

## STA 261 Statistics

Last Revised January 2021



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### Instructor Contact Info

<p><b>Sections A:</b> Tue &amp; Thur 8:30-9:50 AM, <b>B:</b> Tue &amp; Thur 10:05-11:25 AM <b>Name:</b> <b>Jeff Messinger</b> <b>Office hours:</b> <a href="#">schedule a meeting with me</a> <b>Email:</b> <a href="mailto:messinjd@miamioh.edu">messinjd@miamioh.edu</a> <b>Telephone:</b> (513)529-1954</p>	<p><b>Sections A:</b> Tue &amp; Thur 8:30-9:50 AM <b>C(xyz):</b> Tue &amp; Thur 11:40 AM-1:00 PM <b>E:</b> Tue &amp; Thur 2:50 PM-4:10 PM <b>Name:</b> <b>Jacob Smith</b> <b>Office hours:</b> <a href="#">Schedule a time with me</a> <b>Email:</b> <a href="mailto:smith113@miamioh.edu">smith113@miamioh.edu</a></p>
<p><b>Section C(abc):</b> Tue &amp; Thur 11:40AM-1:00PM <b>Name:</b> <b>Dr. Donghyung Lee</b> <b>Office hours:</b> <a href="#">Drop-in</a> TuTh 2 - 4 PM and by appointment <b>Email:</b> <a href="mailto:leed13@miamioh.edu">leed13@miamioh.edu</a></p>	<p><b>Sections A:</b> Tue &amp; Thur 8:30-9:50 AM <b>C(xyz):</b> Tue &amp; Thur 11:40 AM-1:00 PM <b>E:</b> Tue &amp; Thur 2:50 PM-4:10 PM <b>Name:</b> <b>Kelvin Njuki</b> <b>Office hours:</b> <a href="#">Schedule a meeting with me</a> or other times by appointment. <b>Email:</b> <a href="mailto:njukikk@miamioh.edu">njukikk@miamioh.edu</a></p>
<p><b>Sections C(xyz):</b> Tue &amp; Thur 11:40 AM-1:00 PM <b>E:</b> Tue &amp; Thur 2:50 PM-4:10 PM <b>Name:</b> <b>Lynette Hudiburgh</b> <b>Office hours:</b> <a href="#">schedule a meeting with me</a> <b>Email:</b> <a href="mailto:hudibulm@miamioh.edu">hudibulm@miamioh.edu</a> <b>Telephone:</b> (513)529-2166</p>	<p><b>Sections B:</b> Tue &amp; Thur 10:05-11:25 AM <b>C(abc):</b> Tue &amp; Thur 11:40 AM-1:00 PM <b>D:</b> Tue &amp; Thur 1:15 PM-2:35 PM <b>Name:</b> <b>Lizzy Compton</b> <b>Office hours:</b> <a href="#">Schedule a meeting with me</a> <b>Email:</b> <a href="mailto:comptom5@miamioh.edu">comptom5@miamioh.edu</a></p>
<p><b>Section D:</b> Tue &amp; Thur 1:15-2:35 PM <b>Name:</b> <b>Tom Fisher</b> <b>Office hours:</b> <a href="#">schedule a meeting with me</a> <b>Email:</b> <a href="mailto:fishert4@miamioh.edu">fishert4@miamioh.edu</a> <b>Telephone:</b> (513)529-2176</p>	<p><b>Sections B:</b> Tue &amp; Thur 10:05-11:25 AM <b>C(abc):</b> Tue &amp; Thur 11:40 AM-1:00 PM <b>D:</b> Tue &amp; Thur 1:15 PM-2:35 PM <b>Name:</b> <b>William Agyapong</b> <b>Office hours:</b> <a href="#">schedule a meeting with me</a>, or other times by appointment <b>Email:</b> <a href="mailto:agyapowo@miamioh.edu">agyapowo@miamioh.edu</a></p>

Dept. of Statistics Telephone: (513) 529-7828

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### Required Texts

- *STA 261 Course Pack* - You can access a digital copy of the module notes and problems for class (the course pack) in each of the modules on Canvas.
- *Statistics: The Art and Science of Learning from Data*, Fourth Edition (Custom Edition for Miami

University), by Alan Agresti & Christine Franklin. **All students will be given access to the e-Textbook.** If you prefer a physical copy of the text, they are available for purchase through the [publisher](#) for \$49.95. To order, click on the link, add to cart, and then create an account for the *myPEARSONstore* site. [\[Back to Top\]](#)

### ***Required Technology***

- A working computer or laptop with a working webcam and microphone.
- A calculator with basic arithmetic functions (including a square root button). You may not use the calculator feature on your cell phone during exams.
- StatCrunch, available through our Canvas course site and MyStatLab, will be used to perform statistical analyses. StatCrunch will work on any mobile device. **You must be, or become, comfortable with the use of StatCrunch in order to ensure your success in this course.**
  - For assistance using StatCrunch, check out the [StatCrunch User Guide](#) and/or the [StatCrunch instructional videos](#) that can also be accessed through the Help tab in StatCrunch. [\[Back to Top\]](#)

### ***Course Overview***

This course is designed as an introductory statistics course for students without a calculus background. It is also a Miami Plan Foundation Course, meeting the "formal reasoning" requirement. The course will not count towards a mathematics and/or statistics major requirement (although it does count for math education), nor will it meet the Business School statistics requirement.

