NRRT601-001 – Quantitative Analysis in Tourism Decision–Making

Instructor: Dr. Jerry J. Vaske
Office hours: 10 – 11 Tuesdays (or by appointment)
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Term: Spring, 2015
Credits: 2
Prerequisite(s): ST312 (or equivalent)

Course Description: NRRT601 provides an overview of the statistical techniques used by researchers to inform and support tourism decision-making. Emphasis is placed on understanding data manipulation techniques and what statistics are appropriate for addressing applied decision–making problems.

Primary Text(s): Selected chapters from:


Vaske, J. J. (in prep.). *Understanding multivariate statistics: Applications in parks, recreation and human dimensions*.

Supplemental readings


Additional Class Material:

Readings and computational software for the Potential for Conflict Index (PCI2) are available at http://warnercnr.colostate.edu/~jerryv/PCI2/

Students will need to have access to IBM SPSS v22. The student version of the software is available from RamTech. A one-year license is $72.00. Alternatively, SPSS is available on the WCNR computer lab PCs.

Electronic data sets for use in class quizzes will be made available to students.

Course Objective(s): At the end of this course, students will …

1. Have an understanding of the major statistical techniques used by researchers to inform and support tourism decision-making.
2. Be able to differentiate what statistical techniques are appropriate for analyzing selected types of tourism research questions.
3. Be able to conduct data analysis using statistical software.
4. Interpret computer printouts and construct data tables / figures for communicating with technical and non-technical audiences.
Course Topics / Module Schedule:

Module 1 – Introduction to quantitative analysis
Reading – Levels of measurement: Once over again (Vaske, 2008 – Chapter 5, pp. 79-88)
Lecture – Some basic terminology
Lecture – Chapter 05 – Levels of measurement.ppt
Quiz – Levels of measurement

Reading – Levels of measurement: Once over again (Vaske, 2008 – Chapter 5, pp. 89-94)
Lecture & Quiz – Selecting an appropriate statistic

Module 2 – The Analytical Tool
Reading – An introduction to SPSS for Windows (Vaske, 2008 – Chapter 9, pp. 223-240)
Lecture – Chapter 09 – Intro to SPSS v22.ppt
Quiz – Introduction to SPSS

Reading – Understanding SPSS variables (Vaske, 2008 – Chapter 10, pp. 242-257)
Lecture – Chapter 10 – Understanding SPSS variables.ppt
Quiz – Understanding SPSS variables

Module 3 – Turning Descriptive Data into Information
Reading – Frequencies and descriptive statistics (Vaske, 2008 – Chapter 11, pp. 259-277)
Lecture – Chapter 11 – Frequencies & Descriptives.ppt
Quiz – Frequencies – CO State Parks

Reading – Data manipulation techniques (Vaske, 2008 – Chapter 12, pp. 285-314)
Lecture – Chapter 12 - Data manipulation.ppt
Quiz – Data Manipulation – Mt. Evans conflict

In Class Lecture and Quiz
Lecture – Vaske (2013) – Intro to PCI2.ppt
Non-graded Quiz – Yellowstone wolves

Module 4 – Detecting Differences between Known Tourism Markets – Part 1
Reading – Hypothesis testing and effect size (Vaske, 2008 – Chapter 6, pp. 97-120)
Lecture – Chapter 06 – Hypothesis testing & Effect size.ppt
Quiz – Hypothesis testing & Effect size

Reading – Crosstabulations (Vaske, 2008 – Chapter 13, pp. 315-342)
Lecture – Chapter 13 – Crosstabs and Chi-Square.ppt
Quiz – Crosstabs – CO Tourism impacts

Module 5 – Detecting Differences between Known Tourism Markets – Part 2
Reading – Means and t-tests (Vaske, 2008 – Chapter 14, pp. 343-374)
Lecture – Chapter 14 – Means and t-tests.ppt
Quiz – Means & t-tests – CO State Parks

Reading – Analysis of Variance (Vaske, 2008 – Chapter 15, pp. 375-407)
Lecture – Chapter 15 - 1-way & n-way ANOVA.ppt
Quiz – ANOVA – CO Tourism impacts
Module 6 – Forecasting Tourism Behavior
Reading – Correlation (Vaske, 2008 – Chapter 16, pp. 409-421)
Lecture – Chapter 16 – Bivariate Correlation.ppt
Quiz – Correlation – Tourism Development

Reading – Regression (Vaske, 2008 – Chapter 16, pp. 422-452)
Lecture – Chapter 16 – Regression.ppt
Quiz – Regression – Tourism Development

