POLS 418/GEOG 418: Quantitative Methods  
Spring 2005

Tuesdays and Thursdays, 1:30—2:45 p.m.  
Batten Arts & Letters 332

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Spring 2005 Office Hours:  
T 11:00 a.m.—12:00 noon  
Th 3:00—5:00 p.m.  
Or  
By Appointment

Blackboard Technical Support (OCCS)  
http://www.odu.edu/dl/clt/bb/student_help_page.html  
757-683-3192

Syllabus

Catalogue Description and Objectives

This course is a survey and practicum in the basic techniques of quantitative research, including the concepts of empirical research, the identification of data sources, and the use of appropriate statistical techniques. This is a hands-on course in which you will use SPSS, a software package of standard statistical methods, to analyze data and report findings. Although the course involves some math, it focuses on the practical applications of those statistical methods that you will find commonly used in the social and physical sciences. Students will undertake practical book and computer-lab exercises that require critical thinking and analytical skills. The course covers a variety of topics in quantitative methods, including the identification and development of concepts; formulation of hypotheses and specification of corresponding models; use of descriptive statistics including graphs and cross tabulation; techniques of sampling and corresponding logics of inference; measurement of associations and tests of significance; and bivariate and multivariate regression. When the student has completed the course, he or she will possess (a) a working knowledge of basic statistical techniques in social and physical sciences; (b) the knowledge to read, comprehend and criticize existing studies that utilize these techniques; and (c) the skills to apply these statistical techniques, in conjunction with SPSS, to test hypotheses as part of a comprehensive research design.
Prerequisites

The course assumes students possess a basic understanding of descriptive statistics and the fundamentals of research design, as elaborated in Statistics 130M: Elementary Statistics and Political Science/Geography 308: Research Design. Both courses are pre-requisites for this course.

In addition, students must have an ODU email account and password with which to access course materials and information through the Blackboard system (http://blackboard.odu.edu). An email account with an off-campus service provider (such as Yahoo! Mail) will not provide you the access to materials you need.

Course Materials

You can purchase the following textbooks at the ODU bookstore in the Webb Center (http://odu.bkstore.com). You may also find copies for a competitive price at the Dominion Bookstore on Hampton Boulevard. **NOTE: If you are unable to find the texts under the “Political Science” section in the ODU bookstore, you may wish to check in the “Geography” section under GEOG 418 since the course is cross-listed.**

*Required Books*


*Computer Labs*

Because the course emphasizes the practical application of quantitative techniques, students will spend time working with SPSS on problem sets. If you wish to purchase a copy of the software for your personal use, SPSS Graduate Pack v. 12.0 is available at the Monarch Techstore in the Webb Center. Otherwise you will find SPSS v. 12.0 installed on workstations in computer labs across campus. These include BAL 105, Library 164, and Webb 2200. Students should expect to spend several hours a week using SPSS to complete their problem sets. All students therefore must be familiar with the hours, rules and regulations for the usage of University computer labs. You may get more information on the labs at http://www.odu.edu/af/oecs/labs.html.

*Course Requirements and Evaluation*

Student grades are based upon three elements of the course:

1. **Midterm Exams** (each worth 20 percent of your grade): The student will take two mid-semester exams, the first on Thursday, February 17, 2005, the second on
Tuesday, March 29, 2005. Exams will cover all required reading materials, lectures, and problem set assignments. For the first test, the exam will cover materials from the first six weeks of the course. The second exam will cover materials from weeks six through eleven. You should be prepared to take exams on the scheduled dates and at the start of class. Examinations will end five minutes prior to the end of the scheduled class time. I reserve the right to change the dates of exams if we must adjust our schedule due to inclement weather or other unforeseen circumstances.

2. Problem Sets (40 percent): The student will complete ten problem sets throughout the semester, due on the dates as specified in the Course Plan and Schedule section. I have designed problem sets to assess your understanding of the course materials presented in lecture and in the readings. Problem sets are due at the beginning of class on the dates specified below. I will post problem sets and any associated data sets to the course’s Blackboard page a week before they are due. Students should expect to receive their problem sets from Blackboard.

