# University of Florida
## College of Public Health & Health Professions Syllabus
## Fall 2015 PHC 6050: Statistical Methods for the Health Sciences I (3 credits)

Section: 1611 - HPNP G301 – Monday 4th Period, Thursday 3rd & 4th Periods
Section: 06B6 - HPNP G301 – Monday 6th Period, Thursday 7th & 8th Periods
*Open Assistance Periods: HPNP G301 – Monday 5th Period, Thursday 5th & 6th Periods*
Delivery Format: Blended Learning Model
Course Specific Content and Assessments in E-Learning using CANVAS: https://lss.at.ufl.edu/
Open Access Course Materials: http://bolt.mph.ufl.edu/

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**Starting the Course:** Read this syllabus and review the course calendar. Review the E-Learning home page. You must take the "Syllabus quiz" and earn a score of 100% in order to start the course. This quiz is located in the Assessments tool. The quiz is based on information in this syllabus and may be taken as many times as needed to earn 100%. This quiz is required and will be counted as part of your quiz grade. Additional guidance for getting started is provided in the E-learning site in CANVAS.

🙂     As your instructor, my primary goal is for each of you to learn as much as possible during the semester!     🙂

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| Instructor Name: | Dr. Amy Cantrell (http://users.phhp.ufl.edu/acantrell/) |
| Office: | CTRB 5213 |
| Phone Number: | 352-294-5927 |
| Email: | via E-learning in Canvas |
| Office Hours: | by appointment (arrange via email through E-Learning) |

Preferred Course Communications:
- Ask about specific quiz questions or issues of a personal nature by email through E-Learning
- Ask anything (except personal or specific quiz questions) in the most appropriate discussion board
- Ask or Comment Anonymously through Qualtrix Survey (Password: fall.2015.biostat)

**Note:** In the E-Learning system a cut-off time of 10:00pm means that at 10:00:01pm you are late. Computers do not recognize seconds after a given time as "on time." Please plan your work accordingly and do not wait until this cut-off time to complete your assignments in the system.

*If you find any information on the course site that is contradictory to this syllabus, please bring it to Dr. Cantrell's attention as soon as possible.*

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| Teaching Assistant | Rachel Zahigian | Email via E-Learning in Canvas |

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**IMPORTANT:** course materials discuss a few software packages. **In PHC 6050 you are only responsible for SPSS.**

**Prerequisites and Co-requisites:** There are no specific pre-requisite courses. The following describes important skills and discusses the software you must obtain for this course.

Although most statistical analyses will be conducted using software in this course, **students should be comfortable working with equations and performing basic mathematical calculations including order of operations, fractions, and square roots**.

We are using **Statistical Package for the Social Sciences, SPSS 20 (or higher)** in this course. The software is available in Windows and Mac versions. Becoming familiar with a statistical package is an important part of your statistical education. **it is highly encouraged that you have access to SPSS on a device for in class use**. See https://software.ufl.edu/student-agreements/, click on **SPSS for Windows** for SPSS program purchase information and online documents.

SPSS (Version 21) is also available along with other applications such as Microsoft Office on the free APPS server (see http://info.apps.ufl.edu/). We do not have tutorials on working with this system so if you use this you will need to learn additional skills on your own regarding how the apps server works with data in SPSS. In addition the system has a limited number of licenses available so that it is preferable for you to still have your own functioning copy of the software.

If you buy this software from a source other than those listed above be sure to obtain either the STANDARD GRADUATE PACK (GRADPACK) or PREMIUM GRADUATE PACK. The BASE or other student versions may not have enough functionality for this course. The version available through UF is more complete than the versions you can buy elsewhere.

**Other Potentially Useful Software Packages:**

- Open Office (http://www.openoffice.org/) - free "Office" suite of programs (like Microsoft Office) which can edit Word and Excel documents and convert output to PDF files.
- CutePDF (http://www.cutepdf.com/Products/CutePDF/writer.asp) - is a free "printer" which converts any document you can print into a pdf file. If installed, you can choose "CutePDF" in the printer list when you print a document.
- Print Friendly (http://www.printfriendly.com/) is an excellent resource for printing webpages.

