Syllabus for STA 2023 - Introduction to Statistics

Fall 2015 -- ONLINE

Instructor Information

Instructor: Megan Mocko

Email: m meece@ufl.edu

Phone Number: 352-273-2975

Office Hours: MF 10am to 11:30am W 11am to 12:30pm (Make an appointment within the Calendar using the Scheduler. The slots for the appointments are 15 minutes long. I will send you in Conferences at the Scheduled Time. If you schedule a time within 24 hours of the appointment, please send an email to be as well.)

Appointments at another time are also possible. Send an email to m meece@stat.ufl.edu. Appointments will need to be scheduled 24 hours in advance.

Teaching Assistant Information

Teaching Assistant: Yeun-Ji Jung

Email: snow0907@stat.ufl.edu

Online Office Hours: Mon 3-5pm; Thu 4-6pm (Make an appointment within the Calendar using the Scheduler. The slots for the appointments are 15 minutes long. I will send you in Conferences at the Scheduled Time. If you schedule a time within 24 hours of the appointment, please send an email to be as well.)

General Course Information

THIS COURSE SATISFIES GENERAL EDUCATION CREDITS IN THE MATHEMATICAL SCIENCES. STUDENTS LEARN HOW TO SUMMARIZE DATA AND HOW TO MAKE APPROPRIATE DECISIONS BASED ON DATA. (This course is the general education category of M.)

Course Description

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 samples (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.

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.

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 homework assignments, 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 assignments and semester project. 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 their assignments, quizzes and on the exams.

**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.

**Course Material By Week**

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Introduction to the field of statistics; Exploring Data with Graphs</td>
</tr>
<tr>
<td>Week 2</td>
<td>Measures of Center, Shape, and Spread; Exploring Relationships between Two Variables</td>
</tr>
<tr>
<td>Week 3</td>
<td>Regression</td>
</tr>
<tr>
<td>Week 4</td>
<td>Data from Surveys/Experiments and Probability</td>
</tr>
<tr>
<td>Week 5</td>
<td>Probability Distributions</td>
</tr>
<tr>
<td>Week 6</td>
<td>Exam 1, Sampling Distributions for the Sample Proportion</td>
</tr>
<tr>
<td>Week 7</td>
<td>Sampling Distribution for the Sample Mean</td>
</tr>
<tr>
<td>Week 8</td>
<td>Confidence Intervals for the Population Proportion and Population Mean</td>
</tr>
<tr>
<td>Week 9</td>
<td>More on Confidence Intervals, Significance Test for the Population Proportion</td>
</tr>
<tr>
<td>Week 10</td>
<td>Exam 2, Significance Test for the Population Mean</td>
</tr>
<tr>
<td>Week 11</td>
<td>Comparing Two Independent Proportions</td>
</tr>
<tr>
<td>Week 12</td>
<td>Comparing Means from Independent and Dependent Samples</td>
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<tr>
<td>Week 13</td>
<td>Comparing Dependent Samples of Proportions</td>
</tr>
<tr>
<td>Week 14</td>
<td>Review; Project Due</td>
</tr>
<tr>
<td>Week 15</td>
<td>Exam 3</td>
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</tbody>
</table>
**Required Materials**

1. *Student Lab Workbook for Statistics: The Art and Science of Learning from Data—3rd edition by Megan Mocko and Maria Ripol*
3. **Scientific Calculator** that has some basic statistical functions: mean and standard deviation. Many inexpensive calculators (around $10 to $15) have these functions; check the manual or look for the following symbols: \( \bar{x} \) and either \( s \) or \( \sigma \). All of the more expensive graphing calculator have them as well, but it is not necessary to buy one of them for this class.
4. **A Reliable Computer**
   - Windows Users: A reliable computer running Windows XP (minimum) Windows 8 (recommended) (or higher) with 1024 MB of RAM or higher
   - Mac users: Mac OS X (minimum) MAC OSX 10.9 Mavericks (recommended)
   - A web cam with 640x480 video pixel resolution or higher.
   - Headphones or working speakers connected to the computer.
   - A working microphone connected to the computer. We recommend a web cam that has a built in microphone. (Webcam must have 640x480 resolution, 1280by720 preferred.)
   - A web browser with Adobe Flash Player installed. We recommend Flash Player 11 and Adobe Shockwave player.
   - A reliable, high-speed internet connection (minimum 768 KBPS/384 KPS download upload or higher – recommended 1.5Mbps download and upload speed.) (wired connection preferred).
   - The ability to allow video and screen-sharing connections to the computer you will be using to take your exam.
   - Authority to allow remote access to your computer and screen by one of the test proctors.
   - Use this link to test your computer before the Exams.
   - Functioning microphone
   - Web Browser (Google Chrome, Mozilla Firefox, Safari, Internet Explorer 7 – 10)
   - At least 1024 MB RAM but 2 GB preferred.
Course Assessment

