Syllabus STA2023 - Fall 2024 University of Florida Introduction to Statistics I - Statistical Methods 1 GE Core)

INSTRUCTIONAL TEAM

Course Coordinator	Lab Coordinator	Teaching Assistants
Maria Ripol mripol@stat.ufl.edu Griffin Floyd 117C 352-273-2976 Office Hours: MW: 1:00 – 2:30 online F: 1:00 – 2:30 in person Or by appointment	**Stephanie Stine** s.stine@ufl.edu Griffin Floyd 117B 352-273-2975 Office Hours: M: 10am - 11:30am in person W: 2pm - 3:30pm online R: 10am - 11:30am online	~16 TAs - names and emails available in Canvas **Tutoring Room** - available around 40 hours per week, mixture of online and in person tutoring hours in Griffin Floyd 104 – see below
Contact Course Coordinator for questions about quiz and exam grades, and for general questions about the course not answered on the syllabus or the homepage in Canvas.	**Contact Lab Coordinator** for questions about lab.	**Contact TAs** for incorrectly recorded grades on lab worksheet, and for assistance with the course material in the Tutoring Room (see Canvas for schedule).

Course website in Canvas at https://elearning.ufl.edu/

MATERIALS

Lecture Notes – you can download them from the course homepage in Canvas, and then print them or write on them electronically. UF allows you to print for free in the computer labs.

Lab Worksheets – needed for the lab portion of the course, and available to print from the course homepage in Canvas.

Scientific Calculator - You will need a calculator with some basic statistical functions: mean and standard deviation. Many inexpensive calculators (around $15) have these functions; check the manual or look for the following symbols: x-bar and either s or σn-1. Graphing calculators are NOT ALLOWED on exams.

Recommended Textbook: *Statistics: The Art and Science of Learning from Data* by Agresti, Franklin, Klingenberg, 5th edition, Pearson, 2021. You need to have access to the textbook in order to complete the *suggested* homework problems listed for each module- these are good practice to learn the material but *do not count for your grade*. There will be copies of the book available for you to use on reserve at the Marston Science Library and in our Tutoring Room. You can get the book as an eText which allows you to complete the homework problems electronically, check your answers, and use the homework help for extra videos and examples through AccessPearson. See Canvas for more details.

Materials/Supplies Fees: $1.74 charged during registration for lab materials

COURSE DESCRIPTION

IN THIS COURSE, STUDENTS WILL UTILIZE DESCRIPTIVE AND INFERENTIAL STATISTICAL METHODS IN CONTEXTUAL SITUATIONS, USING TECHNOLOGY AS APPROPRIATE. THE COURSE IS DESIGNED TO INCREASE PROBLEM-SOLVING ABILITIES AND DATA INTERPRETATION THROUGH PRACTICAL APPLICATIONS OF STATISTICAL CONCEPTS. THIS COURSE IS APPROPRIATE FOR STUDENTS IN A WIDE RANGE OF DISCIPLINES AND PROGRAMS.

STA 2023 is an introductory course that assumes no prior knowledge of statistics but does assume some knowledge of high school algebra. Basic statistical concepts and methods are presented in a manner that emphasizes understanding the principles of data collection and analysis rather than theory. Much of the course will be devoted to discussions of how statistics is commonly used in the real world. There are two major parts to this course:

I Data – which includes graphical and numerical summaries to describe the distribution of a variable, or the relationship between two variables (chapters 1, 2 and 3, approximately 3 weeks), and data production to learn how to design good surveys and experiments, collect data from samples that are representative of the whole population, and avoid common sources of biases (chapter 4, 1 week.)

II Probability and Inference – using the language of probability and the properties of numerical summaries computed from a random sample (chapters 5, 6 and 7, 4 weeks), we learn to draw conclusions about the population of interest, based on our random sample, and attach a measure of reliability to them (chapters 8, 9, 10 approximately 8 weeks).

Course Objective: The primary goal of the course is to help students understand how the process of posing a question, collecting data relevant to that question, analyzing data, and interpreting data can help them find answers to real problems from their world.

