

PSYC6474 Scientific Research I (Internet)
Fall 2009

Professor: Bill Day, Ph.D. e-mail: bday@nobts.edu
Phone: 504-816-8820 (office); 504-472-9021 (home); 504-234-4262(cell)
Address: NOBTS - Leavell Center, 3939 Gentilly Blvd., New Orleans, LA 70126

Grader: Adrian Fairchild e-mail: kafairchild@bellsouth.net

VERY IMPORTANT: If a student communicates with the professor by email, note clearly in the subject line the course name and the purpose of the message. Due to junk email, if the purpose of the email is not clear, the message may be deleted without ever being read.

NOBTS Mission Statement: The mission is to equip leaders to fulfill the Great Commission and the Great Commandments through the local church and its ministries.

NOBTS Core Values: The seminary's core values are: (1) doctrinal integrity, (2) spiritual vitality, (3) mission focus, (4) characteristic excellence, and (5) servant leadership. The focus of the seminary during the 2009-10 academic year is spiritual vitality which will involve reading the entire Bible within the 2009-10 academic year.

Bulletin Description:

This course is designed as a graduate-level study of statistics for research. Students learn how research proceeds from forming the research hypothesis through collection, organization, description, analysis, and interpretation of data. Measures of central tendency, dispersion, relative standing, linear regression, correlation and hypothesis testing are studied. Probability and decision making, sampling distributions, inferential statistics, decisions, error, power, independent and correlated groups, One-way ANOVA, Two-way ANOVA, Multiple comparisons: Scheffe's Test and Tukey's HSD, interaction between levels, multiple regression, Chi Square, and randomized block designs are examined. (This course is prerequisite to PSYC6475 Statistics II and PSYC6278 Appraisal of the Individual. This course is also designed for students who plan to pursue the Ph.D. degree).

Required Resources:

(1) Field, Andy (2009). *Discovering Statistics Using SPSS (3rd ed.)*. Thousand Oaks, CA: SAGE Publications. **ISBN-10:** 1847879071 **ISBN-13:** 978-1847879073.

Note: The textbook uses some language that may be objectionable to some students. Neither the seminary nor the professor approve of some of the author's choice of words. Except for this problem, the textbook is one of the best books available for helping students learn statistics along with the computer software SPSS.

Note: The third edition of the textbook is required. Earlier editions are **not** acceptable.

Note: The text is 821 pages long. Don't despair! Some of the chapters will be used in Scientific Research II and students will only be responsible for the parts of the chapters covered in the lecture materials. In addition, the text can also be used for later reference.

(2) SPSS 17.0 Base Graduate Pack for Windows (2009). Computer software. Version 17.0 CD-ROM. Chicago: SPSS.

Note: PASW Statistics 18 is a newer version of SPSS. It is not recommended for use in this class.

Options for Statistical Software SPSS 17.0 Graduate Pack:

This course requires using the statistical software *SPSS 17.0 Base Graduate Pack*. Four options for using this software package are available to the student:

(1) Rent a copy of the software from e-academy (<http://www.onthehub.com/spss>) for \$45.99 (6 month rental) or \$79.99 (12 month rental). A copy of a student's ID card must be faxed to the company in order to prove student status and obtain an ID and password. Windows, Mac, and Linux versions are available. If the student plans to take Scientific Research II the 12 month choice will save the student \$11.99 as compared to two six-month rentals. **Note:** This software can only be downloaded once on a single computer. If the computer later fails, a second copy will need to be purchased. The software can be downloaded once the fee is paid. When given the option to download the file or run the set-up program from the web site, choose to download it.

(2) Use one of the four SPSS designated computers in the seminary's computer lab. There is no cost for using one of these computers. However, the downside is that the student must use the computers while the ITC offices are open.

(3) Purchase *SPSS 17.0 Graduate Pack* (four year license) for about \$200.00 from the UNO bookstore or on-line at www.journeyed.com, www.academicssuperstore.com, or www.studentdiscounts.com.

