

University of Florida College of Public Health & Health Professions
PHC 6050: Statistical Methods for the Health Sciences I (Fall 2013 Section 1611)

Required Class Session: Thursday 7th–9th Periods (1:55 – 4:55) HPNP G101
Dedicated Assistance Available: Tuesday 6th–7th Periods (12:50 – 2:45) HPNP G201

Instructor Information:

Amy Cantrell, PhD
Clinical Assistant Professor
UF Department of Biostatistics
Office Hours: by appointment

Email: acantrell@ufl.edu
Phone: 352-294-5927
Office: CTB 5213
Web: <http://users.phphp.ufl.edu/acantrell/>

Teaching Assistants:

- Suwa Xu – will attend class sessions and assist the student and instructor as needed
- Qi An – will hold office hours (TBA)

Note: When emailing the instructor or TA, we ask that you use the mail feature of the E-Learning site and ALWAYS check the box “send a copy to the recipients email.” This will result in the fastest possible response.

Course Structure: This course is a “flipped learning” class. Online materials are provided which students are expected to complete prior to weekly applications sessions. Each required class session will be broken down as follows. Students only need to attend the software assistance and instruction period for their software.

- *1:55-2:30: SAS assistance and instruction for PHC 6052 students*
- **2:40-4:10: Application session**
- **4:20-4:55: SPSS assistance and instruction for PHC 6050 students**

Software: We are using Statistical Package for the Social Sciences, SPSS 20 (or higher), in this course. Becoming familiar with a statistical package is an important part of your statistical education. Although it is not required, it is highly encouraged that you have access to SPSS on a device for in class use. The version available at the UF bookstore should be the one mentioned here:
<https://software.ufl.edu/agreements/spss/student/>.

Before purchasing, try <http://info.apps.ufl.edu/>. This is a one-year pilot project. You should give your input on how well it works and how useful it is.

- You must have either the STANDARD GRADUATE PACK (GRADPACK) or PREMIUM GRADUATE PACK. The BASE or other student versions may not have enough functionality for this course.
- IF YOU ARE ON UF’s MAIN CAMPUS: The IBM® SPSS® Statistics Premium educational package can be purchased for \$35.00 licensing fee through the UF Computing Help Desk located at the 132 HUB Stadium Road, Gainesville, Florida 32611. (This version should be more complete than the GradPack.)
- You can also lease this software from www.onthehub.com or www.creationengine.com.
- If you are a PPHP student and have a PPHP resources account (or if your department will request a PPHP resources account for you), you can access SPSS for free through the PPHP terminal server by remote desktop. (We cannot offer any assistance with this method of access, talk with your department to determine your access level to PPHP resources.)

Other computing requirements can be found at <http://mph.ufl.edu/students/computer-requirements/>

Course Overview: Statistical methods for description and analysis provide investigators with useful tools for making sense from 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 testing based on one or two samples, and become familiar with categorical data analysis and linear regression. Data analysis will be conducted in SPSS.

Course Objectives: Upon completion of this course, students will be able to

CO-1: Describe the roles biostatistics serves in the discipline of public health.

CO-2: Differentiate among different sampling methods and discuss their strengths and limitations.

CO-3: Describe the strengths and limitations of designed experiments and observational studies.

CO-4: Distinguish among different measurement scales, choose the appropriate descriptive and inferential statistical methods based on these distinctions, and interpret the results.

CO-5: Determine preferred methodological alternatives to commonly used statistical methods when assumptions are not met.

CO-6: Apply basic concepts of probability, random variation, and commonly used statistical probability distributions.

CO-7: Use statistical software to analyze public health data.

CO-8: Develop presentations based on statistical analyses for both public health professionals and educated lay audiences.

MPH Core Competencies Addressed by this Course:

Five of the competencies listed in the 2013-2014 MPH Student Handbook are addressed by this course; these are listed below by their item number in the handbook:

1. Monitor health status to identify and solve community health problems
2. Diagnose and investigate health problems and health hazards in the community using an ecological framework
8. Evaluate effectiveness, accessibility, and quality of personal and population-based health services
9. Conduct research for new insights and innovative solutions to health problems
10. Communicate effectively with constituencies in oral and written forms

MHA Core Competency Addressed by this Course:

- Use statistical and analytical tools to measure and improve organizational performance.

E-Learning/Sakai: An E-Learning site in Sakai will be available for the course. Grades, discussion boards, and other information will be available in the E-Learning system. E-learning is accessible at lss.at.ufl.edu or through my.ufl.edu. You must have a valid Gatorlink ID and password. For assistance, call the UF Help Desk at 392-HELP

Course Materials: Course materials will be provided in the form of an “online” textbook. A printable version is also available which contains the main content and notification of any online-only content such as videos, self-learning activities, or other online resources. The materials for each week will be clearly identified in the E-Learning site for the course.