**What is blended learning and why is it important?** A Blended Learning class uses a mixture of technology and face-to-face instruction to help you maximize your learning. Knowledge content that I would have traditionally presented during a live class lecture is instead provided online before the live class takes place. This lets me focus my face-to-face teaching on course activities designed to help you strengthen higher order thinking skills such as critical thinking, problem solving, and collaboration. Competency in these skills is critical for today's health professional.

**What is expected of me?** You are expected to actively engage in the course throughout the semester. You must come to class prepared by completing all out-of-class assignments. This preparation gives you the knowledge or practice needed to engage in higher levels of learning during the live class sessions. If you are not prepared for the face-to-face sessions, you will struggle to keep pace with the activities occurring in the live sessions, and it is unlikely that you will reach the higher learning goals of the course. Similarly, you are expected to actively participate in the live class. Your participation fosters a rich course experience for you and your peers which facilitates overall mastery of the course objectives.

Because I post material online, you can go back and review it as many times as needed to feel comfortable with the material prior to the live class. Please keep in mind that you have to allocate your time wisely to take full advantage of the blended learning approach.

**PURPOSE AND OUTCOME**

**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 and/or Goals:** 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.

**Relation to Program Outcomes:** This three-credit course is a required core public health course for certain 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 Materials:** There is no textbook to purchase for this course. Course materials will be provided in the form of an "online" textbook at http://bolt.mph.ufl.edu/. The materials for each week will be clearly identified in the E-Learning site for the course. Students are expected to work through the material as scheduled. This page can be used to test your system: http://bolt.mph.ufl.edu/2012/11/07/test-your-system/.

It is very important that you work through all content contained on this site as directed and ask questions about material you do not understand. Working through the content from start to finish is the best approach to achieve a high level of success in this course.

**Videos**: Most videos presented in the course materials 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.

**Flash:** Embedded self-assessment quizzes and other components of the course materials require Flash. Be sure to enable Flash in your browser and upgrade if needed (http://www.adobe.com/software/flash/about/.)

**JAVA:** The course materials utilize many JAVA applets which provide interactive illustrations of certain concepts. Although none of these applets will be absolutely required in order to understand the concepts, we highly encourage you to experiment with these applets to increase the depth of your understanding of difficult concepts. Unfortunately, JAVA has made changes which require more actions in order to run these programs due to security concerns. There are links to detailed instructions on our test your system page: http://bolt.mph.ufl.edu/2012/11/07/test-your-system/.

**Recommended SPSS books:** Although we will provide tutorials for all SPSS skills required for this course, there are numerous SPSS guides available if you wish to purchase one. The best for you may depend on what you might be doing with SPSS after our course. 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 recommendations for others are also appreciated.

**SPSS Information:** If you have questions about SPSS ask in the "SPSS Questions" discussion board. 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. We offer some advice below and are happy to help you determine the best approach for you.

There are tutorials provided for all skills needed for assignments in this course. We have tried to make it as easy as possible to follow along with the tutorials. Watching the videos at a slower speed can help. Viewing the transcripts while you watch or work in SPSS 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.

Some students find SPSS to be the most fun part of the course, others dislike learning the software. Regardless, the MPH program (which operates this course) requires SPSS to be an integral part of our instruction. If you find SPSS to be fun and easy and are willing to provide moral or tutorial support for other students, feel free to post on the discussion board or let me know!

**E-Learning:** An E-Learning site will be available for the course. The Weekly Schedule and all course materials are available online through this site including grades, assignments, discussion boards, and other course information. 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.