(4) Download a free trial version of PASW Statistics 17.0.2. This version is the full SPSS version with no restrictions. The demo version will expire approximately 21 days after it is downloaded. This option will provide a temporary fix until a student decides what other option to choose. The demo file is 305 MB in size and will take several minutes to download using a DSL/Cable connection. Downloading the file is not recommended using a dialup (56Kb). The web site for downloading the file is:
[http://www.spss.com/downloads/Papers.cfm?ProductID=00035&Name=PASW Statistics Base](http://www.spss.com/downloads/Papers.cfm?ProductID=00035&Name=PASW%20Statistics%20Base)

How to Use SPSS - Videos

Videos will be posted on Blackboard that will help students to learn various SPSS procedures. The student is encouraged to use these videos to supplement the textbook instructions.

Requirements, Grading, and Important Dates:

10 Quizzes (Open book and notes) The two lowest quiz grades will be dropped - 25%

12 SPSS Homework Assignments (Open book and notes). The two lowest homework grades will be dropped - 25%

2 Exams (Take home - open book and notes): (15% each) - 30%

Final Exam (Take home - open book and notes). All chapters - 20%

Read Textbooks: (Part of each Exam)

Bible Reading (Student verification of completion - part of final exam)

Course Objectives:

- 1.) Students will study and develop an understanding of the key concepts of the scientific language of statistics.
- 2.) Students will gain a working knowledge of descriptive statistics, measures of central tendency, correlation coefficients, t-tests, analysis of variance, multiple regression analysis, chi-square, and hypothesis testing.
- 3.) Students will gain knowledge in understanding the statistical analysis sections of professional research journal articles in order to keep abreast of research findings in their discipline.

- 4.) Students will learn and be able to discuss theoretical distributions, inferential and treatment effect tests.
- 5.) Students will be able to demonstrate skill in selecting and using appropriate statistical techniques given specific research questions and sample/population demographics
- 6.) Students will have a working knowledge and be able to use SPSS statistical software to analyze data appropriately, using the statistics introduced in this course.

Major Areas of Study:

Nominal, Ordinal, Interval, Ratio Scales
 Independent and Dependent Variables Graphic
 Presentation Measures of Central Tendency
 Dispersion, Normal Curve, Transformed
 Scores Frequency Distribution Probability and
 Decision Making Correlation Linear
 Regression Hypothesis Evaluation and
 Decision Making Statistical Hypothesis
 Choice of Statistical Tests
 z scores
 Pearson-Product Moment Correlation
 Coefficient Spearman Rank Order Coefficient
 t-test One-way ANOVA Two-way ANOVA
 Multiple Regression Analysis Chi Square
 Tests for Treatment Effects
 Single Sample, 2 Independent Samples,
 Dependent Samples, Randomized, Block,
 Repeated Measures Designs, Factorial Designs,

Important Notes:

This is a fast-paced course, students will need to be disciplined in their reading in order to keep pace with readings and lectures. Historically, students who achieve good grades and learn the major concepts of this course devote a minimum of 5 or more hours per week, are part of a study group, and complete the homework assignments. A lack of a strong history in math, algebra, or statistics has not been observed to place a student at a disadvantage in this course. The emphasis of this course is NOT memorizing formulas but on how to solve statistical problems using a statistical program named SPSS.

Notify professor in advance if you are unable to complete an exam or quiz on time. Permission may be granted for a postponement but only if the request is made in advance. Penalties will be assessed for late work. The lowest 2 of the 10 quiz grades and the 2 lowest of the 12 homework assignments will be dropped. Makeup quizzes are exceptions and should not be assumed as an

option. Any approved make-up quizzes or exams must be completed within 2 weeks of original date unless otherwise approved by professor.

SPSS:

Proficiency in the use of the statistical program *SPSS 17.0* will be guided by homework assignments. Homework assignments will be given according to the course schedule. All computer printouts must be submitted together with the answers to the problems.

Quizzes:

An objective question quiz is given according to the printed schedule. Quizzes cover lecture material from the immediately preceding week and textbook material. Note the attached schedule.

Blackboard:

The professor will enroll each student into Blackboard.

A student that does not have a Blackboard account may request an account at this site:
<http://courses.nobts.edu/>

Students will not be able to access Blackboard until after all fees have been paid.

Lecture notes, PowerPoint files, links to helpful web sites, etc. will be posted throughout the semester. Students are encouraged to check Blackboard on a regular basis.

