Studies

**Exams:** There will be a midterm exam and a final exam.

<u>Exam 1</u>	<u>Thursday, October 13, 2016</u>
<u>Final Exam</u>	<u>15:15pm-17:15pm, Tuesday, December 13, 2016</u>

There will be no make-up exams without a valid excuse. If you miss an exam for a medical emergency, you must have a valid doctor's excuse. If you miss an exam due to a documented University sponsored event, you should provide documentation to verify your absence from the exam. In case an exam will be missed, arrangements should be made with the instructor **PRIOR** to the absence.

**Course Grades:**

Case Study: written report	100 pts
Case Study: presentation	100 pts
Term Project	100 pts
Exam 1	100 pts
<u>Final Exam</u>	<u>100 pts</u>
<i>Total</i>	<i>500 pts</i>

Based on your accumulated total points, your final course grade will be converted as follows:

<u>Total</u>	<u>Final Grade</u>
450 – 500 points	A
400 – 449 points	B
350 – 399 points	C
300 – 349 points	D
Below 300 points	F