For technical difficulties with E-learning please contact the UF Help Desk at:
- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- https://lss.at.ufl.edu/help.shtml

**Browser Recommendations:** https://wiki.helpdesk.ufl.edu/FAQs/SupportedBrowsersForUFWebsites#elearning

**Non-SPSS 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. There is a link to Student Help in our course site. Please familiarize

yourself with the information in each of these help tools. 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 (non-SPSS related) technical help in the course, please post your questions in the "Technical Difficulties" discussion board. You may find the answer to your issue from other student postings. This can often be the quickest way to get help.

**Response Time:** If I can, I will address your questions immediately. During the week I will do my best to address all questions completely within 24 hours. For questions asked on Friday, Saturday, or Sunday, I may not be able to respond until early the following week.

**Announcements:** Class Announcements will be sent via E-learning. You are responsible for all information in these announcements. Your notification settings in CANVAS will determine additional notifications you receive. As a student of the University of Florida, it is very important to check your UFL email and E-learning sites for your courses regularly. In this class, you should check these accounts at least once every day during the week. An easy way to access your UF email account is at https://webmail.ufl.edu/.

**Discussion Boards:** Reviewing the discussion posts of other students and asking your own can be very helpful.

## ACADEMIC REQUIREMENTS AND GRADING

**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.

**Quizzes:** There will be untimed weekly quizzes due each Wednesday by 10 PM covering the material assigned for review the previous week in the weekly schedule. You have the opportunity to take each quiz up to three times before the due date. For 7 of the quizzes, there will be a 1st attempt due on Wednesday by 10 PM and final attempts due on Sunday by 10 PM. This is designed to give you the opportunity to fully benefit from the in-class activities. **In order to receive any credit for the quiz you must score 80% or higher.** Students who do not pass the quiz with a grade of 80% or higher will be required to remediate until they earn an 80% in order to obtain a grade for the quiz. The only score which can be earned through remediation is 80%. Students in need of remediation will be contacted directly by the instructor with instructions. Quizzes test basic definitions and skills and may sometimes be cumulative in that they will go back and ask earlier questions. We highly encourage you to take your three attempts on different days with time for review in between. There is feedback available in the quiz review which can help direct you to the content needed to review.

**Assignments:** Individual assignments will involve data analysis in software and interpretations as well as certain types of questions which cannot be easily presented in the quizzes. Assignments will be due on Monday at 10 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. The attached schedule provides reminders about when to begin working on assignments.

**Course Project:** Each student will individually prepare a course project consisting of a guided data analysis based upon two (hopefully 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.

**Group Assignments:** During class sessions, groups will often work on specific worksheets and assignments. The grades for these assignments are based upon your attendance and participation during the session as well as your preparation for the session. In particular, some quizzes will have an initial due date for the first attempt followed by an in-class group activity prior to the final due date for that quiz. Students who do not prepare for the session by completing the first attempt will earn a maximum of 70% for that group assignment. Students who are not in attendance will earn no credit unless the absence is excused.

**Attendance:** Attendance will be taken during each class session. Students who are on-time to class will receive 3 points; students who are less than 10 minutes late will receive 2 points; and students who are more than 10 minutes late will receive 1 point. Students who are not in attendance will receive 0 points.

**Class Sessions:** 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 please 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: All assignments must be submitted via E-Learning by the exact due date and time

**Grading**

| Requirement | % of final grade |
|---|---|
| Quizzes (x15 – 2% each) | 30% |
| Assignments (x6 – 5% each) | 30% |
| Course Project<br>(Due: December 9th by 10 PM) | 25% |
| Group Work | 5% |
| Required Attendance | 10% |

Point system used (i.e., how do final course averages translate into letter grades).

| Final Average | 94-100 | 90-93 | 85-89 | 80-84 | 77-79 | 74-76 | 70-73 | 67-69 | 64-66 | 60-63 | 57-59 | Below 57 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Letter Grade | A | A- | B+ | B | B- | C+ | C | C- | D+ | D | D- | E |

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.

| Letter Grade | A | A- | B+ | B | B- | C+ | C | C- | D+ | D | D- | E | WF | I | NG | S-U |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Grade Points | 4.0 | 3.67 | 3.33 | 3.0 | 2.67 | 2.33 | 2.0 | 1.67 | 1.33 | 1.0 | 0.67 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