I expect you to type your problem sets, unless you use the exercises from the Companion text, in which case I expect you will complete the exercise with neat and legible handwriting. Do not include a cover page for your problem sets. You should, however, include the following information in the upper right-hand corner of every page of your problem set: your name, the problem set number, the due date, and the date you submit the work. Please staple together all sheets of your problem set. I will penalize your problem set if it does not satisfy these guidelines.

3. Final Exam (20 percent): The student will take a final exam during the university-specified exam period: Tuesday, May 3, 2005, from 12:30 to 3:30 p.m. Although the final exam will be comprehensive, covering materials from the entire course, it will emphasize the materials we cover in weeks twelve through sixteen.

Scoring and Quality of Work

I maintain rigorous standards for this class, and expect students to provide high-quality work. When grading, I expect the student’s work to demonstrate (a) a thorough understanding of the subject matter and how it applies beyond the materials we discuss in the course; (b) precision and clarity of thought and writing; and (c) neat and orderly presentation. I will award grades of A or A minus only to work that is exceptional or superior. I will award B pluses, B’s and B minuses to work that is good but not exceptional. I reserve grades in the B range for work that is well written, and that demonstrates an understanding of the subject matter. Students who demonstrate a satisfactory understanding of the material will receive a grade of C. Grades of C minus and below indicate non-satisfactory work. A student who receives a C minus or below should arrange to meet with me immediately to discuss how we may improve their performance in the course.

Final Letter Grades

There is no grading curve for the course. It is hypothetically possible for each student to get an A, or for each to get an F. I grade each student’s work on its merits, irrespective of the merit of other students’ work.
Based on your on-time completion of the required assignments and your adherence to the University's honor code (see below), I will assign you a final grade from the following grade scale:

<table>
<thead>
<tr>
<th>Percent of Total Points</th>
<th>Final Grade</th>
</tr>
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<tbody>
<tr>
<td>94–100</td>
<td>A</td>
</tr>
<tr>
<td>90–93</td>
<td>A–</td>
</tr>
<tr>
<td>87–89</td>
<td>B+</td>
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<tr>
<td>83–86</td>
<td>B</td>
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<tr>
<td>80–82</td>
<td>B–</td>
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<td>77–79</td>
<td>C+</td>
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<tr>
<td>73–76</td>
<td>C</td>
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<tr>
<td>70–72</td>
<td>C–</td>
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<td>67–69</td>
<td>D+</td>
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<td>63–66</td>
<td>D</td>
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<tr>
<td>60–62</td>
<td>D–</td>
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<tr>
<td>0–59</td>
<td>F</td>
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</tbody>
</table>

**Late Work**

I will accept problem sets that are overdue but will penalize you five percent for each day the assignment is late, including weekend days. To avoid this penalty, you must obtain from me an extension of the due date no later than 48 hours before the assignment is due, at which time we will agree to a new due date. I reserve the discretion to grant or withhold no-penalty extensions, and will do so only for serious reasons.

There will be no make-up or late exams, unless approved per university guidelines.

**Academic Integrity**

I expect all students to understand and to abide by the University’s Honor Code:

“We, the students of Old Dominion University, aspire to be honest and forthright in our academic endeavors. Therefore, we will practice honesty and integrity and be guided by the tenets of the Monarch Creed. We will meet the challenge to be beyond reproach in our actions and our words. We will conduct ourselves in a manner that commands the dignity and respect that we also give to others.”


You should understand your rights and obligations, what constitutes a violation of the honor code and academic integrity, what disciplinary procedures and sanctions you may face, and what options I have should I suspect a violation. If you are unfamiliar with the honor code and disciplinary procedures, I suggest you visit the Honor Council’s web page (http://studentservices.odu.edu/hc/). You may also refer to the Code of Student Conduct, Sanctions, and Disciplinary Procedures in the Old Dominion University Catalog 2004-2006, pp. 14-19.

