

University of Florida
College of Public Health and Health Professions Syllabus
PHC 6052: Introduction to Biostatistical Methods (3 Credits, Fall 2024)
Class Meeting Time: Monday 5:10-6:00pm, Thursday 4:05-6:00pm. Classroom: HPNP G-307
Delivery Format: In-Person
Course Materials and Assessments: <http://elearning.ufl.edu/>
Open Supplemental Materials: [BOLT](#) (Biostatistics Open Learning Textbook)

Note: It is important to review the home page in CANVAS each week and read all announcements carefully.

STARTING THIS COURSE:

1. Read this syllabus. Review the E-Learning homepage and weekly schedule. Take the “Syllabus Quiz” (Quiz 0) located under Assignments in CANVAS. This quiz is based on the information contained in this syllabus and may be taken as many times as needed. This quiz is required and will count toward your final grade.
 2. Find Assignment 1 – Pre-semester & Community Construction Activity under Assignments in CANVAS and answer all questions.
-

INSTRUCTOR:	Dr. Lixia Wang
Office:	CTRB 5212
Phone Number:	352-294-5919
Email:	lixia.wang@ufl.edu
Time for Office Hours:	M & W: 1:00-2:00 PM (ET) or by appointment
Location for Office Hours:	My office and/or in zoom

PREFERRED COURSE COMMUNICATIONS:

- Ask questions during class/office hours pertaining to assignments, worksheets, and lecture notes.
- Ask about specific questions or issues of a personal nature by email through CANVAS inbox in E-learning.
- Ask more general questions (NOT personal or specific quiz questions) on the discussion board.

NOTE: If you email me directly, please specify your class section.

TEACHING ASSISTANT: TBD (TBD@ufl.edu)

ABOUT THE COURSE

PREREQUISITES AND CO-REQUISITES: There are no specific prerequisite courses, but students should be comfortable working with equations and performing basic mathematical calculations (e.g., order of operations, fractions, and square roots), and working with computers.

COURSE OVERVIEW: Statistical methods for description and analysis provide investigators with useful tools for making sense of data. The pervasiveness of statistics in public health as well as other fields has led to increased recognition that statistical literacy—familiarity with the goals and methods of statistics—should be a basic component of a well-rounded educational program. In this 3-credit course, students will develop statistical vocabulary, learn methods for descriptive data analysis, study the fundamentals of probability and sampling distributions, learn methods for point and confidence interval estimation and hypothesis testing based on one or two samples, become familiar with methods (both the parametric and non-parametric) commonly used to analyze the relationship between two variables (two dimensional data) in three cases: Case CQ, Case CC, and Case QQ, and be comfortable to perform (when appropriate) simple linear regression and interpret the results in context. Data analysis will be conducted in SAS.

RELATION TO PROGRAM OUTCOMES: This three-credit course is a required concentration core course for MPH Biostatistics students and covers the following MPH Biostatistics competencies.

- Describe the role of biostatistics in public health research.

- Interpret and critique analyses found in public health studies.
- Use appropriate statistical methodology to address public health problems.
- Apply software to conduct statistical analyses.

This course is also a core public health course for other MPH concentrations and covers the following MPH competencies.

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

COURSE OBJECTIVE AND/OR GOALS: Upon successful completion of this course, students will be able to

- CO-1: Describe the role 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.

INSTRUCTIONAL METHODS: This course will be presented using a mix of learning material review and group activities. Learning material review will generally be given Mondays and activities or discussions will take place on Thursdays. You are expected to study the materials provided in Canvas or in the online supplementary material [BOLT](#) prior to the corresponding classes.

DESCRIPTION OF COURSE CONTENT

Topical Outline (Tentative)

Week	Date(s)	Topic(s)
1	8/22-8/23	Introduction of the Course and SAS, Access to SAS, & Preliminaries
2	8/26-8/30	Unit 1: EDA Unit 1A – EDA for One Variable (concepts, SAS code and output)
3	9/2-9/6	Unit 1B – EDA for Two Variables (concepts, SAS code and output)
4	9/9-9/13	Unit 2 – Producing Data
5	9/16-9/20	Unit 3: Probability Theory Unit 3A – Probability
6	9/23-9/27	Unit 3B – Discrete Random Variables

