Professor Ramenofsky  
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Maguire Office: Room 388  
1 East Pearson, Chicago, IL  60611  
Office Hours, including By Appointment:  

Thursday 4-6 PM;  

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**ISOM 491, Section 001 - Managerial Statistics**  
Winter Quarter 2013-14, Thursday 6:00 – 9:00 PM, Maguire Hall Room 330

**Catalog Description**

The fundamentals of managerial statistics are presented. Topics may include descriptive statistics, random variables, probability distributions, estimation, and hypothesis testing, regression, and correlation analysis. Statistical software is used to assist in the analysis of these problems.

**Course Overview**

The course is designed to show managers and future managers how to use statistics in problem solving. By using available data and statistics, the goal of the course is to improve your problem-solving skills by making informed decisions. MegaStat, statistical software add in to excel, is an integral part of this course and will continuously be used to bring business applications to the classroom and to solve assigned problems where raw data is present.

**Course Objectives and Learning Outcomes**

Students will be able to demonstrate understanding of (1) statistical thinking and (2) data analysis technique for decision-making purposes.

**Required Materials:**

**Text:**  
Statistical Techniques in Business and Economics, 15th Edition,  
Lind, Marchal and Wathen, McGraw-Hill/Irwin.
Suggested Supplementary Resources:
Statistical Software Package – discussed first class meeting- see page 6

Course Requirements and Grading Criteria

Grades will be given out as follows:

- 87.5 or greater: A  Upper 1/3 of any interval is a Plus Grade
- 75 up to 87.5: B
- 62.5 up to 75: C
- 50 up to 62.5: D
- less than 50: F

Grades are determined by a weighted average of the following (whichever is best for you.):

Weights:  
- Test I: 35  
- Final: 55  
- Homework: 10 (Selective grading: hand in homework on exam days; to get 100 percent, must use statistical software to solve numerical problems that have raw data)

Quinlan School of Business Policies:

Attendance

Class attendance and participation are fundamental components of learning, so punctual attendance at all classes, for the full class meeting period, is expected of Quinlan students. Faculty may set participation policies unique to their courses and use class participation as a component of the final grade. The student is responsible for any assignments or requirements missed during an absence. **Prior notice to the instructor is required for an absence from an exam**
**Make-Up Examinations**

Loyola University academic policy provides that tests or examinations may be given during the semester or summer sessions as often as deemed advisable by the instructor. Because Quinlan faculty believe examinations represent a critical component of student learning, required examinations should be taken during the regularly scheduled class period. **Make-up examinations are discouraged.** Exceptions may be granted only by the faculty member or department chair, and only for unavoidable circumstances (illness verified by a signed physician’s note, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, or religious observance). A make-up final examination may be scheduled only with the permission of the appropriate Quinlan Assistant or Associate Dean.

If a make-up examination must be given, it is the responsibility of the faculty member to prepare, schedule, and proctor the exam. The only regular exception is for a student athlete, who may use the testing services of the Athletics Department to complete a make-up examination. For a student with a documented special testing need, please consult University policy concerning use of the testing center in Sullivan Center at Lake Shore Campus.

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**Academic Integrity**

All members of the Quinlan School shall refrain from academic dishonesty and misconduct in all forms, including plagiarism, cheating, misrepresentation, fabrication, and falsehood...Plagiarism or cheating on the part of the student in individual or group academic work or in examination behavior will result minimally in the instructor assigning the grade of “F” for the assignment or examination. In addition, all instances of academic dishonesty must be reported to the chairperson of the department involved.