You will learn how statistics applies to your everyday life through current events and real examples from various disciplines. Every day, we encounter statistics in areas such as medical research, consumer product testing, industrial product testing, politics, marketing, and many others. The study of statistics emphasizes careful problem analysis, precise communication, and the ability to work with data from many different disciplines.

Students develop their critical thinking skills through the study of statistics by presenting arguments that are based on data, analyzing data and performing the appropriate inference procedures, and by critiquing statistical arguments that have been made by others. There will be an emphasis on applications so students will learn statistics by doing. [\[Back to Top\]](#)

### ***General Course Objectives***

STA 261 students will:

1. Differentiate between descriptive and inferential statistics and different types of studies (i.e., observational, experimental).
2. Create, describe the characteristics of, and interpret graphical displays for data.
3. Calculate measures of center and measures of variation.
4. Use rules of probability to determine the likelihood of events and use simulation to answer research questions.
5. Apply the properties of probability distributions of discrete and continuous random variables in problem-solving situations. Identify basic properties of a normal curve, determine areas under the standard normal curve, and find probabilities for any normally distributed variable.
6. Apply properties of the Central Limit Theorem to sampling distributions of the sample mean and

the sample proportion.

7. Calculate confidence intervals using bootstrapping and traditional methods, and interpret them in context.
8. Identify Type I and Type II errors (i.e., false positives and false negatives) and their consequences.
9. Perform and interpret the results of various hypothesis tests: one-population mean t-test, two-populations mean t-test, paired t-test, one-proportion z-test, two-proportions z-test, and the regression t-test, one-way ANOVA, and Chi-Square tests.
10. Obtain and graph the regression equation for a set of data points, interpret the slope of the regression line, and use the regression equation to make predictions.
11. Read, interpret, and explain statistical results in articles and research studies and determine if appropriate statistical techniques have been employed. [\[Back to Top\]](#)

### ***Course Prerequisites***

- Students need to be able to navigate Canvas to access course information.
- Students need to be able to attend class synchronously through [Zoom](#).
- Students need to be able to complete and submit online homework, quizzes, and exams through the integrated Canvas website.
- Students need to be able to create and to save files as Word documents and [PDFs](#). Click to access [Microsoft Word tutorials](#).
- Students need to be able to collaborate with [Google Docs](#).
- Students need to be able to [receive email and send email](#) with attached files. [\[Back to Top\]](#)

### ***Course Design***

This course is delivered **entirely online**. We will have **synchronous meetings** on Zoom **during our regularly scheduled class time**. During the synchronous meetings, we will work on content in which students typically struggle; we will also use our synchronous sessions to “do” statistics through lab activities, projects, and group work. The online component of the class will consist of a series of 7 modules located in Canvas, into which MyStatLab (published by Pearson) has been integrated; therefore, you will access MyStatLab, the eTextbook, and StatCrunch through Canvas.

Each module contains a variety of readings and activities to help guide you through the material, presented in various formats. You will be expected to prepare for each synchronous meeting by watching lecture videos **prior** to class, reading selected texts, and completing various activities. **The synchronous sessions will be tailored to address those concepts that you are finding difficult; therefore, it is very important that you keep up with the course work and do not wait until the last minute to complete assignments.** Please see the course calendar located at the end of the syllabus for specific dates. Please note: **students who do not complete the orientation assignments on time may be dropped from the course.**

**Modules:** Modules consist of the following items (some modules may not include all components):

- **Checklist** – A listing of the activities and assignments to be completed for each module.
- **Objectives** – What you should be able to do in order to demonstrate your learning.
- **Readings** – Required readings from each chapter of the textbook.
- **Video Lecture Vignettes** – Narrated lecture videos covering key concepts. Watching the video

lecture vignettes is **required**.

- **Assignments** – Homework assignments, lab activities, projects, etc...
- **Assessments** – Information about where and when to complete quizzes and/or exams.
- **Supplementary Resources** – For example, websites and applets to review, offering visual representations or interactive elements, and other information. [\[Back to Top\]](#)

## ***Class Attendance***

Each student is expected to attend **every** synchronous class session. Synchronous classes will take place over Zoom. Students will only be able to access the synchronous class by logging into their Miami Zoom account via Canvas. Research has shown a strong correlation between class attendance and successful course completion. As per University policy:

*There are no University-recognized excused absences except for religious observances that require absence from a class session and other required class activities. Students must give written notification to their instructor within the first two weeks of class of the religious event that prohibits class attendance and the date that will be missed if officially known. Instructors will, without prejudice, provide such students with reasonable accommodations for completing missed work. However, students are ultimately responsible for material covered in class, regardless of whether the student is absent or present. If a student is involved in activities that result in class absence (such as intercollegiate athletics, band, debate, other class activities, etc.), it is the student's responsibility to negotiate specific arrangements with individual instructors about any absences.*

**Your instructor reserves the right to drop students who have more than 3 unexcused absences OR who do not complete 3 consecutive class assignments without communicating to the instructor as to why the assignments were not completed.** Students who do not attend class or who do not complete their assignments have difficulty collaborating and contributing to group projects and class discussions which often adversely affects their grades.

In order for you to get the most out of the synchronous sessions, you will be expected to have completed all required videos, reading, and assignments in a timely fashion. You will also be expected to be actively engaged in the learning process, to participate fully in each class session, and to ask questions about any information you do not understand. Following each synchronous session, you are expected to solve the rest of the problems that we do not cover during class as homework.