7	9/30-10/4	Unit 3B – Continuous Random Variables
8	10/7-10/11	Unit 3B – Sampling Distributions
9	10/14-10/18	Unit 4: Inferential Statistics Unit 4A – Estimation
10	10/21-10/25	Unit 4A – Hypothesis Testing
11	10/28-11/1	Unit 4B – Inference for Relationships (Case CQ)
12	11/4-11/8	Unit 4B – Inference for Relationships (Case CQ - cont.)
13	11/11-11/15	Unit 4B – Inference for Relationships (Case CC)
14	11/18-11/22	Unit 4B – Inference for Relationships (Case QQ)
Break	11/25-11/29	Thanksgiving Holiday
15	12/2-12/6	Review. Last quiz (Quiz 14) and last step of the course project (Project Step 4) Due.
16	12/9-12/13	Final Exam Week. Last assignment – Assignment 8 due on 12/9.

A detailed schedule of assignments with due dates can be found at the end of this syllabus.

COURSE MATERIALS AND TECHNOLOGY

- All course materials are available online through CANVAS: <http://elearning.ufl.edu>. An open Supplemental Materials can be accessed for Free at: [BOLT](#). Students are expected to work through the material as scheduled. It is very important that you work through all content as directed and ask questions about the material you do not understand. **Working through the content from start to finish is the best approach to achieve a high level of understanding and success in this course.** There is no required textbook to purchase for this course. However, the following textbooks may serve as useful references with additional examples/exercises:
 - Daniel, W.D. (2013): *Biostatistics: A Foundation for Analysis in the Health Sciences*. 10th Edition, Wiley.
 - Agresti, A. (2013): *The Art and Science of Learning from Data*. 4th Edition, Pearson.
- You will also need access to the statistical software package, SAS. **IMPORTANT:** Course materials may discuss multiple software packages, but **in PHC 6052 you are only responsible for SAS.**

VIDEOS

Most videos presented in the course material are stored in YouTube. If the text in the video is too blurry, try increasing the quality of the YouTube video using the small gear icon which appears at the bottom of the video when it is playing. If you want to view the video faster or slower, you can adjust the speed using the gear icon. Many videos have closed captions and/or transcripts available.

Statistical Software – SAS

Access SAS

The current version of SAS is SAS 9.4, and SAS 9.3 or higher is required for this course. There are several options for SAS access, though depending on your operating system, not all may work.

- Direct purchase and installation.** This option is only available for Windows users. SAS can be purchased on campus at the UF computing help desk located at 132 HUB Stadium Road

(<https://software.ufl.edu/software-listings/sas.html>); this can only be done in-person. Click on the [SAS Student page](#) for SAS program purchase information and online documents. The current cost is \$36.

- 2) SAS is also available, along with other applications on the free UFApps server (<https://info.apps.ufl.edu>). To use SAS on UFApps, you will need to learn how to upload and download files to and from the UFApps server. See the Using SAS on UFApps document for specific instructions.
- 3) SAS has a free virtual app called SAS OnDemand for Academics. For more information and to get access, see https://www.sas.com/en_us/software/on-demand-for-academics.html. It can be used with any operating system, although this option (like UFApps) requires you be able to upload and download files using a remote server (i.e., “the cloud”). Tutorial videos demonstrating these two options are provided.
- 4) For some departments, SAS may also be available through their IT group or remote desktop. Check with your own department for SAS access.

Use SAS

I know students enrolled in this course with a wide range of expectations on SAS skills they are required or trained in this class: for those without programming experience, you may feel very nervous and anxious; for those who have experience using SAS or other programming language before, you may want to develop advanced SAS programming skills. However, this is a sophisticated introduction to biostatistical methods course starting from the very basic concepts in biostatistics and concluding with various parametric and non-parametric statistical methods for analyzing two-dimensional data, while SAS is a huge comprehensive Statistical Analysis System, a programming language with its syntax and rules, and we do not have any prerequisite statistics or programming background for this course. It is impossible to cover all the topics in depth and teach SAS programming from scratch in a one semester 3 credit course like ours. An important reason of using SAS for this course is SAS has been widely used, especially in hospitals and medical related industries and most of our students are or will be in health-related fields, so experience of using SAS should be helpful for their current or future research and work. Based on these considerations, this course is designed to focus on the biostatistical knowledge and SAS is used as a “calculator” type tool to perform statistical analysis in order to get the output. To achieve this,