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Percent of Grade</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>20 %</td>
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<tr>
<td>Exam 2</td>
<td>20 %</td>
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<tr>
<td>Exam 3</td>
<td>20%</td>
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<tr>
<td>Lesson Quizzes</td>
<td>10 %</td>
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<tr>
<td>Practice Assignments</td>
<td>20 %</td>
</tr>
<tr>
<td>Individual “Island” Project</td>
<td>10 %</td>
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</tbody>
</table>

Possible Grades for the Course

<table>
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<tr>
<th>Letter Grade</th>
<th>Grade Points</th>
<th>Percentage of Points Needed</th>
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<tbody>
<tr>
<td>A</td>
<td>4.00</td>
<td>90 to 100%</td>
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<tr>
<td>A-</td>
<td>3.67</td>
<td>88.5 to 89.99%</td>
</tr>
<tr>
<td>B+</td>
<td>3.33</td>
<td>84.5 to 88.49%</td>
</tr>
<tr>
<td>B</td>
<td>3.00</td>
<td>80 to 84.49%</td>
</tr>
<tr>
<td>B-</td>
<td>2.67</td>
<td>78.5 to 79.99%</td>
</tr>
<tr>
<td>C+</td>
<td>2.33</td>
<td>74.5 to 78.49%</td>
</tr>
<tr>
<td>C</td>
<td>2.00</td>
<td>67.5 to 74.49%</td>
</tr>
<tr>
<td>D</td>
<td>1.00</td>
<td>60 to 67.49%</td>
</tr>
<tr>
<td>E</td>
<td>0.00</td>
<td>Below 60%</td>
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Course Websites

We will be using the course management system, Canvas. Mystatlab is incorporated inside Canvas and can be found under the modules link. Canvas can be accessed using your gatorlink id and password.

In Canvas you will be able to: complete the lessons in the course, find any updates to the Syllabus, watch the lectures as streaming video as you complete the lessons, take the online quizzes, turn in portions of the project using the assignment tool, ask questions in the “Piazza”, and check your grade. For any technical problems with E-Learning, please contact 392-HELP or learning-support@ufl.edu.

In MyStatLab, you will be able to complete the required homework and optional study guides.
Lessons Quizzes

You will be completing about one lesson twice a week. This lesson will include text and video about the day’s assigned material. As you work through the material, you will be filling in the lab workbook. It will also have several activities and short quizzes for you to accomplish. You should expect this lesson and the homework to take you about 2 to 3 hours per lesson.

The lesson scores are automatically sent to the gradebook. There is an unlimited number of tries for each lesson up until the due date. If you are uncertain if your grade is being recorded in the gradebook, take a screen shot of your score from the lesson.

After you finish the assessment, the grade should appear in the gradebook. Please check the calendar posted in the course management system for a more up to date list of deadlines. Please check your scores in a timely manner. To get your grade for this section, total up your points from each lesson and divide by the total number of points. Take this number and multiple by 100 to get your grade for this part.

Practice Assignments

It is important to practice statistics in order to learn it. In this course, there are many difference types of assignments available for you to practice learning statistics.

- Essentially, you should be completing about 2-3 practice assignment per week. However, I am leaving the choice of which assignments you complete up to you.
- There are a total of about 40 assignments available. Out of the 40 assignments, I will count the highest 32 assignments. You are welcome to complete more than 32 of the assignments if you wish, but only the highest 32 assignments will be counted. I highly recommend that you pick a variety of different types of assignment. Varying the way that you practice will better prepare you for the exam.
- Each of the assignments have due dates. After the due date for that assignment has passed, you can no longer complete that assignment. Because I am only counting the highest 32 assignments, I will not re-open assignments for any reason.
- Here is a briefly list of the types of assignments that you may encounter.
  - **MyStatlab HW** – For each of the lesson topics, there is a corresponding HW. For each of the problems on the homework, you can re-do the problem up to 3 times to improve your score. These are graded immediately and you can see your scores listed in Mystatlab immediately; however, I have to grade sync the scores in order for them to appear in Canvas. I will try to do this multiple times during the weekday. I will also sync scores once on Saturday. Additionally, there is SmartThinking tutoring available for these problems for 24 hour assistance to complete the problems. WARNING: Because the help functions have been turned on in the course, homework scores are not always a good judge of how you are learning the material. Carefully, reflect on how often you have to use the help functions and how many times you submit the homework. Please see the link in the modules labeled Mystatlab help if you need technical assistance.
Canvas Quizzes – There are also cumulative quizzes over several sections/chapters. These quizzes can help you judge your knowledge of the material over a broader section of the material. These are graded immediately. The highest score out of 3 will be counted. If you have problems with Canvas, please contact the UF computer help desk at 392-HELP for assistance.