Some of the sessions in this course will be recorded. Such recordings will only be available to students registered for this class. The faculty member will provide you notice if any of these recordings will be shared with anyone outside of this course, and will obtain your prior written consent before sharing. These recordings are the intellectual property of the faculty member and Miami University and may not be shared or reproduced without the explicit, written consent of the faculty member and Miami University. Further, students may not share these sessions with those not in the class, or upload them to any other online environment. Doing so would be a breach of the Code of Student Conduct. [\[Back to Top\]](#)

## ***Homework***

**Weekly online homework assignments** will be posted and completed in MyStatLab. Prior to attempting homework assignments, you are required to watch the corresponding video lectures and read the textbook sections. You will have **3 attempts** to answer each question correctly. If you complete a version of a question incorrectly, all you need do is click the **Similar Question** button and a new version will be generated. If you work through 3 versions of a question, then your score for that question will be finalized.

There are various support buttons to assist you in completing the problems. For example, should you need to contact your instructor regarding specific homework questions, please click on the **Ask My Instructor** button which can be found when clicking on the **Question Help** button in the upper right hand corner of each question page. A box will open in which you can type your question, and the website will email your instructor your question and a link to the problem you are attempting.

### **How to make the best use of homework:**

- Start assignments early so you have plenty of time to ask questions.
- Watch the video lectures, read the corresponding sections in the textbook, and complete the notes handout for each week before attempting the homework assignment.
- Come to class and/or office hours with specific questions. You should at least attempt each problem and be ready to explain specifically where you are struggling before asking for help.
- **We will rely on StatCrunch for almost all computations**, so don't try to work problems out by using statistical tables. There are only a handful of times where some basic computation is needed.
- Focus on understanding the concepts behind the homework questions. It is important to be able to **know how and why you are solving a problem a certain way** so you are prepared to encounter a different question over the same concept on a quiz or exam.

### **Extra Practice**

- **Coursepack problems**, written by the instructors and similar to the types of questions that may be asked on a quiz or exam. We will work some of these in class, however, any problems we do not work are provided as extra practice. You will be able to check your answers with the answers posted on Canvas.
- **Textbook problems**, are provided as extra practice but will not be collected or graded. You will be expected to check your answers with the answers posted on Canvas.
- If you find that you need more practice on course concepts, you can access the **MSL Study Plan** through Canvas. The Study Plan contains study materials for each of the chapters we will study. The Study Plan will automatically track your progress in learning the required content and will suggest additional study materials as needed.
- **Practice quizzes on MyStatLab**; there are pre-tests and post-tests for each chapter. You may attempt them as many times as you wish. The scores do not count toward your grade. [\[Back to Top\]](#)

### **Discussion Forums**

**Discussion Forums:** You will be asked to participate in 2 discussion forums throughout the course (located under the "Discussions" tab on Canvas). You will be assigned to work with a group for the

second discussion. More detailed prompts and instructions will be provided under the discussion forums section of the Canvas course site. All replies must be thoughtful and support the topic. **Post throughout the period so you are part of the entire discussion to earn full points.** Students will not receive full credit if all posts are completed on the same day, or on the day in which the discussion closes. Discussions will close at 11:59 p.m. (E.S.T.)

- Discussion #1 – Introductions (opens Saturday 1/23, 12:01 AM, closes Tuesday 2/2, 11:59 PM)
- Discussion #2 – Exploratory Data Analysis (opens Sat. 2/6, 12:01 AM, closes Fri. 2/19, 11:59 PM)

To post your initial post for each discussion, click on the “Discussions” tab in the left navigation pane. Then click on the appropriate discussion in the list of discussions. Next, click on “Reply.” Enter your message content and then click “Post Reply.” You will not be able to see your classmates’ posts until after you post in the discussion forum. To reply to a classmate’s post, click on “Reply” underneath that person’s post. Enter your message content and then click “Post Reply.” **You will not receive full credit for posts that do not appear under the appropriate topic and/or do not follow these instructions.**

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### ***Problem Sessions & Lab Activities***

In our synchronous meetings we will engage in problem sessions and hands-on activities designed to develop your understanding of statistical concepts and to allow you to actually do statistics. You will be expected to give feedback by verbally answering questions posed by the instructor, by answering questions in the chat, or by answering **Learning Catalytics Questions (LCQs)** as we work through the problem sessions and lab activities. LCQs will be used to assess your understanding of a given topic or topics and tailor the instruction to meet your needs. The number and type of LCQs will vary depending on the content; and at least 50% of the credit awarded will be based on participation with the remaining percentage based on the correctness of your response. A minimum of five lab activities and/or problem sessions will be collected and graded. These assignments may use all or parts of a given class period and will consist of your working alone or with classmates. For lab activities and problem sessions 50% of the points will be based on completion and 50% of the points will be based on the accuracy of your work.

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### ***Project***

The required group project has a total of 2 components with several items that will contribute to your overall group project grade; (1) Descriptive Analysis, and (2) Inferential Analysis. This project is designed to develop your understanding of statistical concepts as well as allow you to actually do statistics. The project items will be submitted as **pdf files** via Canvas.