- I will provide my sample SAS code for all assignments in this course. Students are expected to modify my sample code so the code can work for their corresponding assignments. This is the simplest and least stressful way for beginners to use SAS do assignments in our course.
- There are also tutorials provided in the free online extra course material. You can watch the tutorial videos for all skills needed for assignments in this course and beyond if you like. Watching the videos at a slower speed can help. Viewing the transcripts while you watch or work in SAS may also help. Whenever possible, many students find it helpful to have the videos playing in one window, monitor, or other device while working in the software in another, pausing as needed to work through the process with your own data.
- There is also a document on the main SAS Resource page called SAS Skills Document for Material Covered in PHC 6052. This can be very useful but does contain more and possibly different code than my sample code and the code in the video tutorials. You can also look at the SAS code posted on the actual tutorial pages. As you become more proficient in SAS, it may be that looking at the code will be all that is necessary for you to learn new SAS skills.

If you wish to learn more of SAS programming or if you wish to have additional resources, there are numerous guidebooks available. Many of these books are available both in print and online via the UF library. The best for you may depend on what you might be doing with SAS after our course. Two options (both are available for free through the UF library) we recommend are:

- *The Little SAS Book: A Primer*. 5th ed., by Lora Delwiche and Susan Slaughter, SAS Institute: Cary, NC (2012).
- *Learning SAS by Example*, by Ron Cody, SAS Institute: Cary, NC (2007).

IMPORTANT: If you are having issues with using SAS to do assignments, let us know immediately, and we will help as soon as possible. Do not allow yourself to waste time working in the software. Try to make sure as much of your time as possible in the software is productive.

COMPUTING

Please review the Student Computing requirements appropriate for you found at <http://mph.ufl.edu/current-students/student-essentials/technology-requirements/>.

E-learning

An E-Learning site is available for the course (<http://elearning.ufl.edu>). The weekly schedule and all course materials, as well as grades, assignments, discussions boards, and other course information are available online through this site. **It is very important to check the weekly page, review all announcements carefully, and finish each quiz, assignment, project before its due date.**

TECHINICAL SUPPORT

For technical support for this class, please contact the UF Help Desk at:

- helpdesk@ufl.edu
- (352) 392-HELP - select option 2
- <https://helpdesk.ufl.edu/>

More resources for technical help:

- **NON-SAS TECHNICAL HELP:** Information on many common issues can be found in the E-Learning support pages at <http://studentlife.online.mph.ufl.edu/e-learning/>.
- For technical difficulties with E-Learning in general please contact the UF Help Desk at: Learning-support@ufl.edu or (352) 392-HELP – select option 2.
- For problems with our E-Learning CANVAS site, activities and assessments, please contact Dr. Wang.

Additional Academic Resources

[Career Connections Center](#): Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

[Library Support](#): Various ways to receive assistance with respect to using the libraries or finding resources.

[Teaching Center](#): Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.

[Writing Studio](#): 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

Student Complaints On-Campus: [Visit the Student Honor Code and Student Conduct Code webpage for more information.](#)

On-Line Students Complaints: [View the Distance Learning Student Complaint Process.](#)

RESPONSE TIMES

For questions posted Monday–Thursday, I will try my best to respond within 24 hours. For questions posted Friday–Sunday, I will respond Monday or as soon as possible thereafter.

ANNOUNCEMENTS

Class announcements will be sent via the Announcements tool in E-Learning. You should have your CANVAS notification settings to send alerts to your UF email for announcements through CANVAS. You are responsible for all information in these announcements. As a student of the University of Florida, it is very important to check your UFL email address and course sites regularly. An easy way to access your UF email account is at <http://webmail.ufl.edu>.

DISCUSSION BOARDS

Reviewing the discussion posts of other students and posting your own can be very helpful.

ACADEMIC REQUIREMENTS AND GRADING

QUIZZES

There will be untimed quizzes in Canvas which are typically due each **Tuesday by 11:59 pm** covering the material assigned for the review of the previous week. You have the opportunity to take each quiz **up to three times before its due date**. Your highest of these scores will be recorded. Quizzes test basic definitions and skills and may sometimes be cumulative in that they will go back and ask earlier questions. We highly recommend that you start your first attempt early and take your three attempts on different days with time for reviewing the course material in between. When you submit a quiz attempt, you will see your grade and will be able to review your quiz attempt. For each question, you will see whether you answered correctly or incorrectly but it will not reveal the correct answer for any you did not answer correctly. There will also be feedback for each question which will direct you to the most important content to review.