Each week the professor will post (1) detailed PowerPoint lectures on the subject of the week, (2) a general PowerPoint explanation on how to use SPSS to solve problems related to the subject of the week, and (3) a threaded discussion related to the material presented during the week. The professor will seek to present the material in enough detail that the student can successfully solve the homework problems and answer the tests.

Homework will involve solving problems using SPSS. The problems will be related to the Blackboard postings of the previous week. Homework should be emailed to the grader. All computer printouts must be submitted together with the answers to the problems.

All tests will be open book and notes. Each test will cover selected chapters. Questions will be multiple choice, true/false, and solution of problems. The tests should be mailed or Emailed to the grader. All computer printouts must be submitted together with the answers to the problems.

If the student has difficulty meeting a deadline, contact the professor. Prior approval will be necessary to avoid penalty.

Evacuation of the NOBTS Campus: If the NOBTS campus must be evacuated (hopefully not), check the seminary's web site and Blackboard for important seminary and course information.

Fall Semester Bible Reading Plan (September 1, 2009 – December 19, 2009)

SEPTEMBER

- 1 Genesis 1:1-2:25, Matthew 1:1-25, Psalm 1:1-6, Proverbs 1:1-4
- 2 Genesis 3:1-4:26, Matthew 2:1-23, Psalm 2:1-6, Proverbs 1:5-6
- 3 Genesis 5:1-6:2, Matthew 3:1-17, Psalm 2:7-12, Proverbs 1:7
- 4 Genesis 7:1-9:7, Matthew 4:1-20, Psalms 3:1-8, Proverbs 1:8-9
- 5 Genesis 9:8-10:32, Matthew 4:21-5:12, Psalm 4:1-8, Proverbs 1:10-14
- 6 Genesis 11:1-12:20, Matthew 5:13-32, Psalm 5:1-6, Proverbs 1:15-16
- 7 Genesis 13:1-15:6, Matthew 5:33-6:4, Psalm 5:7-12, Proverbs 1:17-19
- 8 Genesis 15:7-17:27, Matthew 6:5-24, Psalm 6:1-5, Proverbs 1:20-23
- 9 Genesis 18:1-19:22, Matthew 6:25-7:12, Psalm 6:6-10, Proverbs 1:24-27
- 10 Genesis 19:23-21:21, Matthew 7:13-8:4, Psalm 7:1-8, Proverbs 1:28-31
- 11 Genesis 21:22-23:20, Matthew 8:5-27, Psalm 7:9-17, Proverbs 1:32-33
- 12 Genesis 24:1-54, Matthew 8:28-9:17, Psalm 8:1-9, Proverbs 2:1-5
- 13 Genesis 24:55-26:11, Matthew 9:18-38, Psalm 9:1-6, Proverbs 2:6-8
- 14 Genesis 26:12-27:29, Matthew 10:1-20, Psalm 9:7-12, Proverbs 2:9-10
- 15 Genesis 27:30-29:12, Matthew 10:21-42, Psalm 9:13-20, Proverbs 2:11-15
- 16 Genesis 29:13-30:43, Matthew 11:1-19, Psalm 10:1-6, Proverbs 2:16-19
- 17 Genesis 31:1-55, Matthew 11:20-12:8, Psalm 10:7-12, Proverbs 2:20-22
- 18 Genesis 32:1-33:20, Matthew 12:9-37, Psalm 10:13-18, Proverbs 3:1-2
- 19 Genesis 34:1-35:29, Matthew 12:38-13:9, Psalm 11:1-3, Proverbs 3:3-4
- 20 Genesis 36:1-43, Matthew 13:10-35, Psalm 11:4-7, Proverbs 3:5-6
- 21 Genesis 37:1-38:30, Matthew 13:36-58, Psalm 12:1-5, Proverbs 3:7-8
- 22 Genesis 39:1-41:7, Matthew 14:1-21, Psalm 12:6-8, Proverbs 3:9-10
- 23 Genesis 41:8-42:4, Matthew 14:22-15:9, Psalm 13:1-6, Proverbs 3:11-12
- 24 Genesis 42:5-43:14, Matthew 15:10-39, Psalm 14:1-7, Proverbs 3:13-14
- 25 Genesis 43:15-44:34, Matthew 16:1-20, Psalm 15:1-5, Proverbs 3:15-16
- 26 Genesis 45:1-46:27, Matthew 16:21-17:13, Psalm 16:1-6, Proverbs 3:17-18
- 27 Genesis 46:28-48:22, Matthew 17:14-18:9, Psalm 16:7-11, Proverbs 3:19-20
- 28 Genesis 49:1-50:26, Matthew 18:10-35, Psalm 17:1-5, Proverbs 3:21-24
- 29 Exodus 1:1-2:25, Matthew 19:1-22, Psalm 17:6-12, Proverbs 3:25-26
- 30 Exodus 3:1-4:31, Matthew 19:23-20:19, Psalm 17:13-15, Proverbs 27-28