**Descriptive Analysis:** Your group will summarize a data set numerically and graphically. First, your group will formulate a broad topic question, and then 10 specific statistical questions (overlapping questions that can be used to tell a story about the dataset). Each individual will be responsible for creating a data visualization to answer their specific question. Then, the group will compile the different visualizations to create a single Data Visualization. You can think of it as preparing a magazine spread to tell the story about a set of data. This component consists of eight different items; a group contract, an Exploratory Data Analysis (Discussion #2), a rough draft, a group meeting with your instructor or GA, a Team Improvement Process formative evaluation, a video presentation of your group’s final data visualization, a group member evaluation, and a self reflection.

**Inferential Analysis:** Each group will perform inference procedures (construct confidence intervals and/or perform hypothesis tests) to answer several research questions. Each individual will be responsible for performing at least one inference procedure to answer their assigned research question. Prior to performing inference, you will assess all necessary conditions for the inference procedures. You will write up the analyses, including all the models, and will provide substantial, statistical justification for your choice of the best model. This component consists of eight different items; an updated group contract, a project plan, a rough draft, a group meeting with the instructor or GA, a Team Improvement Process formative evaluation, a final report, a group member evaluation, and a self reflection.

**Group Meeting with Instructor or GA:** After submitting your rough draft you will meet online with your instructor or GA to discuss your project and show the work you have completed up to that point. You will have two group meetings; one concerning the Descriptive Analysis and the other concerning the Inferential Analysis. **All** group members **must** attend the group meetings.

**Group Member Evaluation:** Each person will evaluate their group members and each individual's contributions to both the Descriptive and Inferential Analysis components.

**Self Reflection:** The self reflection will include an evaluation of their own contributions to the project, what they learned about the project, and how this information can be transferred to other areas of interest. This will be completed for both the Descriptive and Inferential Analysis components.

More information about the project will be provided on Canvas. [\[Back to Top\]](#)

### ***Group Process & Expectations***

In this class you will be assigned to work with a team both outside the synchronous class as well as during our synchronous class meetings. Groups will have a maximum size of 6 members. During synchronous class meetings we will be breaking out into rooms where you and your group will have the ability to discuss problems with each other. **You are expected to have your camera and mic on while in your breakout room.** Your instructor will be able to jump into any breakout room to help answer questions or check in. To optimize the group experience and help you build soft skills employers seek, you will (1) submit a group contract which will specify a code of conduct all group members agree to follow and (2) periodically provide feedback about the group process both collectively and individually.

The group contract assists with developing group norms, creating individual and group accountability, improving group dynamics, and discussing issues that often cause groups to implode. Research has shown that when students are encouraged to establish expectations for individual and group behavior upfront, fewer miscommunications occur and group members are more apt to contribute their fair share of the work. Moreover, in the event of a conflict requiring the instructor's mediation, the group contract assists in understanding each individual's role in the project, which in turn leads to more effective resolution.

We will utilize both individual and team feedback to ensure groups are working toward a common goal. Individual feedback will take the form of formative and summative group member evaluations which will be completed several times throughout the semester. Team feedback, based on the scrum principle (Sutherland and Sutherland, 2014) and Team Improvement Process (Anson and Goodman, 2014) allows

teams to see how they actually work, and provides them with tools to improve the group process and the quality of their work. Periodically we will require groups to share their answers to the following five questions: (1) What have you done since the last check-in? (2) What do you plan to do before the next check-in? (3) What's working? (4) What struggles and/or obstacles are getting in your way? And, (5) What top 3 things should you start doing differently? Should an intervention be necessary, changes can be made throughout the course, instead of waiting until the end of the semester, when it is too late.

In a group project, everyone is expected to take on some share of the work and complete it in a timely manner so the group as a whole can put everything together and make adjustments as needed. To ensure this process goes as smoothly as possible everyone is encouraged to begin working on projects as early as possible, and to communicate frequently since group meetings may be difficult to arrange. If a group member contacts you asking for help with their part of the project, do not do the work for them; instead, coach them through the process to the best of your ability. This could range from explaining what type of procedure might be appropriate for what they are trying to do, to explaining what buttons they need to click in StatCrunch to get where they need to go. As always, your instructor is available as a resource if you get stuck on a project, and would be happy to meet with you online via Google Meet, Webex, or Zoom. [\[Back to Top\]](#)

## **Assessments**

### **Module Quizzes**

There will be one quiz per week (except during those weeks when exams are scheduled) with no make-ups allowed. All quizzes will occur online and will be completed on MyStatLab. Once you start the online quiz, you will have **45 minutes** to complete it, and you must finish it in a **single session**. Please note: You will be able to access the module quiz beginning on Wednesday of each week. I will drop the two lowest quiz scores at the end of the semester.

- **You must complete the corresponding chapter homework assignment with a minimum score of 70% in order to access the module quiz.** If you do not complete the homework assignment with a score of 70% by the specified deadline, you may not attempt the quiz for that chapter, and will be given a 0% for that quiz.