Structure of the Course: This course consists of:

- 36 Modules which include:
  - class material offered as live lectures, recorded lectures, or interactive videos
  - a short online quiz for each one
  - suggested homework problems from the textbook and additional examples
- 10 Labs to be completed weekly, in person, in CSE E231.
- 3 Exams also completed in person

LECTURES

In this hybrid course ALL students, regardless of which section they are registered for, can choose to

- attend the live lectures offered MWF 8th period (3pm) in TUR L007 in person
- watch the recordings of those lectures, available in Canvas about an hour after the live lecture ends (for technical problems contact the UF Help Desk http://helpdesk.ufl.edu/)
- access the material through the Playposit interactive videos available in the Modules in Canvas

QUIZZES

There will be a short, 5-point quiz associated with each module. These online Module Quizzes will be completed in Canvas and students will have three chances for each quiz, with the highest score counting towards your grade. For technical problems contact the UF Help Desk http://helpdesk.ufl.edu/

There are 36 Module Quizzes during the semester. They must be completed by the deadline, typically at 11:59pm one business day after the live lectures are taught – see Canvas for more details. All quizzes are open from the beginning of the semester so students can work ahead if they need to – remember all the material is available as Playposit interactive videos posted from the start.

Please complete the quizzes early if you have travel plans, religious observances, sports or club events, or any other conflict whether approved by the university or not. Students are expected to complete ALL module quizzes before the deadline. At the end of the semester, the lowest three Module quiz scores will be dropped.

LABS

Students are required to attend Lab in person once a week, according to the section for which they are registered. Each lab meets for one class period, and they all meet in CSE E231, which is located close to Turlington and the Marston Science Library. Lab Worksheets with instructions will be posted in Canvas at least one week before labs meet. There are 10 labs during the semester, each worksheet graded out of 10 points.

To get credit for lab, you must:

- Bring the correct printed lab worksheet to lab.
- Attend the section you are registered for.
- Be on time – students will not get credit for the activity if they are more than five minutes late.
- Sign the attendance sheet for each Lab to show you arrived on time. Late students disrupt the activity and create problems for the rest of the students and the TA, so it will not be tolerated.
- Turn in the lab worksheets to the section TA before leaving Lab that day.

Class Numbers and Meeting Times (in CSE E231):

period	Time	Monday	Tuesday	Wednesday	Thursday	Friday
2	8:30 am		16652		16653	
3	9:35 am		16657		16245	
4	10:40 am	16654	16658	16246		16248
5	11:45 am	16655		16247		16249
6	12:50 pm	16656		16251		16250
10	5:10 pm		16659			

NOTE: If you know you will regularly have trouble attending the lab you are registered for, or being on time, you MUST CHANGE LAB SECTIONS IMMEDIATELY. This includes conflicts with travel, religious observances, sports or club events, or any other conflict whether approved by the university or not.

There are usually plenty of opportunities to change sections during Drop/Add period. After Drop/Add is over, you will need to contact the Lab Coordinator to see if any changes are possible - see the top of this syllabus for the Lab Coordinator's contact information.

Makeup Labs: Students are expected to complete ALL labs in person during the assigned day and time for their section. To allow for situations such as illnesses or emergencies, two makeup labs will be available in Canvas during the final three days of classes. No excuses are necessary to complete these makeup labs.

Extenuating Circumstances: The two makeup labs are meant for situations when a student is unable to complete the assignment at the appropriate time. These makeups cover all situations including illness, family emergencies, travel, computer or transportation trouble, etc. They should be used judiciously. In very rare instances these makeup opportunities are not enough due to a student experiencing extended hospitalization or illness, or some catastrophic event during the semester. In these cases, the student must meet with the Course Coordinator during office hours with appropriate documentation for all of their missed assignments. Each case will be reviewed individually.

EXAMS

There will be three assembly exams, each worth 100 points. The two midterms are given at night, and the last one during final exam week. Each exam consists of 33 multiple choice questions, each worth 3 points, which totals 99 points. You can earn the remaining 1 point by bringing a picture ID to the exam and by bubbling in your name, UF ID# and test code (listed on the front page of the exam) correctly. Exams will cover a larger amount of material that the quizzes and will also place more emphasis in the understanding of concepts and ideas behind the formulas.

Room assignments for each exam will be announced in class and on the website. Bring to the exam your UFID number, picture ID, no.2 pencils and eraser for completing the bubble sheets, and a scientific calculator. Graphing calculators may be NOT used during the exam. Accessing notes and formulas from the course during the exam is cheating. Accessing your cell phone or communicating with another individual during the exam is also considered cheating. Academic dishonesty on any exam will result in a minimum penalty of a grade of *zero* on that exam.

