COURSE NUMBER: TSTD 6251 & TSTD6251DE

COURSE TITLE: Quantitative Applications in Tourism and Hospitality Management

COURSE DESCRIPTION: This course introduces students to the applications of quantitative methods in tourism and hospitality management. It studies the procedures and methodology for collecting data, summarizing and analyzing data, interpreting data, drawing conclusions and making decisions based on the data. Methods of analysis and applications are equally emphasized in this course.

PREREQUISITES:

PROFESSOR: Larry Yu
Department of Management
Office: Funger 301Q
Office Hours: Wednesday 3 – 6 pm, Thursday 3 – 6 pm or by appointment
Phone: 202 994-8740
E-mail: lyu@gwu.edu

LEARNING OBJECTIVES:
1. Understand data scales: nominal, ordinal, interval & ratio scales of measurement.
2. Organize raw data and present data graphically.
3. Understand the concept of distributions: binomial probability and normal probability distribution.
4. Conduct hypotheses testing for means and proportions.
5. Calculate and interpret confidence intervals and estimate sample size.
6. Learn to perform one-way analysis of variance and understand F distributions.
7. Perform non-parametric tests: chi-square and Spearman rank correlation.
8. Analyze time series data: correlation and linear regression, and tourism forecasting.
9. Apply statistical methods to tourism/hospitality management decisions.
10. Be able to understand statistical methodology published in academic research article.
11. Use SPSS to perform statistical analysis.

READINGS & MATERIALS: Required
Recommended

Online References

http://www.statsoft.com/Textbook - This electronic statistic textbook offers an introduction to basic statistic concepts and analysis. It can be used as a good reference book for this course.

http://faculty.chass.ncsu.edu/garson/PA765/statnote.htm - This is a comprehensive statistical text for undergraduate and graduate studies. It is a very good reference book for your studies.

GRADING: Students are evaluated by their performance in the following academic requirements:

- Article critique of statistical research (5%)
- 8 weekly SPSS exercise (38%),
- Midterm (24%)
- Final exam (28%)
- Class participation/attendance (5%)

Grades for this course will be curved. That is, the percentage points that you obtain from the case write up, guest lecture critique, market analysis exercises, class participation, and exam will be added up and sorted from high to low. Students at the top of this ranking will get an A. The cut-off points for A-, B+, B, B-, etc., will be determined in accordance with the School's policy on grade distribution. In particular, no more than 40% of the class will receive an A, and the average grade of the class will not be higher than 3.8.

ASSIGNMENTS: Explanation of Course Requirements

1. Article Critique of statistical research (5%)
   One objectives of this course is that students are able to understand and communicate the statistical procedures and techniques applied in academic or industry research. One statistical research article will be selected for students to review and critique toward the end of the semester when students have learned the statistical concept and methods.

2. Weekly SPSS Exercise (38%)
   You will use SPSS program for statistical analysis in this course and you can have the program installed on your computer at the Tech Commons in the lower level of Gelman Library. You will complete eight SPSS weekly exercises relating to the methods learned in class
and some exercises also require you to mine data on the Internet. SPSS exercise enables you to apply statistical procedures to analyzing and solving tourism and hospitality management issues.

3. **Middle Term Exam (24%)**
   A middle exam is scheduled to assess students’ learning of the materials covered till that point in the semester and applications and communications of statistical analysis and results. The exam include problem solving questions.

4. **Final Exam (28%)**
   A comprehensive final exam is scheduled for this course during the final week. This exam will assess student learning outcome in hotel market analysis theories, methods and applications. The final exam consists primarily of problem solving questions and interpretations of SPSS outputs for different statistical analyses.

5. **Participation & Attendance (5%)**
   Class attendance and participation is mandatory and will be evaluated strictly and on an individual basis. Your grade will depend on quantity of your participation and, most of all, the quality of your participation. Your participation grade may be negatively affected by unprofessional behavior, e.g., inappropriate comments, classroom distractions, chatting with classmates.

   It will be particularly important to prepare for the required sessions and activities where we have external guests. These people are experts in their domains and are willing to share their knowledge with us just for our benefit. Let’s honor this by ensuring all are particularly professionally engaged during these sessions.