### **Exams**

There will be three midterm exams during the semester, all of which will include true-false, multiple choice, fill-in-the-blank, and constructed response questions. Exams will be completed on Canvas. Each exam will have a 48 hour window in which it can be completed. Once you start the exam on Canvas, you must finish it in a single session. **You will have 90 minutes to complete the exam.**

- Exam #1 opens Monday, 2/22/21 at 12:01 AM and is **due on Tuesday, 2/23/21 at 11:59 PM**
- Exam #2 opens Thursday, 4/2/21 at 12:01 AM and is **due on Friday, 4/3/21 at 11:59 PM**
- Exam #3 opens Thursday, 4/29/21 at 12:01 AM and is **due on Friday, 4/30/21 at 11:59 PM.**

Both quizzes and exams could require you to use either a graphing calculator or StatCrunch to conduct statistical analyses. They are to be **completed without referencing outside sources.** **Quizzes and exams are to be completed individually and without the aid of any other person. You must complete quizzes and exams by yourself!** [\[Back to Top\]](#)



## ***Academic Integrity & Proctoring Software***

[Academic Integrity](#) is at the heart of the mission and values of Miami University and is an expectation of all students. Maintaining academic integrity is a reflection of your character and underpins your learning and understanding of the course material.

According to the Miami University Student Handbook, “Academic dishonesty is defined as any activity that compromises the academic integrity of the institution or subverts the educational process.”

Examples of academic dishonesty include but are not limited to:

- Referencing outside sources or course notes while taking an exam.
- Referencing non-permitted websites while taking a quiz
- Collaborating with another person in any way while taking a quiz or exam
- Copying someone else’s solutions to a problem and submitting it as your own work
- Posting class material and assignments to sites not affiliated with Miami University
- Plagiarism - Using another person’s ideas without citation and calling them your own

All Miami University policies concerning academic integrity apply to this course. See the [Student Guide to Academic Integrity](#) for details.

**Suspected Dishonesty:** Any suspected instances of academic dishonesty will be handled under Miami University’s [Academic Integrity policy](#). It is a student’s responsibility to read this policy. Lack of knowledge or understanding of the appropriate academic conduct is not an excuse for committing academic dishonesty.

Students who are found responsible for committing academic dishonesty will receive a sanction that ranges from a zero on the assignment to an F in the course, which could contain the AD transcript notation. **Students who are found responsible for committing two acts of dishonesty [academic or Code of Student Conduct section 102 (Dishonesty)] will automatically be suspended from Miami University.**

**Proctoring Software:** In this course, **we will use Proctorio for proctoring of online exams.** The purpose of the use of a proctoring program is to create a testing environment similar to that of a face-to-face class, in which the presence of a proctor observing student behavior often deters academic dishonesty. Some students have indicated they think that cheating occurs in online courses or on online assessments because “no one is watching.” Cheating in online courses carries the same penalties as those in face-to-face classes, and students who choose to cheat in online courses are typically caught.

To help deter the temptation to cheat and to dispel the myth that “no one is watching,” the Proctorio proctoring program will record all students AND will record students’ desktops when completing quizzes/exams. This program will “flag” potential cheating behaviors, and a report will be generated for the instructor. It can block use of multiple browsers and tools until the test is over. It also identifies your location based on your IP address. Before taking an official exam or quiz, students will have the opportunity to complete a tutorial to become familiar with the program and to ensure that it works within the computing environment being used.

**Proctorio requires that you use Google Chrome when you take exams.** You must take your exam on a computer (rather than a mobile device). Please download and install Google Chrome from this website: <https://www.google.com/chrome/browser/desktop/>

You should complete the exam or quiz **without others present**, unless authorized by your instructor. During the exam or quiz, you may be directed to show the environment in which the test is being taken; if you have concerns about this, please arrange to take your test in a library study room or similar location where you have privacy. Exams and quizzes are considered to be classroom times, regardless of the time or date they are held.

Once students have completed the assessment, the course instructor will review the “flag” report and view the flagged recordings of the student and desktop to determine if a student has engaged in a potential act of academic dishonesty. All potential acts of dishonesty will be handled through the procedures outlined in the Miami University Academic Integrity Policy.

Students should act honestly in the completion of all course assignments, and ask the instructor for clarification on any assignment guidelines that are not clear. [\[Back to Top\]](#)

## ***Grading***

<b>Assignments</b>	<b>Weighted Percentage</b>	<b>Grades will be given as follows, on a percent-of-the-total basis</b>	
Online Homework for each module	5%		
Orientation & Chapter Quizzes (15) *The lowest 2 quiz scores are dropped	10%	99% - 100% A+	77% - < 80% C+
Lab Activities & Problem Sessions	10%	93% - < 99% A	73% - < 77% C
General participation	10%	90% - < 93% A -	70% - < 73% C -
Group Project	20%	87% - 90% B+	60% - < 70% D
Midterm Exams (3)	45%	83% - < 87% B	< 60% F
<b>TOTAL</b>	100%	80% - < 83% B -	

Please note that I do not round grades. No extra credit is available. Please contact me if you are concerned about your grade or need help.

**No late assignments will be accepted without prior permission of the instructor.** [\[Back to Top\]](#)

## ***Office Hours***

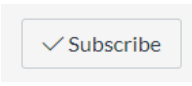
- Office hours are times your instructor has set aside to meet with students individually or in small groups. You are encouraged to stop by during drop-in hours on Thursdays, or to make an appointment to meet at a mutually agreeable time.
- During office hours you can discuss class, questions you have about content and/or assignments, work through problems together, obtain advice about other classes you may wish to consider taking, and get to know your instructor better.
- All office hours will be held virtually. During the video conference you will be able to see your instructor using an online platform, such as Google Meet, WebEx, or Zoom, and you and your instructor can use screen sharing to solve problems together.
- Your instructor wants to help you succeed, and attending office hours is one way to set yourself up for success. Also, you may need a letter of recommendation some day. The best letters come from

professors who know you. [\[Back to Top\]](#)

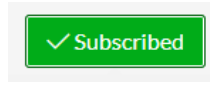
## ***Communication Guidelines & Netiquette***

**Announcements:** Please subscribe to the Course Announcements so you can be automatically notified about important information through your email. To subscribe for auto-email notifications, click on the

subscribe button.