OCTOBER

- 1 Exodus 5:1-6:30, Matthew 20:20-21:11, Psalm 18:1-6, Proverbs 3:29-32
- 2 Exodus 7:1-8:32, Matthew 21:12-27, Psalm 18:7-12, Proverbs 3:33-35
- 3 Exodus 9:1-10:20, Matthew 21:28-46, Psalm 18:13-19, Proverbs 4:1-2
- 4 Exodus 10:21-12:36, Matthew 22:1-22, Psalm 18:20-24, Proverbs 4:3-4
- 5 Exodus 12:37-14:20, Matthew 22:23-46, Psalm 18:25-29, Proverbs 4:5-6
- 6 Exodus 14:21-16:20, Matthew 23:1-22, Psalm 18:30-36, Proverbs 4:7-9
- 7 Exodus 16:21-18:27, Matthew 23:23-39, Psalm 18:37-42, Proverbs 4:10-13
- 8 Exodus 19:1-20:26, Matthew 24:1-14, Psalm 18:43-50, Proverbs 4:14-17
- 9 Exodus 21:1-22:20, Matthew 24:15-35, Psalm 19:1-6, Proverbs 4:18-19

10 Exodus 22:21-24:18, Matthew 24:36-51, Psalm 19:7-14, Proverbs 4:20-22
 11 Exodus 25:1-26:14, Matthew 25:1-13, Psalm 20:1-9, Proverbs 4:23-24
 12 Exodus 26:15-28:14, Matthew 25:14-30, Psalm 21:1-7, Proverbs 4:25-27
 13 Exodus 28:15-29:25, Matthew 25:31-26:5, Psalm 21:8-13, Proverbs 5:1-2
 14 Exodus 29:26-30:38, Matthew 26:6-25, Psalm 22:1-5, Proverbs 5:3-6
 15 Exodus 31:1-32:35, Matthew 26:26-50, Psalm 22:6-10, Proverbs 5:7-8
 16 Exodus 33:1-34:35, Matthew 26:51-75, Psalm 22:11-15, Proverbs 5:9-10
 17 Exodus 35:1-36:19, Matthew 27:1-23, Psalm 22:16-21, Proverbs 5:11-14
 18 Exodus 36:20-37:29, Matthew 27:24-44, Psalm 22:22-26, Proverbs 5:15-17
 19 Exodus 38:1-39:31, Matthew 27:45-66, Psalm 22:27-31, Proverbs 5:18-20
 20 Exodus 39:32-40:38, Matthew 28:1-20, Psalm 23:1-6, Proverbs 5:21-23
 21 Leviticus 1:1-3:17, Mark 1:1-20, Psalm 24:1-10, Proverbs 6:1-3
 22 Leviticus 4:1-5:19, Mark 1:21-45, Psalm 25:1-7, Proverbs 6:4-5
 23 Leviticus 6:1-7:21, Mark 2:1-22, Psalm 25:8-15, Proverbs 6:6-8
 24 Leviticus 7:22-8:36, Mark 2:23-3:12, Psalm 25:16-22, Proverbs 6:9-11
 25 Leviticus 9:1-11:12, Mark 3:13-35, Psalm 26:1-7, Proverbs 6:12-15
 26 Leviticus 11:13-13:17, Mark 4:1-20, Psalm 26:8-12, Proverbs 6:16-19
 27 Leviticus 13:18-14:14, Mark 4:21-41, Psalm Ps 27:1-6, Proverbs 6:20-22
 28 Leviticus 14:15-15:12, Mark 5:1-20, Psalm 27:7-14, Proverbs 6:23-26
 29 Leviticus 15:13-16:34, Mark 5:21-43, Psalm 28:1-5, Proverbs 6:27-29
 30 Leviticus 17:1-19:10, Mark 6:1-20, Psalm 28:6-9, Proverbs 6:30-31
 31 Leviticus 19:11-20:27, Mark 6:21-46, Psalm 29:1-6, Proverbs 6:32-33