**ACADEMIC INTEGRITY:**

The code of academic integrity applies to all courses in the George Washington School of Business. Please become familiar with the code. All students are expected to maintain the highest level of academic integrity throughout the course of the semester. Please note that acts of academic dishonesty during the course will be prosecuted and harsh penalties may be sought for such acts. Students are responsible for knowing what acts constitute academic dishonesty. The code may be found at: [http://www.gwu.edu/~ntegrity/code.html](http://www.gwu.edu/~ntegrity/code.html)

**UNIVERSITY POLICIES:**

**Religious Accommodation**

Students should notify faculty during the first week of the semester of their intention to be absent from class on their day(s) of religious observance. Faculty should extend to these students the courtesy of absence without penalty on such occasions, including permission to make up examinations. Faculty who intend to observe a religious holiday should arrange at the beginning of the semester to reschedule missed classes or to make other provisions for their course-related activities.
**Disability Support Services (DSS)**

Any student who may need an accommodation based on the potential impact of a disability should contact the Disability Support Services office at 202-994-8250 in the Rome Hall, Suite 102, to establish eligibility and to coordinate reasonable accommodations. For additional information please refer to: gwired.gwu.edu/dss/

**Mental Health Services 202-994-5300**

The University's Mental Health Services offers 24/7 assistance and referral to address students' personal, social, career, and study skills problems. Services for students include: crisis and emergency mental health consultations confidential assessment, counseling services (individual and small group), and referrals. counselingcenter.gwu.edu/

**Schedule of Topics, Readings and Problems**
(This is a Wednesday class)

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic(s) and readings</th>
<th>Assignment(s) Due</th>
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<tbody>
<tr>
<td>August 31</td>
<td>Syllabus &amp; Introduction&lt;br&gt;What is statistics? Importance of statistics &amp; definitions&lt;br&gt;Readings: Ch. 1</td>
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<tr>
<td>September 7</td>
<td>Data organization&lt;br&gt;Graphical presentation&lt;br&gt;Readings: Ch. 2</td>
<td>Written homework 1 due</td>
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<td>September 14</td>
<td>Descriptive &amp; univariate statistics&lt;br&gt;Readings: Ch. 3</td>
<td>Practice SPSS assignment due&lt;br&gt;Written homework 2 due</td>
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<td>September 21</td>
<td>An introduction to probability&lt;br&gt;Readings: Ch. 5</td>
<td>SPSS 1 assignment due&lt;br&gt;Written homework 3 due</td>
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<td>September 28</td>
<td>Discrete distribution&lt;br&gt;The binomial probability distribution&lt;br&gt;Readings: Ch. 6</td>
<td>SPSS 2 assignment due&lt;br&gt;Written homework 4 due</td>
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<tr>
<td>October 5</td>
<td>Continuous distributions&lt;br&gt;The normal probability distribution&lt;br&gt;Readings: Ch. 7</td>
<td>Written homework 5 due</td>
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<td>October 12</td>
<td>Midterm exam</td>
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<td>October 19</td>
<td>Statistical estimation&lt;br&gt;Readings: Ch. 8</td>
<td>SPSS 3 assignment due&lt;br&gt;Written homework 6 due</td>
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<td>October 26</td>
<td>Hypothesis testing&lt;br&gt;Large samples, small samples and proportions&lt;br&gt;Readings: Ch. 8</td>
<td>SPSS 4 assignment due&lt;br&gt;Written homework 7 due</td>
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<td>November 2</td>
<td>Analysis of variance &amp; F distributions&lt;br&gt;Readings: Online reading posted on Bb</td>
<td>SPSS 5 assignment due&lt;br&gt;Written homework 8 due</td>
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<tr>
<td>Date</td>
<td>Topic</td>
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<td>November 9</td>
<td>Analyzing bivariate data</td>
<td>SPSS 6 assignment due</td>
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<td>Linear regression and correlation methods</td>
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<td>Readings: Ch. 4</td>
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<td>November 16</td>
<td>Time-series analysis</td>
<td>SPSS 7 assignment due</td>
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<td>Readings: Ch. 4</td>
<td>Written homework 9 due</td>
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<tr>
<td>November 30</td>
<td>Analysis of categorical data</td>
<td>Article critique due</td>
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<td>Chi-square applications</td>
<td>Written homework 10 due</td>
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<td>Readings: Ch. 9</td>
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<td>December 7</td>
<td>Summary &amp; review</td>
<td>SPSS 8 assignment due</td>
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<td>December 14</td>
<td>Final Exam</td>
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NOTE: In accordance with university policy, the final exam will be given during the final exam period and not the last week of the semester.