, it will turn green with “subscribed”,



. We will be communicating with you through the announcements multiple times throughout the week. **Please check the announcements before sending an email, as your question may have already been answered.**

**Discussion Forum:** This is the place to ask questions about course content, homework, MyStatLab, and the group project. General questions about the course should also be asked here so that all students may benefit from the answers. **Check here for answers to your questions before sending an email to the instructor or graduate assistants.** Questions you do not wish to share with the class should be sent directly to your instructor.

**Contacting Your Instructor or GA:** Email is the best way to reach your instructor or GA. However, if you would prefer to have a conversation, you may speak to your instructor during office hours or send your instructor an email to set up a time to meet. Given today’s ease of communication, **it is your responsibility to contact your instructor within 24 hours if you are having any problems.** While instructors will attempt to answer emails quickly, it may take up to 24 hours for you to receive a response.

**Communication Guidelines:** Email is the official mode of communication for the University. You are responsible for any communication that is sent to your Miami email account, so please be sure to check your account frequently. If you have your email forwarded to your preferred account, please be sure you have enough server space for your Miami emails and please check to see that your server will accept Miami emails.

You will be asked to communicate with other students in this class via email. You may access email tools on the Canvas class site. **All group members are responsible for initiating contact with one another as soon as the assignment is opened.** Failing to make contact with your group members is not an excuse to miss completing an assignment.

**Netiquette:\*** At Miami University there are two core principles: love and honor. Those principles should be applied in any classroom environment; face-to-face, hybrid, and online. Diversity has many manifestations, including diversity of thought, opinion, and values. We encourage all learners to be polite and respectful and to refrain from inappropriate or offensive commentary. If inappropriate or offensive content is either emailed or posted on the class site, I recommend college disciplinary action. Students guilty of academic misconduct, either directly or indirectly through participation or assistance, are subject to disciplinary action through the regular procedures of Miami University. Learners as well as faculty should be guided by common sense and basic etiquette. Criticism should be presented in a positive light. The following are good guidelines to follow:

- Never post harassing, threatening, or embarrassing comments.

- Never post content that is harmful, abusive; racially, ethnically, or religiously offensive; vulgar; sexually explicit; or otherwise potentially offensive.
- Never post, transmit, promote, or distribute content that is known to be illegal.
- If you disagree with someone, respectfully respond to the subject, not the person.
- Treat others as you would like to be treated.
- Use emoticons such as 😊 or ;-) when you are joking.
- Be timely in your communication with others.
- Be as brief and succinct as possible.
- Include a descriptive subject line in all emails.
- Use proper spelling and grammar.
- Cite sources appropriately.

Remember that “tone” can usually be detected accurately in verbal communication, but often can be misunderstood in electronic communication. Because of this phenomenon, we encourage you to err on the side of politeness.

\*adapted from Regents Online Campus Collaborative

For more information on netiquette check [Netiquette Rules for Electronic Communications](#) and [5 Tips for Improving your Digital Etiquette](#).

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### ***Student & Instructor Expectations:***

You, as a student, should try your best to:

- Check the Canvas class site at least once per day during the workweek.
- Check your Miami email every 24 hours (more often if you have sent an email to the instructor, GA, or a classmate)
- Read Announcements that are sent via Canvas. **Check Announcements on Canvas before emailing your instructor**, as the information may have already been posted.
- **Post questions you have about the course in the Discussion Forums.** If you can answer another student’s question, please feel free to do so.
- Actively participate in **all** synchronous class sessions, online discussions, group meetings, and other activities required in this course.
- Post your ideas and assignments; react to others’ ideas, and exchange thoughts with fellow students, the GAs, and the instructor.
- Complete all readings and videos in a timely manner so you can get help if needed.
- Submit assignments by their due date/time.
- Spend at least 8-12 hours a week outside class time, studying, watching videos, and completing assignments.
- Submit work that demonstrates a clear understanding of the material.
- Keep an open mind regarding the material and the opinions of others.
- Notify the instructor, in a timely manner (within 24 hours), if you have any problems.

The instructor will try his/her best to:

- Check the Canvas class site every day to monitor progress.
- Check email at least twice a day, Monday through Friday.

- Respond to all emails within 24 hours (except on weekends).
- Post all grades within 1 week of assignment due dates, except for projects which may require up to 2 weeks.
- Make every effort to meet with students who request a meeting. [\[Back to Top\]](#)

### ***STA 261 Myth Busters:***

- Myth #1: Since I struggled in other math classes, I'll probably struggle in STA 261, too.
  - Not necessarily! This class is focused more on interpretation rather than computations. Statistics students typically are surprised by the amount of reading and writing required in statistics courses compared to math courses. Have an open mind regarding statistics and get a good start in the course.
- Myth #2: I can save time by skipping the videos.
  - **NO! If you attempt to complete the chapter assignments before watching the videos, it will take you LONGER!** The videos will introduce ways to think about the content, as well as tips and tricks that can save you countless hours struggling through the homework. Also, you won't understand what we are doing in the synchronous sessions if you don't watch the videos prior to attending class.
- Myth #3: I do not need to read the textbook.
  - Since we cannot cover everything in the videos, you are expected to read the corresponding sections of the textbook, which will provide additional examples and extra practice to learn the content.
- Myth #4: It is not necessary to learn how to use StatCrunch.
  - Using StatCrunch will save you countless hours otherwise spent doing complex computations by hand. There are several resources available to help you learn how to use StatCrunch; the [StatCrunch User Guide](#), [StatCrunch instructional videos](#), and in-class demonstrations.
- Myth #5: Computer problems are an acceptable reason to submit late assignments.
  - **Computer problems are never an excuse!** You must start assignments ahead of time in case the website is temporarily unavailable for any reason. [\[Back to Top\]](#)