ASSIGNMENTS

Most assignments will involve data analysis in software and interpretation and/or certain questions which cannot be easily presented in the quizzes. Assignments will normally be due on **Thursdays at 11:59 pm**, but all assignments except the first and last will require extended work and **should be started as early as possible, no later than the week prior to the due date**, in order to have time to address any questions or issues. For all **software assignments** in this course, if you do not receive full credit for the software part (Part A), you may resubmit Part A before the deadline for Part B to receive half credit back for your corrections.

COURSE PROJECT

Each student will individually perform a guided data analysis based upon two (hopefully linearly related) quantitative variables. These variables will then be categorized in two ways (2 levels, 3+ levels). The relationship between the two variables will be investigated using different combinations of variable types. This course project will be completed in 4 steps during the semester.

CLASS SESSIONS

Monday class sessions (beginning Week 2) are optional. These sessions will begin with a brief lecture and/or discussion of the current content followed by time to work on assignments and ask individual questions of the instructor and TA. Thursday class sessions are REQUIRED and part of the attendance and group work grades. These sessions will begin with a brief opportunity for questions.

Any time not taken specifically with group activities or instructor led discussion can generally be used in whatever way each student finds most beneficial including working on assignments, quizzes, reviewing course materials and tutorials. If you wish to review videos in class, bring headphones or ear buds as audio cannot be played aloud during class. Use this time to try to address all important questions so that outside of class you will be able to make efficient use of your time.

Note: Bring your laptop to each class session. All assignments must be submitted via E-Learning by the exact due date and time.

GRADING

Requirement	% of final grade
Quizzes (14)	15%

Assignments (8)	40%
Software for Assignments (4)	15%
Software for Course Project (STEP 1,2,3)	15%
Course Project STEP 4	15%

Final Average	<60	[60,63)	[63,67)	[67,70)	[70,73)	[73,77)	[77,80)	[80,83)	[83,87)	[87,90)	[90,93)	[93,100)
Letter Grade	E	D-	D	D+	C-	C	C+	B-	B	B+	A-	A
GPA	0	0.67	1.0	1.33	1.67	2.0	2.33	2.67	3.0	3.33	3.67	4

Please be aware that a C- is not an acceptable grade for graduate students. A grade of C counts toward a graduate degree only if an equal number of credits in courses numbered 5000 or higher have been earned with an A.

GRADE RESPONSE TIMES

The time to receive your grade on assignments will vary depending on the type and length of the assignment. The instructor and TAs will always strive to return your graded work as soon as possible.

POLICY RELATED TO MAKE-UP WORK

All work must be submitted via E-Learning by the exact due date and time. Any late submission or missed work will receive a grade of zero unless arrangements have been made ahead of the due date with the instructor. Late submissions or make-ups are acceptable only due to illness or other unanticipated circumstances warranting a medical excuse and resulting in the student missing an assignment deadline, consistent with college policy. Documentation from a health care provider is required.

Please note: Any requests for make-ups due to technical issues **MUST** be accompanied by UF Computing help desk (<http://helpdesk.ufl.edu/>) correspondence. You **MUST** e-mail me within 24 hours of the technical difficulty if you wish to request a make-up.

POLICY RELATED TO REQUIRED CLASS ATTENDANCE

Attendance is strongly encouraged and will help you parse the significant amount of material in the course. Please note all faculty are bound by the UF policy for excused absences. Requirements for class attendance and make-up exams and assignments in this course are consistent with university policies that can be found at

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Excused absences must be consistent with university policies in the Graduate Catalog

(<https://catalog.ufl.edu/graduate/regulations/#text>). Additional information can be found here:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

EXPECTATIONS REGARDING COURSE BEHAVIOR

It's critical to review the weekly page in Canvas and read all announcements carefully. Each week's materials will be clearly identified on the course E-learning site. Students are expected to work through the material as scheduled. It is very important to work through all content contained on this site as directed and ask questions about the material you do not understand. **Working through the content from start to finish is the best approach to achieve a high level of understanding and success in this course.** In addition, it is your responsibility to review the comments and feedback we give on your graded assignments.