Virtual Tours – These assignments bring together statistics used in the real world and computing skills. These assignments give you practice on using StatCrunch to solve problems. Although these assignments do include some multiple choice questions, they also have a few short answer questions similar to what you might see on the test. Some of the questions are graded immediately, but other questions will need to be graded by the instructor so it may take a few days.

Discussion Questions – These questions allow you to communicate with your fellow classmates. The first discussion has you introduce yourself to the class and the others have you search for statistics used outside the classroom. These questions will take a few days to be graded by the instructor.

Other Computer Assignments – There are also a few other assignments that have you look an online or other statistical functions in StatCrunch.

Please be aware that the grade shown for this section in Canvas will appear higher than they actually are. To see your true score, uncheck the box that says "Calculate based only on graded assignments". This will make your overall grade in the course drop substantially, because it calculates the exam scores as zeros, but it will show you the current score for Practice Assignments. Keep completing assignments to get this score as high as possible. The highest possible score is 100%.

Individual "Island" Project

In this course, there is an individual project. The Island project brings together all aspects of the course: data collection, experimental design and data analysis. More information and rubrics are provided in the course management system. The Island Project is worth 10% of your grade. The Island project has been broken down into 3 parts. See more information in the course in Canvas.

Exams

There will be two online proctored exams. The exam will be multiple choice and short answer. Exams will cover a larger amount of material than the quizzes and will also place more emphasis in the understanding of concepts and ideas behind the formulas. Academic dishonesty on any exam will result in a grade of zero on that exam. There will be 2 parts to the exam – a calculation part and a concept part. For the calculation part, you will have access to your calculator and to the StatCrunch Spreadsheet. For the concept part, you will not have access to any aids. You will have one hour for each part.
Online Exam Dates

<table>
<thead>
<tr>
<th>Exams</th>
<th>Date</th>
<th>Time</th>
<th>Chapters in Book</th>
<th>Handbook Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam 1</td>
<td>Tuesday, October 6, 2015 (7 am to 9pm)</td>
<td>Exam length: 2 hrs.</td>
<td>Ch. 1 – Ch. 6 Sec. 3</td>
<td>1 - 48</td>
</tr>
<tr>
<td>Exam 2</td>
<td>Tuesday, November 3, 2015 (7am to 9pm)</td>
<td>Exam length: 2 hrs.</td>
<td>Ch. 7 - Ch. 9 Section 2</td>
<td>49 – 86</td>
</tr>
<tr>
<td>Exam 3</td>
<td>Tuesday, December 8(^{th}), 7am to 9pm</td>
<td>Exam length: 2 hrs.</td>
<td>Ch. 9 to Chapter 10</td>
<td>78 - 121</td>
</tr>
</tbody>
</table>

Makeup Exam Policy

- Every effort should be made to take the exam during the open exam period. Only extreme situations will warrant a makeup exam. Contact the instructor 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 makeup exams will be mostly multiple choice with some short answer.
- If you have an emergency on the day of the exam, the instructor must be contacted by midnight of the day of the exam via email.
- **To make arrangements for a makeup exam**: Contact the instructor at mmeece@stat.ufl.edu. Makeup exams will cover the same material as the regularly scheduled exam, but will not necessarily be in multiple choice formats.