NOVEMBER

1 Leviticus 21:1-22:33, Mark 6:47-7:16, Psalm 29:7-11, Proverbs 6:34-35
 2 Leviticus 23:1-24:23, Mark 7:17-37, Psalm 30:1-6, Proverbs 7:1-3
 3 Leviticus 25:1-55, Mark 8:1-21, Psalm 30:7-12, Proverbs 7:4-5
 4 Leviticus 26:1-46, Mark 8:22-9:1, Psalm 31:1-8, Proverbs 7:6-8
 5 Leviticus 27:1-34, Mark 9:2-29, Psalm 31:9-18, Proverbs 7:9-12
 6 Numbers 1:1-54, Mark 9:30-50, Psalm 31:19-24, Proverbs 7:13-17
 7 Numbers 2:1-3:16, Mark 10:1-22, Psalm 32:1-7, Proverbs 7:18-21
 8 Numbers 3:17-4:20, Mark 10:23-45, Psalm 32:8-11, Proverbs 7:22-23
 9 Numbers 4:21-5:31, Mark 10:46-11:11, Psalm 33:1-9, Proverbs 7:24-27
 10 Numbers 6:1-7:29, Mark 11:12-33, Psalm 33:10-17, Proverbs 8:1-3
 11 Numbers 7:30-89, Mark 12:1-27, Psalm 33:18-22, Proverbs 8:4-5
 12 Numbers 8:1-10:10, Mark 12:28-44, Psalm 34:1-7, Proverbs 8:6-7
 13 Numbers 10:11-11:35, Mark 13:1-20, Psalm 34:8-14, Proverbs 8:8-9
 14 Numbers 12:1-14:4, Mark 13:21-37, Psalm 34:15-22, Proverbs 8:10-13
 15 Numbers 14:5-45, Mark 14:1-21, Psalm 35:1-10, Proverbs 8:14-17
 16 Numbers 15:1-41, Mark 14:22-42, Psalm 35:11-16, Proverbs 8:18-19
 17 Numbers 16:1-50, Mark 14:43-72, Psalm 35:17-21, Proverbs 8:20-21
 18 Numbers 17:1-19:8, Mark 15:1-21, Psalm 35:22-28, Proverbs 8:22-24
 19 Numbers 19:9-21:9, Mark 15:22-47, Psalm 36:1-6, Proverbs 8:25-26
 20 Numbers 21:10-22:41, Mark 16:1-20, Psalm 36:7-12, Proverbs 8:27-29

- 21 Numbers 23:1-24:25, Luke 1:1-23, Psalm 37:1-6, Proverbs 8:30-31
- 22 Numbers 25:1-26:22, Luke 1:24-56, Psalm 37:7-13, Proverbs 8:32-33
- 23 Numbers 26:23-65, Luke 1:57-80, Psalm 37:14-20, Proverbs 8:34-36
- 24 Numbers 27:1-28:31, Luke 2:1-20, Psalm 37:21-26, Proverbs 9:1-2
- 25 Numbers 29:1-30:16, Luke 2:21-38, Psalm 37:27-33, Proverbs 9:3-6
- 26 Numbers 31:1-54, Luke 2:39-52, Psalm 37:34-40, Proverbs 9:7-9
- 27 Numbers 32:1-42, Luke 3:1-20, Psalm 38:1-8, Proverbs 9:10-12
- 28 Numbers 33:1-56, Luke 3:21-38, Psalm 38:9-14, Proverbs 9:13-15
- 29 Numbers 34:1-35:34, Luke 4:1-21, Psalm 38:15-22, Proverbs 9:16-18
- 30 Numbers 36:1- Deuteronomy 1:46, Luke 4:22-44, Psalm 39:1-6, Proverbs 10:1-2

