

**Public Health Core 6050 Statistical Methods for Health Sciences 1 SPRING 2006**

**Online Instructor: Debra Burr**  
**Lecture Instructor: Babette Brumback**  
**Office: 3112 HPNP Complex**  
**Email: via WebCT**  
**Office hours: by appointment**

**Course Webpage:** <http://lss.at.ufl.edu>

**Textbook:** Students are required to purchase the course textbook, *Statistics: The Exploration and Analysis of Data*, 5<sup>th</sup> edition, (2007) by J. Devore and R. Peck, Brooks/Cole – Thomson Learning: Belmont, CA).

**Homework Solutions Manual:** Students are strongly recommended to purchase the homework solutions manual that accompanies the textbook, *Student Solutions Manual for Devore/Peck's Statistics: The Exploration and Analysis of Data*, by J. Devore and R. Peck

**Software:** A student version of SPSS is available for \$80-90 at the University of Florida Bookstore or online. Data analysis assignments will be conducted in SPSS.

**Course Goals:**

Statistical methods for description and analysis provide investigators with useful tools for making sense out of data. The pervasiveness of statistics in public health as well as other fields has led to increased recognition that statistical literacy – a familiarity with the goals and methods of statistics – should be a basic component of a well-rounded educational program. In this course, students will develop a statistical vocabulary, learn methods for descriptive data analysis, study the fundamentals of probability and sampling distributions, learn methods for statistical inference and hypothesis tests based on one or two samples, and become familiar with categorical data analysis and linear regression. Data analysis will be conducted in SPSS.

**Discussions:**

As an online course you will have an opportunity to pose questions via the Discussion boards for each topic or on the “Open Discussion” board. Students are urged to respond to each to help each other in learning the material. The course TA or instructor will answer any questions that the students cannot answer amongst themselves. Students may also e-mail the instructor or TA with individual questions or concerns within the WebCT environment.

**Assessment Plan:**

One one-hour midterm exam: 20%  
Thirteen quizzes, one per chapter: 25%  
Five data analyses: 25%  
One two-hour final exam: 30%

## Course Calendar:

**Week            Topic**

### ***Section 1: Modules 1-5, Title: Descriptive Methods***

- Jan 8-14            Course Introduction  
Module 1 – The Role of Statistics  
Module 2 – The Data Analysis Process and Collecting Data Sensibly  
Quiz 1-2, on Modules 1 and 2 – open Jan 12, closes Jan 16 at 10pm  
Data Analysis 1: Descriptive Methods – assigned
- Jan 15-21            Module 3 – Graphical Methods for Describing Data  
Quiz 3 – open Jan 19, closes Jan 23 at 10pm
- Jan 22-28            Module 4 – Numerical Methods for Describing Data  
Quiz 4 – open Jan 26, closes Jan 30 at 10pm
- Jan 29-Feb 4        Module 5 – Summarizing Bivariate Data  
Quiz 5 – open Feb 2, closes Feb 6 at 10pm  
Data Analysis 1: Descriptive Methods – due Feb 2 by 10pm  
Data Analysis 2: Summarizing Bivariate Data via Simple Linear  
Regression – assigned

### ***Section 2: Modules 6-9, Title: Probability and Estimation***

- Feb 5-11            Module 6 – Probability  
Quiz 6 – open Feb 9, closes Feb 13 at 10pm
- Feb 12-18            Module 7 – Population Distributions  
Quiz 7 – open Feb 16, closes Feb 20 at 10pm  
Data Analysis 2: Summarizing Bivariate Data via Simple Linear  
Regression – due Feb 16 by 10pm
- Feb 19-25            Module 8 – Sampling Variability and Sampling Distributions  
Quiz 8 – open Feb 23, closes Feb 27 at 10pm
- Feb 26-Mar 4        Module 9 – Estimation Using a Single Sample  
Data Analysis 3: Estimation Using a Single Sample– assigned

### ***Section 3: Modules 10-13, Title: Hypothesis Testing and Simple Linear Regression***

- Mar 5-11            Module 9 – Estimation Using a Single Sample (cont.)  
Mid-term review  
Quiz 9 – open Mar 9, closes Mar 13 at 10pm

- Mar 12-18 Spring Break
- Mar 19-25 Mid-term Exam (Modules 1-8, Mar 18-20)  
Module 10 – Hypothesis Testing Using a Single Sample  
Quiz 10 – open Mar 23, closes Mar 27 at 10pm  
Data Analysis 3: Estimation Using a Single Sample – due Mar 23 by 10pm  
Data Analysis 4: Hypothesis Testing – assigned
- Mar 26-Apr 1 Module 11 – Comparing Two Populations or Treatments  
Quiz 11 – open Mar 30, closes Apr 3 at 10pm
- Apr 2-8 Module 12 – The Analysis of Categorical Data  
Quiz 12 – open Apr 6, closes Apr 10 at 10pm  
Data Analysis 4: Hypothesis Testing – due Apr 6 by 10pm  
Data Analysis 5: Categorical Data – assigned
- Apr 9-15 Module 13 – Simple Linear Regression and Correlation  
Review for Final Exam  
Quiz 13 – open Apr 13, closes Apr 17 at 10pm
- Apr 16-22 Review for Final Exam  
Data Analysis 5: Categorical Data – due Apr 20 by 10pm
- Apr 23-25 Final Exam (Modules 1-13, 2 hours) – open Apr 23, closes Apr 25 at 10pm

*Exams and quizzes are administered on WebCT and to be completed without outside help, notes or text. Evidence of cheating will result in failure.*

*updated 12/18/06*