### ***Time Management***

Students in STA 261 typically struggle with time management more than anything else. **It is in your best interest to open the homework assignments and projects as soon as they become available in order to get a sense of how long you think it will take you to complete the assignment.** You should start the homework assignments ahead of time so that you can ask your instructor (or your classmates) questions if necessary. If you start the homework assignments the day they are due, you will rarely (if ever) be able to complete the assignments with the necessary score of 70%. I will always send out reminders regarding assignment deadlines, but it is up to you to manage your time! You have the course calendar that lists all of the assignment deadlines at the start of the course. [\[Back to Top\]](#)

### ***ADA & Students with Disabilities***

Miami University is committed to ensuring equal access to students with disabilities. Miami's Office of Student Disability Services (SDS) assists students with determining eligibility for services and

accommodation planning. Miami's AccessMU provides resources and guidance toward equal opportunity for all individuals. Refer to Miami University's [Accessible Technology Policy](#) for definitions and additional information.

Students who are entitled to disability-related academic adjustments, auxiliary aids, etc., must register with SDS to receive accommodations in university courses. Please understand that formal communication from SDS must be presented prior to the coordination of accommodations for this course. For more information, see [Student Disability Services](#) and/or [the Rinella Learning Center](#). Students may also contact SDS at [\(513\) 529-1541](tel:(513)529-1541) or via email at [sds@miamioh.edu](mailto:sds@miamioh.edu).

**If you have a disability, please contact me, and I will be glad to make any necessary accommodations.**

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## ***Diversity & Discrimination***

All Miami University policies concerning diversity and equal opportunity will be upheld in this class.

*Miami University is a community dedicated to intellectual engagement. Our campuses consist of students, faculty, and staff from a variety of backgrounds and cultures. By living, working, studying, and teaching, we bring our unique viewpoints and life experiences together for the benefit of all. This inclusive learning environment, based upon an atmosphere of mutual respect and positive engagement, invites all campus citizens to explore how they think about knowledge, about themselves, and about how they see themselves in relation to others. Our intellectual and social development and daily educational interactions, whether co-curricular or classroom related, are greatly enriched by our acceptance of one another as members of the Miami University community. Through valuing our own diversity, and the diversity of others, we seek to learn from one another, foster a sense of shared experience, and commit to making the university the intellectual home for us all.*

Please see the [General Bulletin](#) for more information.

*Miami University is committed to providing equal opportunity and an educational and work environment free from discrimination on the basis of sex, race, color, religion, national origin, disability, age, sexual orientation, gender identity, military status, or veteran status. Miami shall adhere to all applicable state and federal equal opportunity/affirmative action statutes and regulations.*

Please see the Miami University [policies regarding discrimination and harassment](#) for more information.

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## ***Additional Resources***

<p><b>Miami University IT Support:</b></p> <ul style="list-style-type: none"> <li>● <a href="#">IT Support Services</a></li> <li>● <a href="#">IT Help Answers Online</a></li> <li>● Email: <a href="mailto:ithelp@MiamiOH.edu">ithelp@MiamiOH.edu</a></li> <li>● Telephone: (513) 529-7900</li> </ul>	<p><b>Pearson/MyStatLab Support:</b></p> <ul style="list-style-type: none"> <li>● <a href="#">Navigate MyStatLab</a></li> <li>● <a href="#">Pearson Tech Support</a></li> </ul>	<p><b>Canvas Support:</b></p> <ul style="list-style-type: none"> <li>● <a href="#">Canvas Student Orientation</a></li> <li>● <a href="#">Canvas Student Guide</a></li> <li>● <a href="#">Canvas How-to Videos</a></li> </ul>
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<p><b>Academic Support:</b></p> <ul style="list-style-type: none"> <li>● <a href="#">Rinella Learning Center</a></li> <li>● The <a href="#">Miller Center for Student Disability Services</a></li> <li>● The <a href="#">Howe Writing Center</a></li> <li>● MU <a href="#">Libraries website</a></li> <li>● <a href="#">English Language Learner Writing Center</a> (ELLWC)</li> </ul>	<p><b>Student Support:</b></p> <ul style="list-style-type: none"> <li>● <a href="#">Academic Advising</a></li> <li>● <a href="#">College of Arts &amp; Science Advising</a></li> <li>● <a href="#">Registration</a></li> <li>● <a href="#">Financial Aid</a></li> </ul>	<p><b>Google Support:</b></p> <ul style="list-style-type: none"> <li>● <a href="#">Google Hangout</a></li> <li>● <a href="#">Google Docs</a></li> </ul>
<p><b>Additional Support Services:</b></p> <ul style="list-style-type: none"> <li>● The <a href="#">H.O.P.E. line</a> is available 24/7 for students to call for immediate support, crisis intervention, and stabilization from a licensed mental health counselor. 855-249-5649.</li> <li>● For a more self-directed approach, <a href="#">Sanvello</a> is offering free, premium access to everyone. Sanvello is an app that provides clinically validated techniques for dealing with stress, anxiety, and depression.</li> <li>● <a href="#">EdLogics</a> is a gamified health education platform free to all Miami students. Learn about health topics while earning points for actual prizes.</li> </ul>		

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## References

Anson, R., and Goodman, J.A. (2014). A peer assessment system to improve student team experiences. *Journal of Education for Business*, 89 (1), 27-34.