DECEMBER

- 1 Deuteronomy 2:1-3:29, Luke 5:1-20, Psalm 39:7-13, Proverbs 10:3-5
- 2 Deuteronomy 4:1-49, Luke 5:21-6:11, Psalm 40:1-5, Proverbs 10:6-8
- 3 Deuteronomy 5:1-6:25, Luke 6:12-36, Psalm 40:6-10, Proverbs 10:9-11
- 4 Deuteronomy 7:1-8:20, Luke 6:37-7:10, Psalm 40:11-17, Proverbs 10:12-14
- 5 Deuteronomy 9:1-10:22, Luke 7:11-35, Psalm 41:1-6, Proverbs 10:15-17
- 6 Deuteronomy 11:1-12:19, Luke 7:36-8:3, Psalm 41:7-13, Proverbs 10:18-21
- 7 Deuteronomy 12:20-14:21, Luke 8:4-25, Psalm 42:1-11, Proverbs 10:22-25
- 8 Deuteronomy 14:22-16:22, Luke 8:26-56, Psalm 43:1-5, Proverbs 10: 26-27
- 9 Deuteronomy 17:1-19:13, Luke 9:1-22, Psalm 44:1-8, Proverbs 10:28-30
- 10 Deuteronomy 19:14-21:23, Luke 9:23-45, Psalm 44:9-16, Proverbs 10:31-32
- 11 Deuteronomy 22:1-23:25, Luke 9:46-62, Psalm 44:17-26, Proverbs 11:1-4
- 12 Deuteronomy 24:1-26:19, Luke 10:1-24, Psalm 45:1-5, Proverbs 11:5-6
- 13 Deuteronomy 27:1-28:14, Luke 10:25-11:4, Psalm 45:6-12, Proverbs 11:7-8
- 14 Deuteronomy 28:15-68, Luke 11:5-28, Psalm 45:13-17, Proverbs 11:9-11
- 15 Deuteronomy 29:1-30:20, Luke 11:29-54, Psalm 46:1-11, Proverbs 11:12-13
- 16 Deuteronomy 31:1-29, Luke 12:1-21, Psalm 47:1-9, Proverbs 11:14-15
- 17 Deuteronomy 31:30-32:52, Luke 12:22-40, Psalm 48:1-7, Proverbs 11:16-18
- 18 Deuteronomy 33:1-34:12, Luke 12:41-59, Psalm 48:8-14, Proverbs 11:19-21
- 19 Joshua 1:1-3:17, Luke 13:1-21, Psalm 49:1-9, Proverbs 11:22-23

Selected Bibliography General Statistics

- Abrami, P. C., Cholmsky, P., & Gordon, R. (2001). *Statistical analysis for the social sciences: An interactive approach*. Needham Heights, MA: Allyn & Bacon.
- Aron, A., Aron, E. N., & Coups, E. J. (2007). *Statistics for the behavioral and social sciences: A brief course* (4th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Babbie, E., Halley, F., & Zaino, J. (2007). *Adventures in social research* (6th ed.). Thousand Oaks, CA: Pine Forge Press, Sage Publications.
- Bluman, A. G. (2005). *Elementary statistics: A step by step approach* (6th ed.). New York: McGraw Hill.
- Coolidge, F. L. (2006). *Statistics: A gentle introduction* (2nd ed.). Thousand Oaks, CA: Sage.
- De Veaux, R. D., Velleman, P. F., & Bock, D. E. (2008). *Stats: Data and models* (2nd ed.). Boston, MA: Pearson Education, Addison Wesley.
- Ferguson, G. A. (1989). *Statistical analysis in psychology and education* (6th ed.). New York: McGraw-Hill.
- Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Freedman, D., Pisani, R., & Purves, R. (2007). *Statistics* (4th ed.) New York: W. W. Norton & Company.
- Gall, Joyce P., M.D. Gall, and Walter R Borg. (2004). *Applying educational research: A practical guide for teachers* (5th ed.). New York: Longman.
- Glass, G. V., Peckham, P. D., & Sanders, J. R. (1972). Consequences of failure to meet assumptions underlying the analysis of variance and covariance. *Review of Educational Research*, 42, 237-288.
- Gonick, L., & Smith, W. (1993). *The cartoon guide to statistics*. New York: HarperCollins.
- Gravetter, F. J., & Wallnau, L. B. (2006). *Statistics for the behavioral sciences* (7th ed.). Belmont, CA: Wadsworth/Thompson Learning.
- Gravetter, F. J., & Wallnau, L. B. (2007). *Essential statistics for the behavioral sciences* (6th ed.). Belmont, CA: Wadsworth/Thomson Learning.