Pre-Exam Checklist

- Go to ProctorU’s FAQ: http://proctoru.com/faq.php
- Test out your equipment: http://www.proctoru.com/testitout/
- Be sure that you are in a well lit room – must be daylight quality.
- Be sure to have your photo id ready.
- Be sure to bring a reflective surface such as a mirror, CD or DVD.
- **Proctored Exams**
- In order to maintain a high standard of academic integrity and assure that the value of your University of Florida degree is not compromised, course exams may be proctored online by ProctorU. You will take your exam electronically using the course website, but you will register with ProctorU early in the semester, and then sign up for a time for a certified proctor in a testing facility to observe you on your computer while you take your exam. You need a webcam, speakers, microphone and reliable Internet connection to be able to take your exams. Wireless internet is not recommended. You may also need a mirror or other reflective surface.
- Please navigate to http://www.ProctorU.com/portal/ufl to ‘Sign Up’ for a ProctorU account, or click the ‘Log in’ option if you already have an existing ProctorU account.
You should get set up with ProctorU and schedule your exam appointment times during the first week of the semester. You must sign up for an appointment at least 72 hours before an exam. Failure to do so will result in additional fees and reduce the likelihood that the time you want will be available. You should receive a confirmation email from ProctorU. If you experience any trouble with online registration, you can click to Live Chat or call 855-772-8678. Your instructor cannot make your appointments for you.

Prior to each exam and in the same environment you plan to take the exam, go to the ProctorU Test Page to ensure your computer is ready for online proctoring. After you get the 6 checks that your system is ready:

- It is strongly recommended that you take the extra step to connect to a live person:

![Connect to a live person](image)

- This process takes just a few minutes and is completely free.
- **IMPORTANT:** If you are unable to take an exam because of a technical glitch on your end, that is your responsibility. However, if you do experience technical difficulties during the exam, ProctorU will document those difficulties and communicate with your instructor to make alternative arrangements.

**More Information from ProctorU Handout**

You will be taking your exam through an online proctoring company. I have posted their information here for your convenience.

**What We Do**

ProctorU is a revolutionary new service that allows students to complete their assessment at any location while still ensuring the academic integrity of the exam for the institution. Using almost any web cam and computer, you can take exams at home, at work, or anywhere you have internet access.

**Preparing for Your Exam**

You will be connected to a live person during your exam that will be there to guide you through the process and assist with any technical problems. If you have any questions, please call our proctor line at 205-870-8122.

**Appointments**

Appointments are required to use ProctorU and all appointments need to be made at least 72 hours in advance. If you register prior to 72 hours before the exam, there will not be an additional fee.
Reservations made within 72 hours of your exam are subject to a $5 late reservation fee. There is also a “Take it Now” option that does not require prior reservation. However, it will cost you $8.75. To make an appointment, simply create an account at http://go.proctoru.com, log in, click on the “new exam” link and select the exam, date, and time you desire. You will receive a confirmation email of your reservations at the email address that you provided to ProctorU.

Procedure

- Plan ahead for your session.
- Make sure you have a quiet, private location in which to take the test.
- The area and room around your computer will be scanned using a web cam prior to your exam, so all non-authorized materials should be put away and the area should be clutter-free. If you are using a public computer lab, you must have a web cam connection and use headphones, so you won’t disturb others.
- You will also be required to show picture identification to your proctor at the time of your exam. Approved forms of identification include, but are not limited to, a driver’s license, military identification card, passport, or school-issued identification card.
- No breaks are allowed during your testing session and cell phones and other devices will not be permitted in the testing area.
- No other people are allowed in the area in which the test is being taken.
- Any unauthorized notes or other attempts to cheat will abort the test session and will be reported to your instructor.
- At the date and time of your appointment, return to http://go.proctoru.com, log in, and a message will appear saying, “You have an exam. Click here to begin.” Click on this button and it will automatically take you to the proctor page. Fill out your personal information and hit submit. You will then be directed to a screen which will connect you to your proctor. Just follow the steps on the screen and a proctor will be connected with you shortly. Once connected, your designated proctor will walk you through the set up process and you will log into your testing portal. Your proctor will also supply the password for your examination. Your exam time will begin when the proctor enters the examination password on your screen. If you have any problems connecting, please call ProctorU at 205-870-8122. Should you not be able to reach ProctorU via telephone you can email help@proctoru.com. If you have scheduled an exam and you are late, your proctor will attempt to call you at the phone number you provided when you scheduled your exam. Should there be any UF login issues at the time of your scheduled exam your proctor will contact the course instructor or course coordinator and you will be able to reschedule your exam if necessary.
- You may not take the exam at a café, on a plane, train or other public place.
- Make sure that your laptop is plugged in before starting the exam.

Lecture Notes

The notes in the Lab Workbook will be used in class. When you are following the lectures, you should always have the lecture notes in front of you. The instructor will go over the definitions and theory, and work out the examples on the spaces provided.