Exams	Date	Time	Chapters in Book	Modules
Exam 1	WED OCT 2	8:20 pm – 10: 00 pm (AT NIGHT)	Ch. 1 – Ch. 6 Sec. 3	1-16
Exam 2	THU NOV 7	8:20 pm – 10:00 pm (AT NIGHT)	Ch. 7 Sec. 1 – Ch. 9 Sec. 2	17-26
Exam 3	TUE DEC 10	5:30 – 7: 10 pm (LATE AFTERNOON)	Ch. 9 – Ch. 10 Sec. 4	27-36

Makeup Exam Policy:

- In case of conflict with a class: Assembly exams have priority over regularly scheduled classes. The instructor for the other class must allow you to make up any work you miss because of an assembly exam - contact them early to make arrangements. This is a University of Florida policy, as stated on the Registrar's website https://catalog.ufl.edu/ugrad/current/regulations/info/exams.aspx
- In case of conflict with another exam: Assembly exams have priority over time-of-class exams. If you have two assembly exams scheduled for the same day and time, the course with the higher number has priority. This is a University of Florida policy, as stated on the Registrar's website

(https://catalog.ufl.edu/ugrad/current/regulations/info/exams.aspx) Contact instructor of the appropriate class early to make arrangements for a makeup exam - do not wait until the last minute. If you need to schedule a makeup exam for STA2023 because it conflicts with another assembly exam for a course with a higher number, you must contact the STA2023 Course Coordinator at least ONE WEEK prior to the regularly scheduled exam.

- In case of sudden illness or emergency: Contact the STA2023 Course Coordinator **prior** to the exam - as soon as you realize you will be unable to take the test at the scheduled time. Each case will be reviewed individually. Valid and detailed documentation is a prerequisite for scheduling a makeup exam under such extenuating circumstances. The STA2023 Course Coordinator must be contacted by midnight of the day of the exam via email or voice mail. If you are sick and have documentation you should NOT take the regular test but request a makeup – there are no retakes.
- To make arrangements for a makeup exam: Contact the STA2023 Course Coordinator by email or in person during office hours (information appears at the top of this syllabus). Makeup exams will cover the same material as the regularly scheduled exam but will not necessarily be in multiple choice format.
- Please Note: Being on vacation is not a valid reason to request a makeup.

TUTORING ROOM SCHEDULE

Virtual Tutoring Hours (white blocks): Zoom Link Passcode: 371678

In Person Tutoring Hours (green blocks): in Griffin Floyd 104 (Campus Map - search for FLO)

Time	Pd	Mon	Tue	Wed	Thu	Fri
9:35	3					
10:40	4	Shravya Sama	Isabella Rodrigues	Shravya Sama	Roger Wang	Shravya Sama
11:45	5	Julia Zager	Isabella Rodrigues	Julia Zager	Roger Wang	Julia Zager
12:50	6	Casie Lin	Sneha Nair	Casie Lin	Casie Lin	Frances Van Looveren
1:55	7	Christina Cortes	Sneha Nair	Sam Sommer	Casie Lin	Frances Van Looveren
3:00	8	Christina Cortes	Kejin Dong	Sam Sommer	CLOSED for TA Meeting	Frances Van Looveren
4:05	9	Christina Cortes	Kejin Dong	Sam Sommer	Sneha Nair	
5:10	10	Ivy Zhang	Ivy Zhang	Tuyen Truong	Luke Phommachanh	
6:15	11	Ivy Zhang	Ivy Zhang	Tuyen Truong	Luke Phommachanh	
7:20	E1	Ivy Zhang	Gail Stelmashenko	Tuyen Truong	Luke Phommachanh	
8:20	E2	Ivy Zhang	Gail Stelmashenko	Tuyen Truong	Luke Phommachanh	

COURSE ASSESSMENT

Grade Structure	Percent
Exam 1	25%
Exam 2	25%
Exam 3	25%
Labs	12.5%
Quizzes	12.5%

Grading Scale		
A	4.00	91 to 100%
A-	3.67	89.5 to 90.99%
B+	3.33	85.5 to 89.49%
B	3.00	81 to 85.49%
B-	2.67	78.5 to 80.99%
C+	2.33	75.5 to 78.49%
C	2.00	68.5 to 75.49%
D	1.00	60 to 68.49%
E	0.00	Below 60%

Minimum grade of C is required for General Education credit. More information on grades and grading policies can be found here: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

HOW TO GET THE MOST OUT OF THIS COURSE

Time Commitment: Keep up with the class material, either by attending a live class, watching them online, or completing the Playposit interactive videos. Set aside time three times a week to work on the course material. Factor in time to complete your quizzes, and don't forget to attend lab each week, on time.