- Greene, J., & D'Oliveira, M. (2005). *Learning to use statistical tests in psychology* (3rd ed.). Philadelphia, PA: Open University Press.
- Greer, B., & Mulhern, G. (2002). *Making sense of data and statistics in psychology*. New York: Palgrave.
- Hamilton, L. C. (1996). *Data analysis for social scientists: A first course in applied statistics*. Belmont, CA: Wadsworth.
- Healey, J. F. (2005). *Statistics: A tool for social research* (7th ed.). Belmont, CA: Thomson Wadsworth.
- Heiman, G. W. (2004). *Essential statistics for the behavioral sciences*. Boston, MA: Houghton Mifflin.
- Howell, D. C. (2007). *Statistical methods for psychology* (6th ed.). Belmont, CA: Thomson Wadsworth.
- Huff, D. (1993). *How to lie with statistics*. New York: W.W. Norton and Co.
- Isaac, S., & Michael, W. B. (1995). *Handbook in research and evaluation: A collection of principles, methods, and strategies useful in planning, design, and evaluation of studies in education and the behavioral sciences*. San Diego, CA: Edits Publishers.
- Iversen, G. R., & Gergen, M. (1997). *Statistics: The conceptual approach*. New York: Springer-Verlag.
- Johnson, R. A., & Bhattacharyya, G. K. (2006). *Statistics: Principles and methods* (5th ed.). Hoboken, NJ: John Wiley & Sons.
- Kachigan, S. K. (1986). *Statistical analysis: An interdisciplinary introduction to univariate & multivariate methods*. New York: Radius Press.
- Kerlinger, F. N. (1999). *Foundations of behavioral research* (4th ed.). Fort Worth, TX: Harcourt Brace Jovanovich College Publisher.
- Kirk, R. E. (1983). *Experimental design: Procedures for the behavioral sciences* (2nd ed.). Pacific Grove, CA: Brooks/Cole Publishing Co.
- Kirk, R. E. (2008). *Statistics: An introduction* (5th ed.). Belmont, CA: Thomson Wadsworth.
- Leedy, Paul D. & Ormrod, Jeanne Ellis (2004). *Practical research* (8th ed.). Upper Saddle River, NJ: Prentice Hall.

- Levine, G. (1981). *Introductory statistics for psychology: The logic and the methods*. New York: Academic Press.
- Lyman, H. B. (1997). *Test scores and what they mean* (6th ed.). Boston, MA: Allyn & Bacon.
- Mann, P. S. (2006). *Introductory statistics* (6th ed.). Hoboken, NJ: John Wiley & Sons.
- McNemar, Q. (1962). *Psychological statistics* (3rd ed.). New York: John Wiley and Sons.
- Misanin, J., & Hinderliter, C. (1991). *Fundamentals of statistics for psychology students*. New York: Harper Collins Publishers.
- Misanin, J., & Hinderliter, C. (1991). *Study guide to accompany fundamentals of statistics for psychology students*. New York: Harper Collins Publishers.
- Pagano, R. R. (2006). *Understanding statistics in the behavioral sciences* (8th ed.). Belmont, CA: Wadsworth/Thompson Learning.
- Pelosi, M. K., & Sandifer, T. M. (2003). *Elementary statistics: From discovery to decision*. Hoboken, NJ: John Wiley & Sons.
- Pyrczak, F. (2002). *Success at statistics: A worktext with humor* (3rd ed.). Los Angeles, CA: Pyrczak Publishing.
- Salkind, N. J. (2004). *Statistics for people who (think they) hate statistics* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Sax, G. (1979). *Foundations of educational research*. Englewood Cliffs, NJ: Prentice Hall.
- Shavelson, R. J. (1996). *Statistical reasoning for the behavioral sciences* (3rd ed.). Boston, MA: Allyn & Bacon.
- Spatz, C. (2008). *Basic statistics: Tales of distributions* (9th ed.). Belmont, CA: Thomson Wadsworth.
- Sprinthall, R. C. (2006). *Basic statistical analysis* (8th ed.). Boston, MA: Allyn and Bacon.
- Sullivan, M., III (2006). *Statistics: Informed decisions using data* (2nd ed.). Upper Saddle River, NJ: Prentice Hall.
- Thompson, B. (2006). *Foundations of behavioral statistics: An insight-based approach*. New York: Guilford Press.
- Thorndike, R. M., & Dinnel, D. L. (2001). *Basic statistics for the behavioral sciences*. Upper Saddle River, NJ: Merrill Prentice Hall.

