

Seminar in Quantitative Research Methods (HACE 4900/6900)

Department of Housing and Consumer Economics, University of Georgia

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Office hours: By appointment

Class time:	5:45 - 8:45 PM Wednesday
Location:	264 Dawson Hall
Course Description:	An introduction to quantitative research methods using the Statistical Analysis System (SAS) software. Students learn data management and modification techniques (reading and writing data, subsetting, concatenating, merging), univariate and bivariate statistical analyses (identifying appropriate statistic, interpreting results, simple plots), basic data reporting practices, and multiple regression procedures.
Prerequisite:	An introductory course in research methods (such as HACE 4000) or statistics (such as STAT 2000).

Required texts:	<p>1. O'Rourke, N., Hatcher, L., & Stepanski, E.J. (2005). <i>A step-by-step approach to using SAS for univariate & multivariate statistics (2nd Ed.)</i>. SAS Publishing and Wiley. ISBN: 9781590474174 (as low as \$48 from online booksellers)</p> <p style="text-align: center;">OR</p> <p>2. Hatcher, L. & Stepanski, E.J. (1994). <i>A step-by-step approach to using SAS for univariate & multivariate statistics</i>. SAS Publishing. ISBN: 1555446345 (as low as \$15 from online booksellers). <i>Note that if you use this version of the text you'll have to rely on others for some of the specific examples and assignments, but if money is an issue is acceptable for this class.</i></p>
Required software:	<p>1. SAS OnDemand for Academics. Available: http://support.sas.com/ctx3/sodareg/index.html This provides access to an online-based version of SAS Enterprise Guide 4.1 that will be accessible throughout the semester. (\$59.99 for the semester license that allows you to use SAS on any Windows-based PC via a SAS OnDemand client program.)</p> <p style="text-align: center;">OR</p> <p>2. SAS Publishing (2008). SAS Learning Edition 4.1: With the Little SAS Book for Enterprise Guide 4.1. SAS Publishing. ISBN: 1590479173 (as low as \$148 from online booksellers). This is a fully-operational version of SAS that is valid until December, 2011. It restricts users to 1,500 cases and includes The Little SAS Book for Enterprise Guide 4.1 It operates only on Windows 2000 or Windows XP Pro.</p> <p style="text-align: center;">OR</p> <p>3. Regular access to a computer lab that has SAS (Dawson 202, Dawson 264).</p>

Course Objectives

Students will develop:

1. An understanding of how the Statistical Analysis System (SAS) operates.
2. An understanding of the most common univariate statistical procedures in SAS.
3. The ability to efficiently create, manage, and manipulate data from numerous sources.
4. An understanding of quantitative analysis methods, from data preparation to reporting.
5. The ability to determine appropriate univariate and bivariate statistics for a given research question.

In addition, graduate students will make significant progress on a quantitative research project.

Course Outline*

Topics*	Reading
1. Basic concepts in research and data analysis Steps of research process; questions and hypotheses; constructs and variables; measurement	Chapter 1
2. Introduction to SAS programs, logs, output What is SAS? how does SAS operate? DAT, LST, and LOG files; syntax requirements/conventions	Chapter 2
3. Data input reading raw data; reading from other files; DATALINES, INFILE statements; CORR matrix input	Chapter 3
4. Data management manipulating, subsetting, concatenating, and merging data; creating variables; recoding variables; logical expressions; conditional statements	Chapter 4
5. Exploring data Proc means, proc freq, proc print, proc univariate; simple plots	Chapter 5
6. Measures of bivariate association proc gplot; proc corr with pearson, spearman; proc freq tables with chisq; SAS options for each of these bivariate tests	Chapter 6
7. Choosing the correct statistic blah	Chapter 6 Appendix A
8. Assessing reliability, correlations alpha, proc corr; scale measurement conventions; true score/measurement theory review	Chapter 7
8.5 t-test and ANOVA proc ttest , proc anova	Chapter 8 Chapter 9
9. Reporting Output delivery system (ODS) and options	Nielsen handouts
10. Multiple regression principles; proc reg; model statement options to assess regression assumptions	Chapter 14
11. Other software options comparing SAS with other statistical packages—when to use SPSS, Stata, WesVar, LIMDEP, LISREL, MPlus, and others	Nielsen handouts

*This course outline, [including anticipated dates](#), is subject to change according to class progress, unanticipated events, acts of nature, etc. Changes will be announced in class and/or WebCT.