Choice: Remember the class material is available in three different formats – live lectures, recorded lectures and online interactive videos. Each student should choose the one that works best for them. Everyone is welcome to attend the live lectures, but it may not be possible for you. The Playposit interactive videos are all available well ahead of the time when the live lectures are delivered and recorded. If you know you will be out of town or very busy one week you may want to complete the modules and quizzes ahead of time.

Watching Videos: You should watch the lectures within a day or two of it being posted. Watch the lectures one at a time at regular speed and then do the quiz and also a few suggested homework problems. Each section in the notes is labeled with chapter and section headings. If I ask the audience to work out a problem, this includes those who watch it online as well. Watch the lectures in a low disruption environment. While watching the lecture, you should be focused on the lecture and not messaging friends, checking social media, etc.. I have carefully considered what needs to be discussed in class in our limited time frame. Make sure that you are paying attention to all of it. If you find that the online lectures are not working for you, consider going to the live lectures.

Getting Help: You can get **free help from all the TAs in the class in our Tutoring Room** that will be open about 40 hours per week in a mixture of ONLINE and IN PERSON tutoring hours. No appointments are necessary, and you don't need to go when your TAs are on duty. The Tutoring Room schedule will be

posted in Canvas. Information about any other free tutoring services offered by UF will be posted there as well.

Quizzes: If you have questions on the quizzes, you are allowed to ask teaching assistants and the instructor about submitted attempts on the quiz only. For example, you can take the quiz one time, submit the quiz for grading. The teaching assistants in the Tutoring Room can help you with the problems with which you had questions. You can then go and try attempt 2 on your own. You are not allowed to complete quizzes in the tutoring room. If you send an email to the instructor about a quiz question, make sure that you take a screen shot of the question and include your full name in the email. Remember that you have several days and several tries for each quiz. Given all these opportunities, all students should do extremely well on the quizzes. Hopefully they will serve the purpose of improving your grade in the class, as well as be an important tool in learning the material for the course.

Labs: Each lab activity will require students to work in groups. Students are responsible for understanding the material covered in class and the quizzes from the previous modules so they can complete the activity by following the instructions on the worksheet. TAs will be in lab to facilitate the activity, but students are expected to work independently to explore the statistical concepts, with the help of their group and their notes, according to the principles of active learning. If a question arises, students should turn to other students in their group or table to discuss them. Students must bring a printed lab worksheet to lab, go to the correct section, be on time, and sign the attendance sheet.

Learn by Doing: You learn Statistics by doing Statistics. In addition to the lectures, quizzes and labs, there are suggested homework problems and additional tutorials and videos through AccessPearson. You should do as much as you need to understand the material.

COURSE POLICIES

Privacy Policies: Student records are confidential. Only information designated "UF directory information" may be released without your written consent. UF views each student as the primary contact for all communication. If your parents contact me about your grade, attendance or other information that is not "UF directory information", I will ask them to contact you.

Privacy in Recorded Live Lectures: Our class sessions will be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. The cameras and microphones are focused on the instructor. Students who participate in class are agreeing to have their voices recorded. If lectures are conducted through Zoom, students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded.

Privacy in Zoom Tutoring and Office Hours: The Zoom Tutoring Room is open to all students to discuss course material. Any student who joins can listen in on your questions, as they would in the in-person tutoring room. However, the Office Hours for the Course Coordinator and the Lab Coordinator will only admit one student at a time, with any others being placed in a waiting room. So students can discuss any personal issues or problems with the instructor during office hours with the guarantee of confidentiality. Neither office hours nor tutoring will be recorded.

Email: Email relating to information about the class should be sent to the STA2023 Course Coordinator or Lab Coordinator (see first section of this syllabus) or to your TA (emails listed on the "Contact Us" website in Canvas). Your message will be answered within two business days, in most cases. Please don't email all TAs or all instructors using the group email sending option in Canvas. We don't know who you intended to speak to. Please send email directly to the TA or lab or course coordinator and address them by name. However, we ask you to please refer to this syllabus, the course pages in Canvas to try to find the answers for yourself. Questions regarding the material covered in class, homework problems, or Lab should be asked in person, in the Tutoring Room, in Lab or in class. Statistical questions often require formulas or pictures, which can make it very hard to communicate by email. Emails should include your full name, UFID number and section number.