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**Any Special Requests, Circumstances, or Instructor Policies:**

**During Class:**

Please turn off cell phone during class lectures and use laptop computers exclusively for class purposes.
Class by Class/Week by Week Course Outline for ISOM 491

Tentative Course Outline: First Class (November 7, 2013)

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Topic</th>
<th>Session (Week)</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
<td></td>
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<td></td>
<td>Ethical Guidelines for Statistical Practice</td>
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<td></td>
<td>American Statistical Association (Handout)</td>
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<tr>
<td>2</td>
<td>Summarizing Data</td>
<td>1</td>
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<tr>
<td>3</td>
<td>Describing Data - Numerically</td>
<td>2</td>
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<tr>
<td>4</td>
<td>Describing Data – Exploring</td>
<td>2</td>
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<tr>
<td></td>
<td>(Introduce concept of Stable Model)</td>
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<tr>
<td>5</td>
<td>Survey of probability</td>
<td>3</td>
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<tr>
<td></td>
<td>(Emphasis - cross tabbing, i.e., Contingency Tables)</td>
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<tr>
<td></td>
<td>(Omit Bayes' Theorem, pp 167-171)</td>
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<tr>
<td>6</td>
<td>Discrete Probability Distributions</td>
<td>3</td>
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<td></td>
<td>(Emphasis Binomial)</td>
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<tr>
<td></td>
<td>(Omit hypergeometric and poisson sections, pp 204-212)</td>
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<tr>
<td>7</td>
<td>Continuous Probability Distributions</td>
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<td>(Emphasis Normal)</td>
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<td>(Omit uniform and exponential distributions, pp223-227, 246-250)</td>
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<tr>
<td>8</td>
<td>Sampling Methods and Central Limit Theorem</td>
<td>4</td>
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<tr>
<td>9</td>
<td>Estimation and Confidence Intervals</td>
<td>5</td>
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<td>10</td>
<td>One Sample Test of Hypothesis</td>
<td>6</td>
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<td>(Omit Type II error, pp 359- 362)</td>
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<tr>
<td>13</td>
<td>Regression and Correlation</td>
<td>8 and 9</td>
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<td>(Omit Transforming Data, pp 495-497)</td>
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<tr>
<td>14</td>
<td>Multiple Regression &amp; Correlation</td>
<td>8 and 9</td>
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<td>16</td>
<td>Introduction to Time Series (If time permits)</td>
<td>9</td>
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<tr>
<td>FINAL (February 13, 2014)</td>
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<td>10</td>
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ALL SELF – REVIEW problems should be reviewed!

Suggested Problems: (The following selected problems will be Graded – Hand in Section I Problems the night of the midterm and Section II Problems the night of the final). Problems that use MegaStat are identified as df problems plus all data set exercises.

Section I

Chapter 1:  1,4,5,7,8,9,13,16,20
Chapter 2:  3,5,7,9,13,15,16,17,19,21,43,51
Chapter 3:  9,11,13,19,23,26,29,31,39,46,51,53,54,55,56,86
Chapter 4:  3,7,11,16,23,25,35,44
Chapter 5:  5,13,15,19,27,29(ignore df),39,41,42,44,45,46,66,92
Chapter 6:  1,5,9,11,13,18,21,23,47,49
Chapter 7:  7,9,11,13,17,19,21,23,25,27,29,31,35,53,57,65,74
Chapter 8:  5,15,17,23,31,35,37,39

Section II

Chapter 9:  1,5,7,9,11,15,17,19,21,23,25,31,57,63,69
Chapter 10:  1,3,5,7,11,13,17,19,23,25,31,33 (omit Compute the p-value),51,53,66
Chapter 13:  3,5,7,9,15,17,23,25,29,33,39,41,47,55,62
Chapter 14:  1,5a,5b,7,11,17,20,25,27,33,35
Chapter 16:  Handout in Class
MegaStat will be used to solve assigned problems in class with raw data (Note: you can use any statistical software package). MegaStat can be purchased (see web site below) along with free data sets (raw data), data files (raw data) and power point slides. Do not purchase MegaStat before first class meeting; details will be discussed in first class meeting.

Supplementary class material can be found at

www.mhhe.com/lind15e

1. Open hyperlink

2. on line learning center – click student edition on Left part of screen:

Course wide content – Choose Data Sets and MegaStat web site

Choose appropriate Chapter for Power Point Slides and Data Files

More Resources

Please note: This class may occasionally deviate from the course outline above. The instructor reserves the right to make changes as needed to the course syllabus.