COMMUNICATION GUIDELINES

Questions about course material should be asked in class, during office hours, or posted on the course discussion boards in E-Learning. Questions about specific quiz questions or issues of a personal nature should be sent by

email through E-Learning. For questions asked Monday-Thursday, we will try our best to respond within 24 hours. For questions asked Friday-Sunday, we will respond Monday or as soon as possible thereafter.

ACADEMIC INTEGRITY

Students are expected to act in accordance with the UF policy on academic integrity. As a student at UF, you have committed yourself to uphold the Honor Code, which includes the following pledge:

“We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at UF. The following pledge is either required or implied on all work:

“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

It is your individual responsibility to know and comply with all UF policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at UF will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For additional information regarding Academic Integrity, please see Student Conduct and Honor Code or the Graduate Student Website for additional details:

<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>

<http://gradschool.ufl.edu/students/introduction.html>

Please remember cheating, lying, misinterpretations, or plagiarism in any form is unacceptable and inexcusable behavior.

RECORDING WITHIN THE COURSE

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, or exams), field trips, private conversations between students in the class, or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

POLICY RELATED TO GUESTS ATTENDING CLASS

Only registered students are permitted to attend class. However, we recognize that students who are caretakers may face occasional unexpected challenges creating attendance barriers. Therefore, by exception, a department chair or his or her designee (e.g., instructors) may grant a student permission to bring a guest(s) for a total of two

class sessions per semester. This is two sessions total across all courses. No further extensions will be granted. Please note that guests are not permitted to attend either cadaver or wet labs. Students are responsible for course material regardless of attendance. For additional information, please review the Classroom Guests of Students policy in its entirety. Link to full policy: <https://p.php.ufl.edu/policy-classroom-guests-of-students/>

ONLINE FACULTY COURSE EVALUATIONS

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluation at <http://evaluations.ufl.edu>. I value your feedback on the course and consistently work to improve the course based on your comments in the evaluations. Course evaluations are also an integral part of the faculty promotion process. Evaluations are typically open the last two weeks of the semester.

ADVICE FROM DR. WANG

- All that I can ask is that you do your best with the provided materials and to ask when you need more direction or explanation.
- It is expected that you will spend approximately 10-12 hours per week on this course. This is roughly equivalent to 3 hours in class combined with 6-9 hours outside of class. Scheduling your time wisely and working efficiently will minimize the need for extra work in this course. Generally, we advise students to break this time up into blocks of 1-3 hours split over as many days of the week as possible given your schedule. Working on too much material in one sitting is more likely to cause frustration and does not allow for time for understanding to develop or for questions to be answered.
- Learn to use the materials to your greatest advantage. There is a lot of content, but if you understand the examples or if you have experience with certain topics, it may not be necessary to review all of the content we provide.
- The questions presented in the “Learn by Doing” and “Did I Get This” activities as well as the course worksheets are indicative of important questions and concepts that you will need to understand and are designed to teach as well as test your understanding. We highly encourage you to go through these as they are presented in the online supplementary material [BOLT](#) (for the “Learn by Doing” and “Did I Get This” activities) and the course E-learning page (for the worksheets). If you go through the content as directed, you will learn the skills you need to succeed in the course as well as build a foundation of statistical knowledge.
- If you ever feel lost, please ask, but also understand that the course is building to a complete picture, and sometimes it’s hard to see how each topic is related until later in the semester when we tie everything together. Often, activities and worksheets are leading you to think about things that will be important later in the course while working on skills related to the current topic.
- Refer my sample code, watch the software tutorials carefully, especially if you find the software aspect challenging, and review our suggestions in the SAS information section. Do not allow yourself to waste time working in the software. If you are having issues, let us know immediately and we will help as soon as possible. Try to make sure as much of your time as possible in the software is productive.
- Be sure to stay on track with the material and ask when you don’t understand. Getting behind can be difficult to fix in any course. Let the instructor know as soon as possible if you feel you are falling behind.

SUPPORT SERVICES

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

If you require classroom accommodation because of a disability, it is strongly recommended you register with the Dean of Students Office <https://dso.ufl.edu/> within the first week of class or as soon as you believe you might be eligible for accommodations. The Dean of Students Office will provide documentation to you, which you must then give to me as the instructor of the course to receive accommodation. Please do this as soon as possible after you receive the letter. Students with disabilities should follow this procedure as early as possible in the semester. The College is committed to providing reasonable accommodations to assist students in their coursework.