Requirements for class attendance and make-up exams, assignments, and other work in the course are consistent with university policies. See UF Academic Regulations and Policies for more information regarding the University Attendance Policies.

University's Honesty Policy: UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students 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." The Honor Code (https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the STA2023 Course Coordinator.

Students with Disabilities: Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center. See the "Get Started With the DRC" web page on the Disability Resource Center site. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester. This letter must be sent to the STA2023 Course Coordinator directly, not the lab TA. Accommodations will not be made retroactively, but only forward from the day that the letter was received. Special circumstances should be discussed in person with the Course Coordinator.

Grading: Grades will be changed only when an error has been made; negotiation is not appropriate.

Incompletes are only assigned when extraordinary circumstances (such as an accident, or extended hospitalization), arising after the date for dropping the course, prevent the student from completing the course requirements. Having a failing grade in the course is not a valid reason for requesting an Incomplete. Information on **medical withdrawal** and **dropping a class** can be found in UF's Academic Catalog: https://catalog.ufl.edu/UGRD/academic-regulations/dropping-courses-withdrawals/

Instructor / Course Evaluations: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email, through Canvas, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

OTHER UNIVERSITY SERVICES

U Matter, We Care: If you or someone you know is in distress, or needs information on services offered at UF, please contact them: 352-392-1575 umatter@ufl.edu https://umatter.ufl.edu/

Student Health Care Center: 352-392-1161 https://shcc.ufl.edu/

University Police Department, 352-392-1111 (or 9-1-1 for emergencies) http://www.police.ufl.edu

E-learning technical support – contact the UF Computing Help Desk: http://helpdesk.ufl.edu/

GENERAL EDUCATION OBJECTIVE AND STUDENT LEARNING OUTCOMES

This course satisfies general education credits in the mathematical sciences. A minimum grade of C is required for general education credit. Students learn how to summarize data and how to make appropriate decisions based on data. (This course is the general education category of M.)

GRAPHICAL AND NUMERICAL DESCRIPTIVE MEASURES. SIMPLE LINEAR REGRESSION. BASIC PROBABILITY CONCEPTS, RANDOM VARIABLES, SAMPLING DISTRIBUTIONS, CENTRAL LIMIT THEOREM. LARGE AND SMALL SAMPLE CONFIDENCE INTERVALS AND SIGNIFICANCE TESTS FOR PARAMETERS ASSOCIATED WITH A SINGLE POPULATION AND FOR COMPARISON OF TWO POPULATIONS. USE OF STATISTICAL COMPUTER SOFTWARE AND COMPUTER APPLETS TO ANALYZE DATA AND EXPLORE NEW CONCEPTS. (M)

General Education Objective (Mathematics)

Courses in mathematics provide instruction in computational strategies in fundamental mathematics including at least one of the following: solving equations and inequalities, logic, statistics, algebra, trigonometry, inductive and deductive reasoning. These courses include reasoning in abstract mathematical systems, formulating mathematical models and arguments, using mathematical models to solve problems and applying mathematical concepts effectively to real-world situations.

In this course, this objective will be met by . . .

During the semester the students will be given an introduction to the three main aspects of statistics: design (of experiments/surveys), description (of data collected) and inference (the extension of conclusions from the data gathered in the sample to the larger population). These concepts will be presented through lectures three times a week and lab once a week. They will also learn about the normal and binomial distributions as well as the methodology of confidence intervals and significance tests. From the methods that they learn in class they will be able to critique real world surveys and experiments, interpret graphs in newspapers and magazines as well as conduct basic statistical inference for one or two groups.

General Education Student Learning Outcomes (SLOs)

Content: Students demonstrate competence in the terminology, concepts, methodologies and theories used within the discipline.

Communication: Students communicate knowledge, ideas, and reasoning clearly and effectively in written or oral forms appropriate to the discipline.
Critical Thinking: Students analyze information carefully and logically from multiple perspectives, using discipline specific methods and develop reasoned solutions to the problems.