Recommended SPSS books: There are numerous SPSS guides available. The best one for you may depend on what you might be doing with SPSS after our class. I have had recommendations from students for Julie Pallant’s “SPSS Survival Manual.” Many resources are available both in print and online via the UF Library. Your

SPSS recommendations for current or future students are appreciated. Documentation: <ftp://public.dhe.ibm.com/software/analytics/spss/documentation/statistics/>.

Announcements: The announcement feature of E-Learning will be the primary method by which the instructor and TA will communicate with the class about important matters that need documenting. These announcements will always be available to review in E-Learning. We may discuss these announcements in class as necessary.

When creating these announcements, we will also send a copy to your UFL.EDU email address associated with your gatorlink account. As a student of the University of Florida, it is very important that you check this email address regularly. In this class, you should check this account at least once every two days. One way to access this account is through UF webmail at <https://webmail.ufl.edu/>.

Communication Methods and Getting Help: Email or phone communication should be used only for personal matters which cannot be shared with your classmates (i.e. student grades, personal situations, issues with specific exam or quiz questions). If you have a question regarding the course material or course assignments, you will post your question on the appropriate discussion board or ask during office hours or the time for dedicated assistance.

If you email a question about course material or assignments you will be asked to post the question on the appropriate discussion board before the instructor or TA will address your question. The primary reason for this policy is to give all students the ability to access all discussion related to the course content.

If you ask a question (on a discussion board or in office hours) which has already been answered, you may initially be directed to the location of the previously given answer. If this does not completely answer your question, please continue to ask but be sure to clearly state that you have reviewed the previously given answer and explain what you still do not understand.

Please do NOT post questions on the discussion boards of a personal nature or dealing with your specific grade(s) in the course. We never discuss a student's progress, grades or personal situations in any open forum. These situations would require an email or phone call to the instructor.

Discussion Boards: Discussion boards are the best place to post your questions and comments. Be sure to place your posts in the appropriate discussion board topic. You are also highly encouraged to respond to others posts. Discussion boards can be used for course questions, material discussions, communication, and problem solving between students, TAs, and the instructor. Discussion boards may be used to submit certain assignments in the course.

Technical Help: On the sign-in site for E-Learning, <http://lss.at.ufl.edu>, there are multiple tutorials and help to aid students in navigating through the E-Learning system.

- If you need help logging onto E-Learning, password issues, etc., please contact the UF Help Desk at 352-392-HELP(4357) or helpdesk@ufl.edu.
- If you need technical help in the course, please post your questions in the "Technical Difficulties" discussion board.

Course Requirements/Evaluation/Grading: Your grade in this course will be based on assignments in each of the following categories. Within each category, the proportion of the total points earned to the total points available will be used. Assignments within each category may vary in points during the semester to reflect length, difficulty, or importance.

- 10% - Class Participation
- 15% - Student Journal Assignments

- 15% - Mastery Quizzes
- 20% - Group Assignments
- 20% - Exam 1
- 20% - Exam 2

The grading scale for this course consists of the scale, including minus grades, below. The conversion factors for grade point values assigned to each grade are also included (in parentheses):

94% - 100% = A (4.00)	77% - 79% = B- (2.67)	64% - 66% = D+ (1.33)
90% - 93% = A- (3.67)	74% - 76% = C+ (2.33)	60% - 63% = D (1.00)
85% - 89% = B+ (3.33)	70% - 73% = C (2.00)	57% - 59% = D- (0.67)
80% - 84% = B (3.00)	67% - 69% = C- (1.67)	Below 57% = E (0.00)

For more detail on letter grades and university policies related to them, see the Registrar's Grade Policy regulations at <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Note: Although you can never be awarded negative points for an assignment, if you do not follow the directions given in this syllabus and in the actual assignment, additional points can be deducted even if the assignment is otherwise correct.

Class Participation: Includes attendance/tardiness, preparation for class, general participation, and group member assessment of participation in group activities. Each required class session will award a maximum of 5 points toward the class participation total – 2 points for on-time attendance, 2 points for preparation, and 1 point for general participation. Tardiness will result in the loss of one attendance point. Arriving more than 20 minutes late forfeits all attendance points for that day. The group member assessment of participation in group activities will be conducted at the end of the semester and will award a maximum of 10 points toward the class participation total.

Student Journal Assignments: The form of these assignments will vary during the semester including brainstorming, short essays, student created examples, output from data analysis using software, and interpretation of results.

Mastery Quizzes: The quizzes have an unlimited number of attempts and are untimed. The first quiz covers the syllabus. Students must score 100% on the syllabus quiz to continue in the course. For all other mastery quizzes, students must pass the quiz with an 80% or higher or make at least two attempts at the quiz before the deadline. Only scores of 80% or higher will contribute to the student's mastery quiz grade. Students can improve upon their grades on any quiz until the day before the final exam. Students who do not pass or make the required 2 attempts at the quiz prior to the deadline will receive the attention of the instructor or TAs and forfeit their ability to earn any points for that quiz, however, mastery of the content through a score of 80% or higher is still expected. These quizzes DO NOT constitute practice exams. Although some overlap in material will exist between the quizzes and exams, the exams will be designed to test a deeper understanding than the mastery quizzes.