StatCrunch
StatCrunch is an online statistical software package that comes with your MyStatLab access code. The data sets from the textbook are automatically entered. We will be using StatCrunch to work out problems throughout the semester. The lessons will include videos on how to do certain tasks and quiz you on these activities. You will also be using StatCrunch as part of your “Island” project and will be used on the test.

Office Hours and Review Sessions

Online Office Hours:

To make an appointment to speak with the instructor or TA, go to the calendar and schedule a 15 minute time slot to meet with them. The meeting will occur in Big Blue Button at the time that you select. Please additionally email the Ta or instructor if you sign up within 24 hours of the appointment time.

Live Review Sessions

We will also be having Live Review Sessions during the semester before the exams. I will post a collaboration page before each review session for questions to be posted before each exam. These live review sessions will be held in Big Blue Button. Attendance at the review sessions is not required. Sessions will be recorded and can be viewed at a later time by all. The sessions are stored for 14 days before they are automatically deleted. The review sessions will be conducted by the instructor, Megan Mocko and by the teaching assistants. I will stay online for 15 minutes, if no one attends, I will close the session.

Question and Answer Discussion Board (Piazza)

All students will have access to a Piazza in Canvas. Piazza is a great tool that will allow us to organize questions so that it is easier to find answers. Please try to post questions under the correct chapter or assignment heading. You are able to ask questions about lessons, videos, lesson quizzes, and homework questions. DO NOT POST QUESTIONS ABOUT CANVAS QUIZZES OR TESTS. Students who post CANVAS quiz or test answers on Piazza will be penalized. It will be considered an honor violation. Please send an email to the instructor to discuss private matters such as grades, medical excuses and DRC letters.

- SignUp Link: piazza.com/ufl/fall2015/sta2023
- Class Link: piazza.com/ufl/fall2015/sta2023/home

Textbook Chapters Covered
<table>
<thead>
<tr>
<th>Chapter 1</th>
<th>Statistics: The Art and Science of Learning From Data</th>
</tr>
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<tbody>
<tr>
<td>1.1 Using Data to Answer Statistical Questions</td>
<td></td>
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<tr>
<td>1.2 Sample versus Population</td>
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<table>
<thead>
<tr>
<th>Chapter 2</th>
<th>Exploring Data with Graphs and Numerical Summaries</th>
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<tbody>
<tr>
<td>2.1 Different Types of Data</td>
<td></td>
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<tr>
<td>2.2 Graphical Summaries of Data</td>
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<tr>
<td>2.3 Measuring Center of Quantitative Data</td>
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<tr>
<td>2.4 Measuring the Variability of Quantitative Data</td>
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<tr>
<td>2.5 Using Measures of Position to Describe Variability</td>
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<thead>
<tr>
<th>Chapter 3</th>
<th>Association: Contingency, Correlation, and Regression</th>
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<tbody>
<tr>
<td>3.1 The Association Between Two Categorical Variables</td>
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<tr>
<td>3.2 The Association Between Two Quantitative Variables</td>
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<tr>
<td>3.3 Predicting the Outcome of a Variable</td>
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<tr>
<td>3.4 Cautions in Analyzing Associations</td>
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<table>
<thead>
<tr>
<th>Chapter 4</th>
<th>Gathering Data</th>
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<tbody>
<tr>
<td>4.1 Experimental and Observational Studies</td>
<td></td>
</tr>
<tr>
<td>4.2 Good and Poor Ways to Sample</td>
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<tr>
<td>4.3 Good and Poor Ways to Experiment</td>
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<td>4.4 Other Ways to Conduct Experimental and Non-experimental Studies</td>
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<thead>
<tr>
<th>Chapter 5</th>
<th>Probability in Our Daily Lives</th>
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<tr>
<td>5.1 How Probability Quantifies Randomness</td>
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<td>5.2 Finding Probabilities</td>
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<td>5.3 Conditional Probability: The Probability of A Given B</td>
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<tr>
<td>5.4 Applying Probability Rules</td>
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| Chapter 6 | Probability Distributions |
6.1 Summarizing Possible Outcomes and Their Probabilities