For greater detail on the meaning of letter grades and university policies related to them, see the Registrar's Grade Policy regulations at: http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

**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 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 an assignment 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. Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

**Policy Related to Required 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 review the currently assigned materials prior to the class meetings, and be prepared to discuss the material. Please note all faculty are bound by the UF policy for excused absences. For information regarding the UF Attendance Policy see the Registrar website for additional details: http://www.registrar.ufl.edu/catalogarchive/01-02-catalog/academic_regulations/academic_regulations_013_.htm

**Communication Guidelines:** Questions about course material should be posted on 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 (check the box "send a copy to the recipients email." This will result in the fastest possible response). Please review the Netiquette Guidelines: http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf.

**Online Faculty Course Evaluation Process:** Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. I value your comments and honest review of this course and consistently work to improve the course based upon the results of these evaluations and other methods of feedback. Course evaluations are also an important part of the faculty promotion process. Evaluations are typically open

during the last two or three weeks of the semester, but you will be notified of specific times when the evaluations are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/

**Academic Integrity:** Students are expected to act in accordance with the University of Florida policy on academic integrity. As a student at the University of Florida, 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 the University of Florida, the following pledge is either required or implied:

> **"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 university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida 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, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

## ADVICE FROM DR. CANTRELL

As you will hear me say numerous times, all I can ask is that you do the best you can with the materials that are made available to you and ask when you need more direction or explanation.

It is expected that you will spend approximately 8 hours each week on this course outside of class. Scheduling your time wisely and working efficiently will minimize the need for extra work in this course. Generally I 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 we present 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 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 materials.

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 at times you feel lost, please ask but also understand that the course is building to a complete picture. Sometimes it is hard to see how each topic is related until later in the semester when we tie everything together.

Watch the software tutorials carefully, they provide additional and occasionally the only instruction on course content. If you find the software aspect challenging review our suggestions in the SPSS information section earlier. 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 ask when you don't understand and work hard to stay on-track with the material. 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, you must register with the Dean of Students Office http://www.dso.ufl.edu within the first week of class. 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 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.

- You 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

*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.*

# Outline of Schedule for Course Materials and Due Dates

For more details, see the weekly schedule in E-Learning

| Content to Review | Monday | Wednesday | Thursday | Sunday |
|---|---|---|---|---|
| **Week 1** | 8/24 | 8/26 | 8/27 | 8/30 |
| Introduction Preliminaries | In Class: Work on<br>• Assignment #1-A<br>  o Nameplates<br>  o Picture | **DUE 10:00 PM**<br>• **Quiz #1 – Preliminaries**<br>• **Blended Learning Survey** | In Class: Work on<br>• Group Assignment #1 – Variables<br>• Test classroom internet access on device(s) | |
| **Week 2** | 8/31 | 9/2 | 9/3 | 9/6 |
| EDA for One Variable | In Class: Work on<br>• Assignment #1-B – Self Assessment or Course Materials<br>**Need access to Internet & E-Learning**<br>**DUE 10:00 PM**<br>• **Assignment #1-B – Self Assessment** | **DUE 10:00 PM**<br>• **Syllabus Quiz in Assessments** | No Class | **DUE: Your Software Installed!!!**<br>**6050 = SPSS** |
| **Week 3** | 9/7 | 9/9 | 9/10 | 9/13 |
| EDA for Two Variables | No Class | **DUE 10:00 PM**<br>• **Quiz #2 – Unit 1 (Part 1 – Through "Normal Shape")** | In Class: Work on<br>• Assignment #2 (**Software**)<br>• Bring headphones or earbuds to listen to tutorials<br>• If no software you should plan to review tutorials & observe<br>• **Access to Internet & E-Learning** | |
| **Week 4** | 9/14 | 9/16 | 9/17 | 9/20 |
| Remainder of Unit 1, All of Unit 2 | In Class: Work on<br>• Assignments #2 or #3 (**Software**) | **DUE 10:00 PM**<br>• **Quiz #3 – Unit 1 (Part 2 – Role-type through Linear Regression)** | In Class: Work on<br>• Assignment #3 (**Software**) | |