Group Assignments: You will be assigned a group for the semester. During most class sessions you will work on a directed group activity which will result in a graded assignment. The types of activities vary depending on the current topic. All students are expected to get to know the members of their group and to participate fully in all group assignments. Each student will anonymously assess the participation of each of their group members at the end of the semester.

Exams: There will be two 90 minute exams for this course each counting for 20% of your grade. They are closed book. You will be allowed one 8.5x11 sheet of paper for notes of any kind (front and back) and calculator (not a phone or other device). The format of questions on the exams varies including multiple choice, matching, and short answer.

Make-up Policy: No late assignments or tests will be allowed, except for urgent need and/or as demanded by UF policy.

Bonus: There are numerous opportunities for “extra credit.” For details on the possible categories, see the discussion board forums “Bonus Area” for details. Be sure to put your primary effort into the course requirements. Do not be distracted from your purpose in this course by your desire to obtain a few bonus points.

Statement of University’s Honesty Policy: At the University of Florida, each student is bound by the academic honesty guidelines of the University and the student conduct code printed in the Student Guide and on the University website. **The Honor Code states: “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”** Cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior. Students are expected to act in accordance with the University of Florida policy on academic integrity (see Student Conduct Code, the Graduate Student Handbook or this web site for more details: <http://www.dso.ufl.edu/sccr/>).

My personal expectations and comments regarding academic integrity: Students will often be encouraged to discuss the material with other members of the class on homework and other assignments. I believe we learn best when individual learning and group cooperation are present. However, I expect that no student will ever do any of the following:

- Have another person complete any assignment in this course
- Copy another student’s work on any assignment in this course
- Use materials provided by a previous student in the course for any purpose. Do not seek to obtain or accept offers of such materials (delete any materials you obtained prior to the beginning of the course)

I want to stress that in this class, if you focus on learning the material and worry less about the grade you will receive, you will be rewarded with knowledge that will be much more useful to you in the future than the grade received in this class.

Policy Related to Class Attendance: Class attendance is mandatory. Excused absences follow the criteria of the UF Graduate Catalogue (e.g., illness, serious family emergency, military obligations, religious holidays), and should be communicated to the instructor prior to the missed class day when possible. UF rules require attendance during the first two course sessions. Regardless of attendance, students are responsible for all material presented in class and meeting the scheduled due dates for class assignments. Finally, students should read the assigned readings prior to the class meetings, and be prepared to discuss the material except for the first class session.

Classroom etiquette: Please come to class on time and be prepared to stay until the time scheduled as the end of class. Pagers and cell phones should not be used in class. The use of cell phones, text messaging, and pagers is a common complaint from students. Please turn them off. Another common complaint is “side” conversations among students. Please consider that your conversation may interrupt the attention of someone seated near you. Generally, you should be speaking to the class as a whole or participating in group discussions as directed by the instructor. I welcome in-class questions. Your question will nearly always be one that other students also have.

Policy Related to Make-up Exams or Other Work: Students are allowed to make up work ONLY as the result of illness or other unanticipated circumstances warranting a medical excuse and resulting in the student missing a

homework or project deadline, consistent with College policy. Documentation from a health care provider is required. Work missed for any other reason will receive a grade of zero.

Accommodations for Students with Disabilities: If you require classroom accommodation because of a disability, you must first register with the Dean of Students Office (<http://www.dso.ufl.edu/>). The Dean of Students Office will provide documentation to you, which you then give to the instructor when requesting accommodation. The College is committed to providing reasonable accommodations to assist students in their coursework.

Counseling and Student Health: Students may occasionally have personal issues that arise in the course of pursuing higher education or that may interfere with their academic performance. If you find yourself facing problems affecting your coursework, you are encouraged to talk with an instructor and to seek confidential assistance at the University of Florida Counseling Center, 352-392-1575 or visit their web site for more information: <http://www.counseling.ufl.edu/cwc/>.

The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services, including primary care, women's health care, immunizations, mental health care, and pharmacy services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: <http://shcc.ufl.edu/>

Crisis intervention is always available 24/7 from Alachua County Crisis Center: (352) 264-6789.

BUT – Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.

Schedule: The tentative schedule for the course will be available next week. Adjustments to this schedule are possible during the semester. The instructor will strive to be informative and fair regarding any changes. We will meet each Thursday and use our allotted final exam time (December 11th 3:00-5:00 PM). Weeks in this course will be defined to be from Thursday to Wednesday. Our first week will start 8/22 and end 8/28.