Assignments, Exams, Grading

Assignments and grading:

- 1) Weekly assignments will be completed. There are no exams. Assignments are graded as follows:
 - i. ✓+ Indicates the assignment was submitted on time and was fully correct and complete
 - ii. ✓ Indicates the assignment was submitted on time and was largely correct and complete
 - iii. ✓- Indicates the assignment was submitted on time but was incorrect or incomplete
 - iv. As a reference point, a full semester of ✓- would yield a C; a full semester of ✓ would yield a B; a full semester of ✓+ would yield an A

- 2) Graduate students will develop an empirical research project plan with Dr. Nielsen (and, if applicable, a student's graduate advisor). In addition to the assignment grades, graduate students will receive a letter grade on each of the intermediate deadlines for their respective empirical research projects. These deadlines will vary according to each graduate student's project. The empirical research project will be weighted equally with the weekly assignments (weekly assignments=50%, empirical research project=50%). The following data may be used for the graduate empirical project:
 - i. Survey of Income and Program Participation (SIPP)
 - ii. Medical Expenditure Panel Survey (MEPS)
 - iii. Survey of Consumer Finances (SCF)
 - iv. Healthy Families, Healthy Finances (HFHF)

- 3) Several students enrolled in HACE 4900/6900 are completing independent research project in lieu of the assignments listed above. These students will complete a contract with Dr. Nielsen at the beginning of the semester that outlines the work to be completed and how the work will be graded.

Attendance and participation: I strongly encourage you to attend each week. Keep in mind that you will not be able to complete assignments unless you attend class. The first half of each class will be lecture/class examples; the latter half of

class will be lab/personal work time where I will help with your assignments and project.

Things to Know

Academic honesty: Familiarize yourself with the University of Georgia's policies on academic honesty (UGA's "A Culture of Honesty") at <http://www.uga.edu/honesty/ahpd/ACOH%20May%20'07.pdf> All academic work must meet these standards. In short, if you work with others be certain that you turn in your work that reflects only your contribution, learn what plagiarism is and then don't do it, and make every effort to be so well prepared in this course that you aren't even tempted to take shortcuts. I have a responsibility of reporting all possible violations.

FERPA Notice: The Federal Family Educational Rights and Privacy Act (FERPA) grants you certain information privacy rights. See the registrar's explanation at <http://www.reg.uga.edu/or.nsf/html/ferpa> Be aware that FERPA allows disclosure of your directory information (name, address, telephone, email, date of birth, place of birth, major, activities, degrees, awards, prior schools, and more) unless you request, in a written letter to the registrar, that directory information not be disclosed. If you have completed the registrar's form, please let me know. Regardless of whether or not you want your directory information disclosed, know that I must err on the side of privacy and will not communicate with your parents, friends, relatives, or others about your grades, progress, assignments, etc. without proper documentation.

Grading challenges: Grading challenges will be entertained for two weeks after the exam or assignment has been returned and only when accompanied with a written explanation of what you believe to be the correct answer or grading error. After two weeks the grading will stand and no challenges will be considered.

Late adds: Per College policy, late adds for this course will not be approved except under exceptional circumstances.

Accommodations due to disability: Students who seek special accommodations due to a disability should contact the instructor during the first week of the semester or as soon as the need for the accommodation is discovered. The instructor will work with the Disability Resource Center (706-542-8719, <http://www.dissvcs.uga.edu/>) to provide accommodations.

UGA calendar reminders:

Event/Deadline	Date
Advisement	January 7
Classes begin	January 8
Drop/Add	Differs for undergrads and grads; see bulleting for details.
Midpoint withdrawal deadline	March 24
MLK Holiday (no classes)	January 19
Spring break	March 9-13
Classes end	April 30
MWF Schedule on a Thursday	April 30
Reading Day	May 1
Final exam	none
Commencement	May 9
Grades due	May 11

From <http://bulletin.uga.edu/bulletin/univ/calendar.html>

V-HACE Notice: All HACE majors are encouraged to sign up for the V-HACE electronic email list to receive information about advising, student organizations, scholarships, course offerings, job opportunities, and more. Instructions are at <http://www.fcs.uga.edu/mailman/listinfo/vhace>

Accommodations due to official university events: Students who are members of University of Georgia athletic teams, bands, clubs, or other officially sanctioned groups will receive special accommodations as long as university procedures are followed. If you expect to request an accommodation due to an officially sanctioned event, please let me know by providing an official university accommodation request no later than the second week of class. Assignments and exams must be completed before your university-sanctioned travel unless prior written arrangements are made with me.

***Please note that this course syllabus is a general plan for the course;
deviations announced to the class may be necessary.***