INTRO TO STATISTICS IN SOCIAL SCIENCE
STAT1053-Section 14 – CRN 96817 – Spring 2014
Tuesdays & Thursdays, 9:35 – 10:50 AM
[Additionally, there will be a Recitation Session, STAT1053.40]
[01/13/14 - 04/28/14]
Main Campus: Room B17, 1957 E

Instructor: Thomas A. Vadakkeveetil, Ph.D.
Office Hours: Before & after class and/or by appointment, MV Campus
Contacts: TVAlex@gwu.edu  Tel: 202-966-5079
TA: Yarong Feng. Email: yfeng@email.gwu.edu

TEXTBOOK & COURSE MATERIALS
Strongly Recommended: Student Solution Manual
Software: SPSS (Available in most GWU computer labs, need not buy.)

SPECIAL REQUESTS FROM YOUR INSTRUCTOR. Please ……
- Your emails must have your full name, course number (STAT2112) and a mention of the issue in the SUBJECT line of the email.
- Bring your textbook to class.
- Turn off your cell phones during the class.
- Do not engage in conversation with your neighbors while the instructor teaches.
- Do not disturb the class or your classmates.
- Avoid tardiness. Come to class on time and do not leave before the class ends.

COURSE DESCRIPTION
This is a general survey course in elementary statistics that will broadly cover descriptive statistics, probability, sampling, and inference, hypothesis testing and simple linear regression. The goal of the course is for students to obtain a good basic understanding of statistics. The course covers Chapters 1 through 9 and 11 excluding “Optional” sections, in the textbook. STAT 51, 53, 91, 104, 111, and 127 are related in their subject matter, and credit for only one of the six may be applied toward a degree.

COURSE PREREQUISITE
None. High school algebra is essential.

LEARNING OUTCOMES
Students will learn to use a variety of fundamental statistical principles integrated with business, economic and social science applications. They will learn to analyze data using appropriate statistical techniques and to interpret the findings. Students will also learn the statistical/quantitative techniques necessary for further study in business, economics, and
social sciences. More specifically, upon successful completion of this course, the student, among other skills, will be able to:

1. Describe the differences between the various types of data.
2. Apply various descriptive graphical techniques.
3. Calculate and interpret measurements of central tendency.
4. Describe the characteristics of discrete and continuous probability distributions.
5. Calculate the standardized values of a normal distribution.
6. Calculate estimates of population parameters using sample data.
7. Develop confidence interval
8. Determine sample size
9. Conduct hypothesis testing
10. Perform simple linear regression analysis and compute correlations using paired data.
11. Use SPSS™ software for statistical analysis
12. Use SPSS™ software for generating statistical graphs

COURSE POLICIES

- Quizzes and tests are in-class tests; there will be no take-home tests. Quizzes are closed-textbook and closed-note; tests are open-textbook.
- There will be no make-up exam (except for very special reasons) or extra-credit assignments.
- Students must bring a calculator for quizzes and tests; sharing of calculators not allowed. Cell phones are not allowed during the quizzes and tests.
- Assignments will be discussed in the class well in advance, and students will be given sufficient time to complete them.
- Assignments submitted after the deadlines will not be accepted.
- Incomplete: A grade of INCOMPLETE will ONLY be given to a student who is passing the course and cannot complete the course due to well documented circumstances beyond their control. University policies on teaching are available at [http://www.gwu.edu/~academic/Teaching/main.htm](http://www.gwu.edu/~academic/Teaching/main.htm)
- Email: The instructor will try to respond to emails sent during normal business hours on Monday-Thursday and by Friday within 24 hours. Email sent at night will be considered to have arrived the following morning and email sent over the weekend will be considered as arriving on Monday morning.
- Feel free to call the instructor. If the instructor is not available please a message with your call-back number. Please be clear and slow.
- There will be absolutely no tolerance of dishonest conduct during the exams, and severe measures will be taken against dishonest conduct. University academic honesty policies will be enforced – check [www.gwu.edu](http://www.gwu.edu)
- Religious Holidays: Students are allowed to take religious holidays off.
- Courtesy rules: No cell phone calls; please turn off your cell phones during class sessions. No consumption of food is allowed; drinks are allowed when consumed in a quiet manner.
- [NOTE: for university policies on teaching, see [http://www.gwu.edu/~academic/Teaching/main.htm](http://www.gwu.edu/~academic/Teaching/main.htm)]