- STUDENTS WILL VISUALIZE AND SUMMARIZE DATA USING DESCRIPTIVE STATISTICS.
- STUDENTS WILL APPLY BASIC PROBABILITY CONCEPTS TO DRAW REASONABLE CONCLUSIONS.
- STUDENTS WILL EMPLOY CONCEPTS OF RANDOM VARIABLES, SAMPLING DISTRIBUTIONS, AND CENTRAL LIMIT THEOREM TO ANALYZE AND INTERPRET REPRESENTATIONS OF DATA.
- STUDENTS WILL CHOOSE AN APPROPRIATE METHOD OF INFERENTIAL STATISTICS, INCLUDING CONFIDENCE INTERVALS AND HYPOTHESIS TESTING, TO MAKE BROADER DECISIONS BASED ON SAMPLE DATA.
- STUDENTS WILL MODEL LINEAR RELATIONSHIPS BETWEEN QUANTITATIVE VARIABLES USING CORRELATION AND LINEAR REGRESSION.

In this course, these SLOs will be met by . . .

Content: Students will learn critical terminology, concepts, methods, and theories during lecture. These concepts will include terminology to describe one and two samples, discuss surveys/experiments, basic probability theory, sampling distributions, and one and two group inference. The students will be assessed on these terms and concepts during the weekly quizzes and the three exams. Students will also demonstrate their competence in identifying the appropriate formulas to use for each situation and using those formulas correctly.
Communication: The students will use verbal and written communication to discuss central statistical concepts in their weekly labs. These concepts include description of data sets, sampling methods and interpretations of inference methodology.
Critical Thinking: The students will be asked to critically think about trustworthiness of surveys and experiments presented in the media. Additionally, students will learn how to conduct significance tests, a statistical method to logically determine if there is enough evidence for a hypothesis. Students will learn how to state the null and alternative hypotheses (different perspectives) and then to use the data collected to determine if there is enough evidence to support the alternative hypothesis using methods central to the field of statistics. The students will be tested on these concepts in lab, quiz and on two of the exams.

WEEKLY COURSE SCHEDULE

Live classes are taught Monday, Wednesday and Friday but the Playposit Interactive Videos for all the modules are available in Canvas from the beginning of the semester. Labs and Exams are done in person. Online Module Quizzes are due at midnight one business day after the material is covered in class, with the exception of the material covered during drop/add, which are all due one day after drop/add ends. All Module Quizzes are available from the beginning of the semester so students can work ahead. See Canvas Calendar for exact dates and more details.

Monday	Tuesday	Wednesday	Thursday	Friday
			8/22	**8/23** **Module 1:** Syllabus and Introduction ***QUIZ***
8/26 **Module 2:** Graphs for Quantitative Data ***QUIZ***	**8/27**	**8/28** **Module 3:** Measuring Center and Spread ***QUIZ*** ***DROP/ADD ENDS***	**8/29**	**8/30** **Module 4:** Quartiles and Boxplots ***QUIZ***
9/02 *Labor Day Holiday* ***Monday sections will complete Lab 1 later***	**9/03** **Lab 1: Histograms**	**9/04** **Module 5:** Intro to Regression ***QUIZ*** **Lab 1: Histograms**	**9/05** **Lab 1: Histograms**	**9/06** **Module 6:** Regression Example ***QUIZ*** **Lab 1: Histograms**
9/09 **Module 7:** Cautions In Regression ***QUIZ*** **Lab 2: Regression**	**9/10** **Lab 2: Regression**	**9/11** **Module 8:** Categorical Data ***QUIZ*** **Lab 2: Regression**	**9/12** **Lab 2: Regression**	**9/13** **Module 9:** Gathering Data ***QUIZ*** **Lab 2: Regression**
9/16 **Module 10:** Experiments ***QUIZ*** **Lab 3: Sampling**	**9/17** **Lab 3: Sampling**	**9/18** **Module 11:** Other Considerations ***QUIZ*** **Lab 3: Sampling**	**9/19** **Lab 3: Sampling**	**9/20** **Module 12:** Basic Probability ***QUIZ*** **SKIP Module 13** **Lab 3: Sampling**
9/23 **Module 14:** Continuous Probability Distributions ***QUIZ*** **Lab 4: Contingency Tables**	**9/24** **Lab 4: Contingency Tables**	**9/25** **Module 15:** Discrete Probability Distributions ***QUIZ*** **Lab 4: Contingency Tables**	**9/26** **Lab 4: Contingency Tables**	**9/27** **Module 16:** More Normal and Binomial Examples ***QUIZ*** **Lab 4: Contingency Tables**
9/30 **EXAM REVIEW** **Lab 1: Histograms**	**10/01**	**10/02** **Q&A** **EXAM 1**	**10/03**	**10/04** **Module 17:** Sampling Dist of p-hat ***QUIZ*** **Lab 5: Sampling Dist of p-hat**

