511-01 Advanced Statistics I

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SYLLABUS
ADVANCED STATISTICS I
Psychology 511-01 2 credit hours
Fall/2016

Location: Joseph 312
Day & Time: Wednesdays, 1:00 pm to 3:00 pm

Instructor: Mark S. Nagy, Ph.D.  
Email: nagyms@xavier.edu
Office: Elet 107B
Office hours: Wednesdays, 3:00 to 4:30, and by appointment

Phone #: 513-745-1958

Department of Psychology Mission Statement: In keeping with the Jesuit, Catholic, liberal arts tradition, the department of psychology educates students in the science of behavior and mental processes with sensitivity toward the diversity of all people so students may use psychological knowledge and insight to address human concerns.

Psy.D. Program Mission Statement: The Psy.D. program provides the highest standard of educational experience to enable graduate students to become practicing clinical psychologists who have a solid appreciation of the role of science in all aspects of professional activity, a clear understanding of the ethical demands of such a position, and who hold the value of contributing to the lives of others, especially those in our society whose needs have been traditionally underserved.

Master of Arts Mission Statement: The Master of Arts program adheres to a practitioner-scientist orientation that recognizes the importance of a strong research foundation upon which applied skills may be built. The program includes a thesis and an internship requirement and is designed for completion within two full-time academic years. The Department of Psychology offers two areas of concentration within the master’s program: Industrial-Organizational (I-O) and General Experimental Psychology.

Catalog Description: Multivariate analyses emphasizing correlational (multiples regression, discriminant analysis, factor analysis, etc.) and experimental (ANOVA, MANOVA, ANOCOVA, etc.) approaches to experimental design and analysis.

Course Overview: This course is to briefly review some of the material in your undergraduate statistics course(s) and then expose you to more advanced statistical methods, such as multiple regression and multivariate statistics (note: some refer to these as the same; I and many others do not).

Course Objectives: The main objective of this course is to have you learn statistics from a conceptual, not an empirical point of view.

Course Format: Lecture

Required books/articles:


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<thead>
<tr>
<th>Date</th>
<th>Lecture Topic</th>
<th>Readings</th>
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</thead>
<tbody>
<tr>
<td>August 24</td>
<td>Introduction/Overview</td>
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<tr>
<td>August 31</td>
<td>Overview</td>
<td>Tabachnick &amp; Fidell, Chs. 1 &amp; 2 Cohen (1992)</td>
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<tr>
<td>September 7</td>
<td>Review of Univariate and Bivariate Statistics; Simple Linear Regression</td>
<td>Tabachnick &amp; Fidell, Ch. 3</td>
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<tr>
<td>September 14</td>
<td>Review of Univariate and Bivariate Statistics; Simple Linear Regression</td>
<td>Tabachnick &amp; Fidell, Ch. 3</td>
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<tr>
<td>September 21</td>
<td>**** EXAM 1 ****</td>
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<tr>
<td>September 28</td>
<td>Screening Data Prior to Analysis</td>
<td>Tachnick &amp; Fidell, Ch. 4</td>
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<tr>
<td>October 5</td>
<td>Screening Data Prior to Analysis</td>
<td>Tachnick &amp; Fidell, Ch. 4</td>
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<tr>
<td>October 12</td>
<td>Multiple Regression</td>
<td>Tabachnick &amp; Fidell, Ch. 5.1 – 5.4 Pedhazur, Ch. 5</td>
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<tr>
<td>October 19</td>
<td>NO CLASS: ASPPB ANNUAL MEETING</td>
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<tr>
<td>October 26</td>
<td>Multiple Regression</td>
<td>Tabachnick &amp; Fidell, Ch. 5.1 – 5.4 Pedhazur, Ch. 5</td>
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<td>November 2</td>
<td>**** EXAM 2 ****</td>
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<td>November 9</td>
<td>Statistical Control</td>
<td>Pedhazur, Ch. 7</td>
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<td>November 16</td>
<td>Statistical Control</td>
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<td>November 23</td>
<td>THANKSGIVING: NO CLASS</td>
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<td>November 30</td>
<td>Prediction</td>
<td>Tabachnick &amp; Fidell, Ch. 5.5 – 5.7 Pedhazur, Ch. 8</td>
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<tr>
<td>December 7</td>
<td>Prediction</td>
<td>Tabachnick &amp; Fidell, Ch. 5.5 – 5.7 Pedhazur, Ch. 8</td>
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<tr>
<td>December 14</td>
<td>**** FINAL EXAM ****</td>
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COURSE POLICIES

Cellular Phones: Be respectful of everyone in the class; not only of those around you, but of your instructor as well. Please turn off all cellular phones while attending class. If you look at your cell phone during a lecture, I will ask you to leave for the day. If you look at your cell phone during an exam, you will get a zero on the exam. You can, of course, check your cell phone during our mid-class break. If you are in a situation in which your cellular phone must be on during class, then you probably should not be in class.

Academic Honesty: “Violations of certain standards of ethical behavior will not be tolerated at Xavier University. These include theft, cheating, plagiarism, unauthorized assistance in assignments and tests...the falsification of results and materials submitted in reports...All work submitted for academic evaluation must be the student's own...the direct and unattributed use of another's efforts is prohibited as is the use of any work untruthfully submitted as one's own. Penalties for violations of this policy may include one or more of the following: a zero for that assignment or test, an "F" in the course, and expulsion from the University” (Xavier University, Office of the Registrar, 2012).

Equal Access: Anyone who feels he/she may need an academic accommodation based on the impact of a disability should contact me to discuss your needs as soon as possible. I rely on the Disability Services Office for assistance in verifying eligibility for academic accommodations. If you have not previously contacted Disability Services, I encourage you to do by calling 513-745-3280, stopping by room 514 of the Conaton Learning Commons, or e-mailing Cassandra Jones at jonesc20@xavier.edu.

ASSIGNMENTS and GRADING

Assignments: Reading assignments represent material that must be covered before attending class.

Exams: The exams will be in essay and short answer format. Please note that the final is NOT cumulative. In the event of school cancellation, exams will take place during the next class meeting. Any student missing the exam at the regularly scheduled time for any reason will be required to take a make-up exam consisting of different, albeit relatively equivalent, questions.

Participation: Participation consists of contributing to class discussion and giving reasonable answers when called upon. We all learn when others participate. Plus, you will have to participate in team meetings when you graduate, so it is best to get over any fears you may have now about publicly speaking your mind now, when you are surrounded by such loving faculty and understanding peers! Finally, being absent in class will adversely influence your participation grade.

Grades: Grades will be determined by adding the scores attained on the three exams and attendance/class participation. Grades will be assigned as follows:

- Exam 1: 30% (60 points)
- Exam 2: 35% (70 points)
- Final Exam: 30% (60 points)
- Participation: 5% (10 points)
- Total Points: 100% (200 points)

Grading Scale: Grades will be assigned as follows:

- 180 - 200 points ==> A
- 160 - 179 points ==> B
- 140 - 159 points ==> C
- 120 - 139 points ==> D
- 0 - 119 points ==> F