Triola, Mario F. *Elementary statistics with multi media study guide* (10th ed.). Upper Saddle River, NJ: Addison Wesley.

Witte, R. S., & Witte, J. S. (2006). *Statistics* (8th ed.). Hoboken, NJ: John Wiley & Sons.

Basic Books on SPSS

Babbie, E., Halley, F. & Zaino, J. (2007). *Adventures in social research: Data analysis using SPSS 14.0 and 15.0 for Windows* (6th ed.). Thousand Oaks, CA: Pine Forge Press.

Brace, N., Kemp, R., & Snelgar, R. (2006) *SPSS for psychologists: A guide to data analysis using SPSS for Windows* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.

Bryman, A., & Cramer, D. (2005). *Quantitative data analysis with SPSS 12 and 13: A guide for social scientists*. New York: Routledge.

Carver, R. H., & Nash, J. G. (2006). *Doing data analysis with SPSS Version 14*. Belmont, CA: Wadsworth/Thompson Learning.

Cronk, B. C. (2006). *How to use SPSS* (4th ed.). Glendale, CA: Pyrczak Publishing.

Elliott, Alan C. And Wayne A. Woodward. *Statistical analysis quick reference guidebook with SPSS examples*. Thousand Oaks, CA: Sage Publications.

Gardner, R. C. (2001). *Psychological statistics using SPSS for Windows*. Upper Saddle River, NJ: Prentice Hall.

George, D., & Mallery, P. (2006). *SPSS for Windows step by step: A simple guide and reference 14.0 Update* (7th ed.). Boston: Pearson Allyn & Bacon.

Green, S. B., & Salkind, N. J. (2007). *Using SPSS for Windows and Macintosh: Analyzing and understanding data* (5th ed.). Upper Saddle River, NJ: Prentice Hall.

Hinton, P. R., Brownlow, C., McMurray, I., & Cozens, B. (2004). *SPSS explained*. New York: Routledge.

Holcomb, Z. C. (2006). *SPSS basics: Techniques for a first course in statistics*. Glendale, CA: Pyrczak.

Kinnear, P. R., & Gray, C. D. (2007). *SPSS 15 made simple*. New York: Psychology Press.

- Landau, S., & Everitt, B. S. (2004). *A handbook of statistical analysis using SPSS*. Boca Raton, FL: Chapman & Hall/CRC CRC PressLLC.
- Morgan, G. A., Leech, N. L., Gloeckner, G. W., & Barrett, K. C. (2006). *SPSS for introductory statistics: Use and interpretation* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum.
- Norusis, M. J. (2006). *SPSS 15.0 guide to data analysis*. Upper Saddle River, NJ: Prentice Hall.
- Osterlink S. J., & Tabachnick, B. G. (2001). *SPSS for Windows workbook to accompany using multivariate statistics* (4th ed.). Boston, MA: Allyn & Bacon.
- Page, M. C., Braver, S. L., MacKinnon, D. P. (2003). *Levine's guide to SPSS for analysis of variance* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum.
- Pallant, J. (2004). *SPSS survival manual* (2nd ed.). Philadelphia, PA: Open University Press.
- Shannon, D. M., & Davenport, M. A. (2001). *Using SPSS to solve statistical problems: A self-instruction guide*. Upper Saddle River, NJ: Prentice Hall.
- Sweet, S. A., & Grace-Martin, K. (2003). *Data analysis with SPSS: A first course in applied statistics* (2nd ed.). Boston: Pearson Education, Allyn and Bacon.
- Weinberg, S. L., & Abramowitz, S. K. (2002). *Data analysis for the behavioral sciences using SPSS*. New York: Cambridge.