| **Week 5** | 9/21 | 9/23 | 9/24 | 9/27 |
|---|---|---|---|---|
| Unit 3A | In Class: Work on<br>• Assignments #3 or #5 (**Software**)<br>**DUE 10:00 PM**<br>• **Assignment #2 - EDA for One Variable** | **DUE 10:00 PM**<br>• **Quiz #4 – Causation –Unit 2** | In Class: Work on<br>• Assignments #3 or #5 (**Software**)<br>• Assignment #4 – Independence | |
| **Week 6** | 9/28 | 9/30 | 10/1 | 10/4 |
| Unit 3B – Discrete RVs | In Class: Work on<br>• Assignments #3 or #5 (**Software**)<br>• Assignment #4 – Independence<br>**DUE 10:00 PM**<br>• **Assignment #3 - Case CC and case CQ** | **DUE 10:00 PM**<br>• **Quiz #5 – Unit 3A – Probability – 1st Attempt** | In Class: Work on<br>• Group Assignment #2 – Probability<br>If your group finishes early you can work on<br>• Assignment #5 (**Software**)<br>• Assignment #4 – Independence | **DUE 10:00 PM**<br>• **Quiz #5 – Unit 3A – Probability – Final Attempts** |
| **Week 7** | 10/5 | 10/7 | 10/8 | 10/11 |
| Unit 3B – Continuous RVs | In Class: Work on<br>• Assignments #5 (**Software**)<br>• Assignment #4 – Independence<br>**DUE 10:00 PM**<br>• **Assignment #4 – Independent Events** | **DUE 10:00 PM**<br>• **Quiz #6 – Unit 3B – Discrete RVs – 1st Attempt** | In Class: Work on<br>• Group Assignment #3 – Discrete RVs<br>If your group finishes early you can work on<br>• Assignment #5 (**Software**)<br>• Course Project – Collecting Data and Initial Investigation (**Software**) | **DUE 10:00 PM**<br>• **Quiz #6 – Unit 3B – Discrete RVs – Final Attempts** |
| **Week 8** | 10/12 | 10/14 | 10/15 | 10/18 |
| Sampling Distributions | In Class: Work on<br>• Assignment #5 (**Software**)<br>• Course Project – Collecting Data and Initial Investigation (**Software**)<br>**DUE 10:00 PM**<br>• **Assignment #5 – EDA for Two Variables** | **DUE 10:00 PM**<br>• **Quiz #7 – Unit 3B – Continuous RVs – 1st Attempt** | In Class: Work on<br>• Group Assignment #4 – Continuous RVs<br>If your group finishes early you can work on<br>• Course Project – Collecting Data and Initial Investigation (**Software**) | **DUE 10:00 PM**<br>• **Quiz #7 – Unit 3B – Continuous RVs – Final Attempts** |

