QMETH 500 – Statistics

Winter 2015

When: Monday and Wednesday, 6:00-7:40 pm or 7:50-9:30 pm
Where: PACCAR 392
Web-Site: https://canvas.uw.edu

Instructor: Erich Studer-Ellis
Office: PACCAR 525
Telephone: 206.543.4780
E-mail: estud@uw.edu [please send messages to my UW e-mail address directly, NOT through Canvas]

Office Hours: Generally Monday – Friday, when not in classes

Course Description:

This course reviews the uses of statistical tools to present, analyze, and interpret data. We emphasize applications of statistical tools and their uses for organizational decision-making, not the theoretical bases of statistical tools. You will develop data and analysis skills to apply in other courses, work experiences, and life experiences. Activities include: representing data through tables, graphs, and numerical summaries; examining the role of probability in statistics; estimating populations and testing hypotheses about populations using sample data; and conducting correlation, regression, and time-series analyses.

Course Objectives:

Organization members encounter strategic decision problems continually in environments characterized by uncertainty and risk. To make good decisions and take actions that promote the organization’s strategic vision, organization members must

- Identify a decision problem’s underlying analytical structure
- Understand the roles of uncertainty and risk in the decision-making process
- Analyze available data to understand relationships among variables and to make predictions
- Use available computing technology and tools
- Be critical consumers of information and data
Books:

Required


Recommended


On Reserve, Foster School Library


For Interested Students (A-B-C-D – Above-and-Beyond-the-Call-of-Duty)


Software:

Microsoft Excel 2010, in particular the Analysis ToolPak add-in.
Grade Structure:

- In-Quarter Examination: 30%
- Final Examination: 30%
- Individual Assignments: 20%
- Team Assignments: 20%
- 100%

Grade Components:

Examinations – One in-quarter, in-class, examination (30%) and a final examination (30%). The final examination is cumulative; however, it will emphasize material after the first examination. Students can use one formula/note sheet for the in-quarter examination and two formula/note sheets (basically, one formula/note sheet for each section of material) for the final examination. Formula/note sheet guidelines: standard paper (8.5” x 11”), handwritten or typed (no photocopies), both sides, and you create/develop individually (meaning, you can not share formula/note sheets and you can not use formula/note sheets created by someone else). Please NOTE: you are allowed to adjust/improve/fix the first formula note sheet after the in-quarter examination. You may not use a computer, mobile telephone, tablet, or similar device during an examination. You will be required to use a calculator – programmable calculators are allowed, but any basic calculator with a natural logarithm (base e) function will be sufficient. No make-up examinations are planned so please prepare accordingly.

Individual Assignments – Eight to ten (approximately one each week) individual homework assignments (20%). Individual assignments will contain conceptual, calculation, and computer questions and will be available on the course web-site approximately one week before they are due. While you may discuss individual assignments with other students, each student is to submit her/his own work and answers. I will generally collect individual assignments when associated classes begin; late assignments will receive zero credit. I accept paper copies of individual assignments; please do not e-mail individual assignments to me. Many students find solving problems a valuable way to understand and apply statistical tools.

Team Assignments – Five to six (approximately one every two weeks) team assignments (20%). Team assignments will generally involve applying a group of analytical methods or tools, will often include analyzing datasets, and will be available on the course web-site approximately one week before they are due. After completing a team assignment, each team member should be familiar with each step/part of the assignment and be prepared to explain or describe in detail each step/part of the assignment. All students whose names are on a team assignment will receive the same credit. If you feel there is a serious problem or issue with the participation of a team member (or team members) please contact me as soon as possible.

Accommodations:

If you have a special need or/and disability that requires academic accommodations, please see me as soon as possible. For more information, please contact the Disability Resources for Students [DRS] Office, Mary Gates 011, 206.543.8924.
Academic Integrity:

[from MBA Program materials] “The University of Washington Graduate Business School Honor System is an integral part of the program. … Students are responsible for understanding the provisions of the code.” Honor Code Statement – “Cheating, attempted cheating, plagiarism, lying, and stealing in relation to academic work is prohibited.” I enforce the School’s Honor Code. Please note: Students are to complete examinations with authorized materials only and without assistance or cooperation of any kind.

Professionalism:

Class attendance is required, except for extreme circumstances such as illnesses and unavoidable conflicts with job responsibilities. If you can not attend a class, please contact me through e-mail in advance to explain the reason. All course members should arrive to each class on time and be prepared for and fully engaged in class content through each class. Please respect other course members’ attempts to behave similarly. Do not use computers, tablets, telephones, pagers, and other electronic devices during class.

Course Support:

Because material in the course is cumulative, avoid falling behind. It will be difficult to do well in the course if you do not understand material as it is presented. If you do not understand material, please seek assistance as soon as possible.

**Skull Sessions** – I am available to hold help or review sessions through the quarter, probably on weekends, as necessary (meaning as requested). Please NOTE: attendance at help or review sessions is voluntary.

Keys to Achieve:

Ignore [your and others’] preconceptions about statistics
Do not fall behind
  Work consistently
Be an active learner
  Ask questions
  Seek assistance
  Investigate or explore
Avoid under-confidence (or over-confidence?)
Practice using note sheets before examinations
Get your money’s worth
  Make me work!
Have fun!
Otis Redding
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<thead>
<tr>
<th>Date/Day</th>
<th>Topic(s)</th>
<th>Assignment</th>
<th>Readings</th>
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<td><strong>Descriptive Statistics</strong></td>
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<tr>
<td>5 Jan – M</td>
<td>1. Background; Data Definitions; Univariate Distributions</td>
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<td>19 Jan – M</td>
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<td>21 Jan – W</td>
<td>5. Discrete Probability Distributions</td>
<td>Team 2</td>
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<td>28 Jan – W</td>
<td>Examination 1</td>
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<td><strong>Inferential Statistics</strong></td>
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<td>4 Feb – W</td>
<td>2. Testing Hypotheses – One Mean</td>
<td>Team 3</td>
<td>E: 7</td>
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<td>11 Feb – W</td>
<td>4. Testing Hypotheses – 2 Means (Dep. Samples), ANOVA</td>
<td>Individual</td>
<td>E: 8, 9.1</td>
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<td>18 Feb – W</td>
<td>5. Testing Hypotheses – 2 Proportions, Correlation, Regression</td>
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<td>8. Regression Modeling – Interaction Terms</td>
<td>Team 5</td>
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<td>16 Mar – M</td>
<td><strong>Examination 2</strong></td>
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