Course Objectives:

I have designed this course with two major objectives in mind. First, I want you to thoroughly understand, and be able to competently apply, those statistical methods typically used in the analysis of business data. Second, I want to affect how you think about problems. If data can help you resolve a business problem, this course should enable you to:

1. structure the problem in a way that facilitates its analysis;
2. specify the data that needs to be collected;
3. decide on the statistical technique(s) most appropriate for analyzing the data;
4. apply the technique correctly; and,
5. insightfully interpret the results in terms of their implications for the original problem.

Course Grade:

Your final grade for the course will be determined by your performance on the following requirements:

- Six mini-assignments, totaling 100 points
- One Exam
- Paper

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\begin{align*}
\text{Six mini-assignments, totaling 100 points} & \quad 100 \\
\text{One Exam} & \quad 100 \\
\text{Paper} & \quad 100 \\
\text{Total} & \quad 300 \text{ points}
\end{align*}
\]

The exam will be open book, open notes, and scheduled during exam time at the end of the second mini-semester. Reading will be primarily in the class SPSS manual and in my handouts. The SPSS Base 10.0 is for backup if you find it helpful.
Class | Day/Date | Topics Covered | Before next class:
---|---|---|---
1 | M, 10/1 | Introduction, Syllabus, Data Files, Application Example | 1) Pick a data base or begin creating a new one; 2) Read pages 1-12 in class SPSS manual; 3) Read pages 1-14 in SPSS Base 10.0.
2 | W, 10/3 | Levels of Measurement, Data Base Discussion | 1) Review notes on levels of measurement.
3 | M, 10/8 | Sampling, Probability Distributions | 1) Review notes on sampling and probability distributions; 2) Run one-page partial print-out of your data base for turning in Thursday.
4 | W, 10/10 | Descriptive Statistics | Assignment Due: Partial Print-out of Data Set (5 points)
5 | M, 10/15 | Chi-Square Introduction | 1) Review notes and hand-out on chi-square; 2) Read pages 30-41 in class SPSS manual; 3) Read pages 63-87 in SPSS Base 10.0; 4) Start experimenting with crosstab runs; 5) Prepare descriptive statistics assignment for turning in Thursday.
6 | W, 10/17 | Chi-Square Implementation and Interpretation | Assignment Due: Descriptive Statistics (5 points)
7 | M, 10/22 | Linear Combinations/Linear Models/F test | 1) Have one crosstab test available for random calling presentation in class.
<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Topics Covered</th>
<th>Assignment Due</th>
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<tr>
<td>8 W, 10/24</td>
<td>W</td>
<td>One independent variable test with binary predictors/Chi-Square Presentations</td>
<td>Chi-Square Test (20 points)</td>
<td>1) Review notes on one-variable test; 2) Experiment with running one-variable tests.</td>
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<td>9 M, 11/12</td>
<td>M</td>
<td>Goodness of Fit Measures/Linear Independence/Chi-Square Presentations</td>
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<td>1) Review notes on goodness-of-fit and linear independence; 2) Read pages 177-188 in SPSS Base 10.0; 3) Prepare one-variable test for turning in Tuesday.</td>
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<td>10 W, 11/14</td>
<td>W</td>
<td>Test for linearity/One-variable presentations</td>
<td>One-variable test (20 points)</td>
<td>1) Review notes on linearity test; 2) Read pages 71-76 in class SPSS manual; 3) Run linearity test for turning in on Thursday.</td>
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<td>11 M, 11/19</td>
<td>M</td>
<td>Tests with two independent variables and binary predictor vectors/ Linearity test presentations</td>
<td>Linearity test (20 points)</td>
<td>1) Review notes on two-variable test; 2) Read pages 52-70 in class SPSS manual; 3) Run two-variable test for turning in on Thursday.</td>
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<td>12 M, 11/26</td>
<td>M</td>
<td>Multiple Regression/Two-variable presentations/Hold-out predictive tests</td>
<td>Two-variable test (30 points)</td>
<td>1) Review notes on multiple regression and predictive test; 2) Read pages 77-106 in class SPSS manual; 3) Run regressions for random calling on Tuesday.</td>
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<td>13 W, 11/28</td>
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<td>Multiple regression transformations/ Multiple regression presentation</td>
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<td>1) Review; 2) Read pages 189-230 in SPSS Base 10.0.</td>
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<td>14 M, 12/3</td>
<td>M</td>
<td>Application examples/Presentations</td>
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15  W, 12/5  Topics Covered: Special considerations for Time Series Data/Presentations

16  M, 12/10 Topics Covered: Time series/Presentations/Applications

The paper is due on Friday, 12/7, no later than 5:00 p.m. in the offices of the second floor of Herring Hall. You are welcome to turn it in early. Have a complete first draft printed out by Wednesday, 12/5.

The final exam will be given on Thursday, 12/13 from 9:00 am to 12:00 noon.

Any student with a disability requiring accommodations in this course is encouraged to contact me after class or during office hours. Additionally, students can also contact Disabled Student Services in the Ley Student Center.