COURSE REQUIREMENTS

Four Quizzes, In-Class Midterm, In-Class Final, Two SPSS Projects and regular class attendance.

GRADING POLICY

- Quizzes: 20%  
- Mid-Term: 25%  
- Final Exam: 35%  
- Assignments/Projects: 20%

GRADING SCALE

- A = 94-100%;  
- A- = 90-93%;  
- B+ = 87-89%;  
- B = 83-86%;  
- B- = 80-82%;  
- C+ = 77-79%;
EXAM SCHEDULE
● Mid-Term: To be announced. Final Exam: To be announced by the University.
● There will be a quiz (TBA) for every two chapters.

PROJECTS
● Project 1 involves conducting an opinion survey using a questionnaire, analyzing the survey data applying the statistical concepts and skills learned in the class, and preparing a report. The report is due by midterm. SPSS will be used for data analysis.
● Project 2 will be on simple linear regression. Data will be provided. Student will analyze the data (using SPSS), develop simple linear models, interpret the findings, and prepare a report. The report is due by the last week of the course.

ACADEMIC INTEGRITY
I personally support the GW Code of Academic Integrity. It states: “Academic dishonesty is defined as cheating of any kind, including misrepresenting one's own work, taking credit for the work of others without crediting them and without appropriate authorization, and the fabrication of information.” For the remainder of the code, see: http://www.gwu.edu/~integrity/code.html

SUPPORT FOR STUDENTS OUTSIDE OF THE CLASS ROOM
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 Marvin Center, Suite 242, to establish eligibility and to coordinate reasonable accommodations. For additional information please refer to: http://gwired.gwu.edu/dss/

UNIVERSITY COUNSELING CENTER (UCC): 202-994-5300
The University Counseling Center (UCC) 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
  http://gwired.gwu.edu/counsel/CounselingServices/AcademicSupportServices

SECURITY
In case of an emergency, follow the evacuation procedures for the building. After evacuation, seek shelter at a predetermined rendezvous location. An evacuation will be considered if the building we are in is affected or we must move to a location of greater safety. We will always evacuate if the fire alarm sounds. In the event of an evacuation, please gather your personal belongings quickly and proceed to the nearest exit.
HOMEWORK

Must practice all the solved examples in the chapters (excluding those in “Optional” sections). All the Problems in “Understanding the Principles” and “Learning the Mechanics” sections of the exercises are strongly recommended. Answers to select odd-numbered problems are given in in Appendix (starting on Page 818). Also, some specific problems will be assigned. Do as many problems as possible. Homework will not be graded.

Chapter 1:
All the “Learning the Mechanics” problems and the other problems with answers.

Chapter 2:
All the “Learning the Mechanics” problems and the other problems with answers.

Chapter 3:
All the “Learning the Mechanics” problems and the other problems with answers.

Chapter 4:
All the “Learning the Mechanics” problems and the other problems with answers.

Chapter 5:
All the “Learning the Mechanics” problems and the other problems with answers.

Chapter 6:
All the “Learning the Mechanics” problems and the other problems with answers.

Chapter 7:
All the “Learning the Mechanics” problems and the other problems with answers.

Chapter 8:
All the “Learning the Mechanics” problems and the other problems with answers.

Chapter 9
All the “Learning the Mechanics” problems and the other problems with answers.

Chapter 11
All the “Learning the Mechanics” problems and the other problems with answers.

Additional problems will be assigned from each chapter for practice.