If you are unsure what may or may not constitute plagiarism, I suggest you visit http://www.csubak.edu/ssric/Modules/Other/plagiarism.htm.
I take the Honor Code seriously, and will pursue vigorously the adjudication of any violations I may perceive or suspect. If I suspect a student has committed a violation, I work only with the University Hearing Officer to determine whether or not a violation has occurred. Under no circumstances will I discuss allegations of academic dishonesty with the individual student.

Students with Disabilities

In accordance with the University’s policies and procedures, I will work to accommodate students with disabilities. If you require such accommodations, please contact me by email, phone or during office hours as early in the semester as possible.

Sexual Harassment

It is the policy of Old Dominion University to provide students and employees with an environment for learning and working that is free of sexual harassment, whether by members of the same sex or the opposite sex, which is prohibited by Title IX of the Education Amendments of 1972 and Title VII of the 1964 Civil Rights Act. I expect all seminar participants to understand and abide by the University’s sexual harassment policy and procedures, as detailed at http://web.odu.edu/webroot/orgs/AO/PO/eoe.nsf/pages/oeohome.

Course Plan and Schedule

Part One: Introduction

January 11th: Course Objectives and Design—What are “quantitative methods?”

January 13th: Introduction, Measurement Part I

Readings:
Essentials, Introduction, ch. 1

January 18th and 20th: Measurement, Part II

Readings: Problem Set:
McClendon, Ch. 1 # 1 (due on the 20th)

January 25th: Hypotheses and Explanations

Readings:
Essentials, Ch. 2
Part Two: Learning SPSS

January 27th: SPSS Crash Course, Part I

Readings: None—read ahead

Problem Set: # 2

February 1st: SPSS Crash Course, Part II

Readings: None—read ahead

February 3rd: SPSS Crash Course, Part III

Readings: None—read ahead

Problem Set: # 3

Part Three: Descriptive Statistics

February 8th: Descriptive Statistics

Readings: Companion, ch. 2

February 10th and 15th: Distribution of Attributes

Readings: McClendon, Ch. 2

Problem Set: # 4 (due on the 10th)

February 17th: First Exam (covers material through February 15th)

Part Four: Properties of Distributions

February 22nd: The Central Tendency Theorem

Readings: McClendon, Ch. 3

February 24th: Describing Variables and Making Comparisons, Part I

Readings: McClendon, Ch. 3 Essentials, Ch. 3

Problem Set: # 5
March 1st: Describing Variables and Making Comparisons, Part II

Readings:
Essentials, Ch. 3
Companion, Ch. 3

March 3rd: NO CLASS, BUT WORK ON PROBLEM SET #6

Readings:
None—read ahead

March 8th and 10th: Spring Break, No Class

March 15th: Working with Data in SPSS

Readings:
Companion, Ch. 4

Problem Set:
# 6

March 17th and 22nd: Dispersion

Readings:
McClendon, Ch. 4

March 24th: Sampling and Inference

Readings:
Essentials, Ch. 4

Problem Set:
# 7

March 29th: Second Exam (covers materials through March 24th)

Part Five: Inference and Testing Hypotheses

March 31st: Making Controlled Comparisons

Readings:
Companion, Ch. 5

April 5th: Making Inferences

Readings:
Companion, Ch. 6
April 7th: Tests of Significance and Measures of Association, Part I

Readings:
Companion, Ch. 6
Essentials, Ch. 6

Problem Set:
# 8

April 12th: Tests of Significance and Measures of Association, Part II

Readings:
Essentials, Ch. 6

April 14th: Chi-square and Measures of Association

Readings:
Companion, Ch. 7

Problem Set:
# 9

April 19th and 21st: Correlation and Regression, Part I

Readings:
Essentials, Ch. 7
Companion, Ch. 8

April 26th: Correlation and Regression, Part II

Readings:
Companion, Ch. 8

Problem Set:
# 10

Tuesday, May 3rd (12:30 to 3:30 p.m.): Final Exam (covers weeks 12 through 16)