| **Week 9** | 10/19 | 10/21 | 10/22 | 10/25 |
|---|---|---|---|---|
| Unit 4A – Estimation | In Class: Work on<br><br>• Group Assignment #5 – Sampling Distributions<br><br>**At least one member needs functioning applet**<br>**DUE 10:00 PM**<br><br>• **Course Project – Collecting Data and Initial Investigation** | | In Class: Work on<br><br>• Group Assignment #5 – Sampling Distributions<br><br>**At least one member needs functioning applet**<br>If your group finishes early you can work on<br><br>• Course Project – Draft (**Software all EDA required**) | **DUE 10:00 PM**<br><br>• **Quiz #8 – Unit 3B – Sampling Distributions (All Attempts)** |
| **Week 10** | 10/26 | 10/28 | 10/29 | 11/1 |
| Unit 4A – Hypothesis Testing | In Class: Work on<br><br>• Course Project – Draft (**Software all EDA required**) | **DUE 10:00 PM**<br><br>• **Quiz #9 – Unit 4A – Estimation – 1st Attempt** | In Class: Work on<br><br>• Group Assignment #6 – Estimation<br><br>If your group finishes early you can work on<br><br>• Course Project – Draft (**Software all EDA required**) | **DUE 10:00 PM**<br><br>• **Quiz #9 – Unit 4A – Estimation – Final Attempts** |
| **Week 11** | 11/2 | 11/4 | 11/5 | 11/8 |
| Unit 4B Case CQ | In Class: Work on<br><br>• Course Project – Draft (**Software all EDA required**) | **DUE 10:00 PM**<br><br>• **Quiz #10 – Unit 4A – Hypothesis Testing – 1st Attempt** | In Class: Work on<br><br>• Group Assignment #7 – Hypothesis Testing<br><br>If your group finishes early you can work on<br><br>• Course Project – Draft (**Software all EDA required**) | **DUE 10:00 PM**<br><br>• **Quiz #10 – Unit 4A – Hypothesis Testing – Final Attempts** |
| **Week 12** | 11/9 | 11/11 | 11/12 | 11/15 |
| Unit 4B Case CC and QQ | In Class: Work on<br><br>• Course Project – Draft (**Software all EDA required**)<br>**DUE 10:00 PM**<br><br>• **Course Project – Draft (all EDA required)** | **Veteran's Day – No Classes**<br>**DUE 10:00 PM**<br><br>• **Quiz #11 – Unit 4B – Case CQ – 1st Attempt** | In Class: Work on<br><br>• Group Assignment #8 – Case CQ<br>If your group finishes early you can work on<br><br>• Course Project (**Software**) | **DUE 10:00 PM**<br><br>• **Quiz #11 – Unit 4B – Case CQ – Final Attempts** |

| Week 13 | 11/16 | 11/18 | 11/19 | 11/22 |
|---|---|---|---|---|
| Review Units 1-3B | In Class: Work on<br>• Course Project (**Software**) | **DUE 10:00 PM**<br>• **Quiz #12 – Unit 4B – Cases CC & QQ – 1st Attempt** | In Class: Work on<br>• Group Assignment #9 – Cases CC & QQ<br>If your group finishes early you can work on<br>• Course Project (**Software**) | **DUE 10:00 PM**<br>• **Quiz #12 – Unit 4B – Cases CC & QQ – Final Attempts** |
| **Week 14** | 11/23 | 11/25 | 11/26 | 11/29 |
| Review Units 4A and 4B | In Class: Work on<br>• Course Project (**Software**)<br>Group Assignment #10 – (Short) Project Presentations<br>**DUE 10:00 PM**<br>• **Bonus: Paired T-tests in Software** | **Thanksgiving Break** | **Thanksgiving Break** | **Thanksgiving Break** |
| **Week 15** | 11/30 | 12/2 | 12/3 | 12/6 |
| | In Class:<br>• Deliver Group Assignment #10 – (Short) Project Presentations<br>If we finish early you can work on<br>• Course Project (**Software**) | **DUE 10:00 PM**<br>• **Quiz 13 – Review Units 1-3B**<br>• **Quiz #14 – Units 4A and 4B** | In Class:<br>• Deliver Group Assignment #10 – (Short) Project Presentations<br>If we finish early you can work on<br>• Course Project (**Software**) | |
| **Week 16** | 12/7 | 12/9 | 12/10 | 12/13 |
| | In Class:<br>• Deliver Group Assignment #10 – (Short) Project Presentations<br>If we finish early you can work on<br>• Course Project (**Software**) | **DUE 10:00 PM**<br>**Course Project - Final Version** | | |
| **Week 17** | 12/14 | 12/16 | | |
| **(Final Exam Period)** | | **DUE 10:00 PM**<br>• **Assignment #6 – End of Semester Self-Assessment (opens 12/10)** | | |