10/07 **Module 18:** Sampling Dist of x-bar ***QUIZ*** **Lab 5: Sampling Dist of p-hat**	**10/08** **Lab 5: Sampling Dist of p-hat**	**10/09** **Module 19:** More Sampling Dist Problems ***QUIZ*** **Lab 5: Sampling Dist of p-hat**	**10/10** **Lab 5: Sampling Dist of p-hat**	**10/11** **Module 20:** Confidence Intervals for p ***QUIZ*** **Lab 6: Sampling Dist of x-bar**
10/14 **Module 21:** Confidence Intervals for μ ***QUIZ*** **Lab 6: Sampling Dist of x-bar**	**10/15** **Lab 6: Sampling Dist of x-bar**	**10/16** **Module 22:** More on Confidence Intervals ***QUIZ*** **Lab 6: Sampling Dist of x-bar**	**10/17** **Lab 6: Sampling Dist of x-bar**	**10/18** *Homecoming* *NO CLASS*
10/21 **Module 23:** Sample Size, Small Sample CI for p and Bootstrap ***QUIZ*** **Lab 7: Confidence Intervals for μ**	**10/22** **Lab 7: Confidence Intervals for μ**	**10/23** **Module 24:** Basics of Significance Tests ***QUIZ*** **Lab 7: Confidence Intervals for μ**	**10/24** **Lab 7: Confidence Intervals for μ**	**10/25** **Module 25:** More P-values and Significance Tests for Proportions ***QUIZ*** **Lab 7: Confidence Intervals for μ**
10/28 **Module 26:** More Significance Tests for Proportions Examples ***QUIZ*** **Lab 8: Significance Test for p**	**10/29** **Lab 8: Significance Test for p**	**10/30** **Module 27:** Significance Tests for Means ***QUIZ*** **Lab 8: Significance Test for p**	**10/31** **Lab 8: Significance Test for p**	**11/01** **Module 28:** Relationship between CI and Sig Tests ***QUIZ*** **Lab 8: Significance Test for p**
11/04 **EXAM REVIEW** **Lab 9: Significance Test for μ**	**11/05**	**11/06** **Q&A**	**11/07** **EXAM 2**	**11/08** **Module 29:** Other Considerations about Sig Tests ***QUIZ***
11/11 *Veterans Day*	**11/12** **Lab 9: Significance Test for μ**	**11/13** **Module 30:** Comparing Two Independent Proportions ***QUIZ*** **Lab 9: Significance Test for μ**	**11/14** **Lab 9: Significance Test for μ**	**11/15** **Module 31:** Comparing Two Independent Means ***QUIZ*** **Lab 9: Significance Test for μ**

11/18 **Module 32:** Comparing Two Dependent Means ***QUIZ*** **Lab 10: Comparing Two Groups**	**11/19** **Lab 10: Comparing Two Groups**	**11/20** **Module 33:** McNemar's and Permutation Tests ***QUIZ*** **Lab 10: Comparing Two Groups**	**11/21** **Lab 10: Comparing Two Groups**	**11/22** **Module 34:** Review – Part 1 ***QUIZ*** ***Last Day to Drop*** **Lab 10: Comparing Two Groups**
11/25 *Thanksgiving Break*	**11/26** *Thanksgiving Break*	**11/27** *Thanksgiving Break*	**11/28** *Thanksgiving Break*	**11/29** *Thanksgiving Break*
12/02 **Module 35:** Review – Part 2 ***QUIZ***	**12/03**	**12/04** **Module 36:** Review – Part 3 ***QUIZ*** ***ALL MAKEUP LABS DUE TODAY***	**12/05** *Reading Days* *NO CLASS*	**12/06** *Reading Days* *NO CLASS*

EXAM 3 – Tuesday Dec 10 at 5:30 PM

NOTE – this calendar is subject to change if necessary