6.2 Probabilities for Bell-Shaped Distributions

6.3 Probabilities When Each Observation Has Two Possible Outcomes

**Chapter 7**  
Sampling Distributions

7.1 How Sample Proportions Vary Around the Population Proportion

7.2 How Sample Means Vary Around the Population Mean

**Chapter 8**  
Statistical Inference

8.1 Point Estimates of Population Parameters

8.2 Constructing a Confidence Interval to Estimate the Population Proportion

8.3 Constructing a Confidence Interval to Estimate the Population Mean

8.4 Choosing a Sample Size for a Study

8.5 How Do Computers Make New Estimation Methods Possible?

**Chapter 9**  
Statistical Inference: Significance Test About Hypotheses

9.1 Steps for Performing a Significance Test

9.2 Significance Tests about Proportions

9.3 Significance Tests about Means

9.4 Decisions and Types of Errors in Significance Tests

9.5 Limitations of Significance Tests

**Chapter 10**  
Comparing Two Groups

10.1 Categorical Response: Comparing Two Proportions

10.2 Quantitative Response: Comparing Two Means

10.3 Other Ways of Comparing Means and Comparing Proportions

10.4 Analyzing Dependent Samples

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**School Closures**
If classes at the University of Florida are canceled, the course will be suspended until the university re-opens. The University will announce this closure on the University of Florida homepage. Any announcements about the course will be posted at the course website.

**Course Policies**

**Extensions:** Because it is possible to complete the lessons early and because only the top 26 practice assignments will be counted to your final grade, no extensions will be given on assignments.

**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.

**Email**

Email relating to information about the class should be sent to the instructor at mmece@stat.ufl.edu or through the course management system. If your questions are about your grade or of a personnel nature, please email Megan Mocko directly. Your message will be answered within one working day, in most cases. However, we ask you to please refer to this Syllabus and the course website to try to find the answers for yourself. Questions regarding the material covered should be asked on the Piazza board. This way everyone can benefit from your questions.

**Instructor's Honor Code**

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

**Academic Dishonesty**

We adhere to the University of Florida rules and guidelines for handling instances of academic dishonesty. Please refer to the Office for Student Services for detailed information about the current policies.

**Students with Disabilities**

Students who require special accommodations in class or during exams should follow the procedures outlined by the Disability Resources Program (http://www.dso.ufl.edu/drc/) Please send the course coordinator (Megan Mocko) your letter of accommodations as soon as you receive the information. I must be emailed the form 7 days before the exam date for accommodations to be arranged.

**Grading**

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

**Incomplete**

Incomplete grades 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.
Where to Get Help for this course:

- During Online Office Hours and Review Sessions
- Piazza in Canvas
- Via Emails to the instructor at mmeece@stat.ufl.edu

How to do well in the course

- Keep up with the lessons. Set a schedule for yourself and stick with it.
- Visit the course website regularly, to read announcements and take the online quizzes.
- Do well on the lesson quizzes and practice assignments.
- Use the help function in MyStatLab to help you work out homework problems.
- Visit the review sessions to get help from the TA and your instructor. Our job is to clarify any questions that you may have, and to help you understand the material and learn to do the problems.
- Get to know other students in the class and get together regularly to work on homework problems, and to study for quizzes and exams. Please remember to be professional in your conversations. Please respect each other and refrain from profanity.
- Prepare carefully for exams by going over the lectures, doing your homework and practice questions, studying your quizzes and reading the book. Pay special attention to the understanding of concepts and ideas behind the formulas.

How to get the most out of the online course

- Set aside time each day to complete the lessons
- You should watch and read the lessons on a regular schedule
- Complete the lessons and then do practice assignment.
- Actively involve yourself in the lesson. Be inquisitive. Work out the lesson quizzes and activities. Learning is not a spectator sport. Jump in and work on the problems.
- Watch the lecture videos and complete the lessons in a low disruption environment. In addition, to watching the lecture, you should not be also texting, instant messaging, emailing, reading a website, watching TV, etc. Your attention should be focused on the lesson.
- I have carefully considered what needs to be discussed in the lessons. Make sure that you are paying attention to all of it.

Problems
Each online distance learning program has a process for, and will make every attempt to resolve, student complaints within its academic and administrative departments at the program level. See http://distance.ufl.edu/student-complaints for more details.

- First, please contact the instructor first via email at mmece AT ufl.edu first.
- If necessary after that, please contact the chair of the Statistics department at 392-1941.
- If necessary after that, should you have any complaints with your experience in this course please visit http://www.distance.ufl.edu/student-complaints to submit a complaint.

**Instructor Course/Evaluations**

Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online at https://evaluations.ufl.edu/ Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results.