In Class Lecture & Quiz
Psychological scales and reliability analysis (Vaske, 2008 – Chapter 18, 501-531)
Lecture – Chapter 18 – Psychological Scales & Reliability Analysis.ppt
Non-graded Quiz – Reliability – Skier-Snowboarder

Module 7 – Predicting Discrete Tourism Choices
Reading – Logistic Regression (Vaske, 2008 – Chapter 17, pp. 453-475)
Lecture – Chapter 17 – Logistic Regression.ppt
Quiz – Logistic – Community vs. Property Rights

Module 8 – Market Segmentation
Reading – Cluster Analysis (Vaske, in preparation)
Lecture – Cluster Analysis.ppt
Quiz – Cluster Analysis – Mountain Biker Conflict

Instructional Methodology:  This class is a combination of online lecture, discussion and computer-aided learning.
The class will meet for 8 Weeks.
January 20 – March 10.

Mode of Delivery:  The primary mode of delivery for this class will be online. Lectures will be presented via videos.
I fully realize that statistics courses can be challenging for some people.
Since face-to-face contact in this course is limited to one day per week, additional challenges are likely.
That said never hesitate to contact me when you get stuck.
Notice that the previous sentence said “when” not “if.”

Methods of Evaluation:
Students will be evaluated on 14 quizzes.
Quizzes are available in Canvas.
Questions for some of the quizzes will be based on the course content for a given Module.
Other quizzes involve running SPSS analyses and interpreting the results.
The table on the next page outlines the points for each quiz.
<table>
<thead>
<tr>
<th>Class</th>
<th>Module</th>
<th>Quiz</th>
<th>Topic</th>
<th>% of Grade</th>
<th>Points</th>
<th>Due</th>
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<tbody>
<tr>
<td>Jan. 20</td>
<td>1</td>
<td>1</td>
<td>Levels of measurement</td>
<td>4%</td>
<td>15</td>
<td>Jan. 25</td>
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<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>Selecting the appropriate statistic</td>
<td>13%</td>
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<tr>
<td>Jan. 27</td>
<td>2</td>
<td>3</td>
<td>Introduction to SPSS</td>
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<td>20</td>
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<tr>
<td></td>
<td>2</td>
<td>4</td>
<td>Understanding SPSS variables</td>
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<td>20</td>
<td>Feb. 1</td>
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<tr>
<td>Feb. 3</td>
<td>3</td>
<td>5</td>
<td>Frequencies</td>
<td>3%</td>
<td>10</td>
<td>Feb. 8</td>
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<tr>
<td></td>
<td>3</td>
<td>6</td>
<td>Data manipulation techniques</td>
<td>4%</td>
<td>16</td>
<td>Feb. 8</td>
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<tr>
<td>Feb. 10</td>
<td>4</td>
<td>7</td>
<td>Hypothesis testing &amp; Effect size</td>
<td>3%</td>
<td>13</td>
<td>Feb. 15</td>
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<tr>
<td></td>
<td>4</td>
<td>8</td>
<td>Crosstabulations &amp; chi-square</td>
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<td>34</td>
<td>Feb. 15</td>
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<tr>
<td>Feb. 17</td>
<td>5</td>
<td>9</td>
<td>Means &amp; t-tests</td>
<td>8%</td>
<td>30</td>
<td>Feb. 22</td>
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<tr>
<td></td>
<td>5</td>
<td>10</td>
<td>Analysis of variance</td>
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<td>Feb. 22</td>
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<tr>
<td>Feb. 24</td>
<td>6</td>
<td>11</td>
<td>Correlation</td>
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<td>20</td>
<td>Mar. 1</td>
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<tr>
<td></td>
<td>6</td>
<td>12</td>
<td>Regression</td>
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<td>30</td>
<td>Mar. 1</td>
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<td>Mar. 3</td>
<td>7</td>
<td>13</td>
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<tr>
<td>Mar. 10</td>
<td>8</td>
<td>14</td>
<td>Cluster analysis</td>
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<td>Mar. 15</td>
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<td></td>
<td></td>
<td>Total</td>
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All assignments are due before midnight on the dates noted in the last column.
Answers to assignments will be available at 1 am the following day.

Grades will be based on the total points accumulated from requirements listed above.
Grades will be assigned as follows.

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<th>Letter Grade</th>
<th>Percentage %</th>
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<td>388 – 400</td>
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<tr>
<td>A</td>
<td>93-96</td>
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<td>83-86</td>
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<td>B-</td>
<td>80-82</td>
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<td>308 – 319</td>
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<td>73-76</td>
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<td>70-72</td>
<td>280 – 291</td>
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<td>D</td>
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<td>Less than 60</td>
<td>&lt; 240</td>
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