COUNSELING AND STUDENT HEALTH

Last revised 8/17/2024 5:46:00 PM

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that may interfere with their academic performance. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

- The **Counseling and Wellness Center** 352-392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their web site for more information: <http://www.counseling.ufl.edu>. On line and in person assistance is available.
- **U Matter We Care** website: <http://www.umatter.ufl.edu/>. If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.
- 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. 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: <https://shcc.ufl.edu/>
- Crisis intervention is always available 24/7 from: Alachua County Crisis Center: (352) 264-6789 <http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx>
- **University Police Department:** [Visit UF Police Department website](#) or call 352-392-1111 (or 9-1-1 for emergencies).
- **UF Health Shands Emergency Room / Trauma Center:** For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; [Visit the UF Health Emergency Room and Trauma Center website](#).

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.

INCLUSIVE LEARNING ENVIRONMENT

Public health and health professions are based on the belief in human dignity and on respect for the individual. As we share our personal beliefs inside or outside of the classroom, it is always with the understanding that we value and respect diversity of background, experience, and opinion, where every individual feels valued. We believe in, and promote, openness and tolerance of differences in ethnicity and culture, and we respect differing personal, spiritual, religious and political values. We further believe that celebrating such diversity enriches the quality of the educational experiences we provide our students and enhances our own personal and professional relationships. We embrace The University of Florida's Non-Discrimination Policy, which reads, "The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act." If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see your instructor or refer to the Office of Multicultural & Diversity Affairs website: www.multicultural.ufl.edu

Weekly Topical Outline and Schedule of Assignments with Due Dates

Content to Review by Week	Tuesday	Thursday
Week 1		8/22
Course Introduction, SAS Introduction & Access, Preliminaries		Assignment 1 – Self-Assessment & Community Construction (in class)
Week 2	8/27	8/29
Unit 1A – EDA for One Variable	Quiz 1 – Syllabus Quiz	Software Assignment 1 - SAS Verification
Week 3	9/3	9/5
Unit 1B – EDA for Two Variables	Quiz 2 – EDA for One Variable (Due on 9/3)	Assignment 2A – EDA for One Variable (Software)
Week 4	9/10	9/12
Unit 2 – Producing Data	Quiz 3 – EDA for Two Variables	Assignment 2B – EDA for One Variable (Written)
Week 5	9/17	9/19
Unit 3A – Probability	Quiz 4 – Producing Data	Assignment 3A – EDA for Case CC and CQ (Software)
Week 6	9/24	9/26
Unit 3B – Discrete Random Variables	Quiz 5 – Probability	Assignment 3B – EDA for Case CC and Case CQ (Written)
Week 7	10/1	10/3
Unit 3B – Continuous Random Variables	Quiz 6 – Discrete Random Variables	Assignment 4 – Independent Events
Week 8	10/8	10/10
Unit 3B – Sampling Distributions	Quiz 7 – Continuous Random Variables	Assignment 5A – EDA for Two Variables (Software)

Content to Review	Tuesday	Thursday
Week 9	10/15	10/17
Unit 4A – Estimation	Quiz 8 – Sampling Distributions	Course Project Step 1
Week 10	10/22	10/24
Unit 4A – Hypothesis Testing	Quiz 9 – Estimation	Assignment 5B – EDA for Two Variables (Written)
Week 11	10/29	10/31
Unit 4B – Inference for Relationships (Case CQ)	Quiz 10 – Hypothesis Testing	Course Project Step 2
Week 12	11/5	11/7
Unit 4B – Inference for Relationships (Case CQ)	Quiz 11 – Case CQ Part I	Course Project Step 3
Week 13	11/12	11/14
Unit 4B – Inference for Relationships (Case CC)	Quiz 12 – Case CQ Part II	Assignment 6 – Examples from Literature
Week 14	11/19	11/21
Unit 4B – Inference for Relationships (Case QQ)	Quiz 13 – Case QQ	Assignment 7 – Inference with Data
Week Thanksgiving	11/26	11/28
Break	Break	Break
Week 15	12/3	12/5
Review	Last class meeting day. Quiz 14 – Case CC (Note: Last Day of Classes @UF is Wed, 12/4)	No Class – Reading Day Course Project Step 4
Week 16	12/9	12/12
Final Exam Week	Assignment 8 – End of Semester Self-Assessment	