Sutherland, J., and Sutherland, J.J. (2014), *Scrum: The Art of Doing Twice the Work in Half the Time*. New York, NY: Crown Business.

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## Wellness Days



As you review our schedule of activities and deadlines for our course on the next 4 pages, please note that there are no assignment due dates, office hours, or study sessions on the **five Spring 2021 Wellness Days** (Feb 17, Mar 9, Mar 25, Apr 12, May 7). We encourage you to identify the best ways for you to use the days -- rejuvenating, refreshing, disconnecting, and/or catching up. Look out for Miami University programming that supports the [Dimensions of Wellness](#) to make the most of your well-being during the spring semester.

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# Course Calendar

KEY: Class Topic and Corresponding Textbook Sections			QUIZ & HOMEWORK DUE DATES	LAB ACTIVITIES
GROUP WORK	EXAM DATES	DISCUSSION DUE DATES	Wellness Days	Course drop dates
	Monday	1/25/2021		
	Tuesday	1/26/2021	First Day of STA 261 What is Statistics? <ul style="list-style-type: none"> <li>Textbook Sections: 1.1, 1.2, and 1.3</li> </ul>	
Week #1	Wednesday	1/27/2021		
	Thursday	1/28/2021	<b>Stats in the News Lab due 11:59 PM</b> <b>Online Learning Readiness Quiz due 11:59 PM</b> <b>Syllabus Quiz due 11:59 PM</b> <b>Class Survey due 11:59 PM</b>	
	Friday	1/29/2021	<b>Module 1, Part 1 Due</b> (Homework and Quiz due 11:59 PM)	
	Monday	2/1/2021		
	Tuesday	2/2/2021	Module 1, Part 2 Problem Session (Design) <ul style="list-style-type: none"> <li>Textbook Sections: 4.1, 4.2, 4.3, 4.4</li> </ul> <b>Discussion #1 closes 11:59 PM</b>	
Week #2	Wednesday	2/3/2021		
	Thursday	2/4/2021	<b>Question of Causation Lab</b> <b>Introduce Group Project</b> <b>Course Materials Quiz due 11:59 PM</b>	
	Friday	2/5/2021	<b>Group Contract Due 11:59 PM</b> <b>Module 1, Part 2 Due</b> (Homework and Quiz due 11:59 PM)	
	Monday	2/8/2021		
	Tuesday	2/9/2021	Module 2, Part 1(a) Problem Session (Graphical Summaries of Descriptives for Categorical & Quantitative Data) <ul style="list-style-type: none"> <li>Textbook Sections: 2.1- 2.3</li> </ul> <b>Discussion #2 opens</b>	
Week #3	Wednesday	2/10/2021		
	Thursday	2/11/2021	Module 2, Part 1(b) Problem Session (Graphical Summaries of Descriptives for Categorical & Quantitative Data) <ul style="list-style-type: none"> <li>Textbook Sections: 2.4 - 2.6</li> </ul> <b>Last day to drop without a grade</b>	
	Friday	2/12/2021	<b>Module 2, Part 1 Due</b> (Homework and Quiz due 11:59 PM)	



	Monday	2/15/2021	
	Tuesday	2/16/2021	Module 2 Part 2 Problem Session (Association, Correlation & Regression) <ul style="list-style-type: none"> <li>Textbook Sections: 3.1- 3.3</li> </ul>
Week #4	Wednesday	2/17/2021	Wellness Day
	Thursday	2/18/2021	Descriptive Exploratory Analysis Group Work
	Friday	2/19/2021	Module 2 Part 2 Due (Homework and Quiz due 11:59 PM) Proctorio Practice Quiz due 11:59 PM Discussion #2 closes 11:59 PM
	Monday	2/22/2021	Exam 1 (Modules 1 & 2) opens at 12:01 AM
	Tuesday	2/23/2021	EXAM 1 (Modules 1 & 2) due by 11:59 PM
Week #5	Wednesday	2/24/2021	
	Thursday	2/25/2021	Introduction to Simulation Lab
	Friday	2/26/2021	Data Viz Rough Draft due by 11:59 PM Team Improvement Process Evaluation due by 11:59 PM
	Monday	3/1/2021	
	Tuesday	3/2/2021	Module 3 Part 1 Problem Session (Simulation & Probability) <ul style="list-style-type: none"> <li>Textbook Sections: 5.1- 5.4</li> </ul>
Week #6	Wednesday	3/3/2021	
	Thursday	3/4/2021	Chances of Getting the Flu Simulation Lab
	Friday	3/5/2021	Module 3 Part 1 Due (Homework and Quiz due 11:59 PM)
	Monday	3/8/2021	Must have completed a group meeting w/Instructor or GA
	Tuesday	3/9/2021	Wellness Day
Week #7	Wednesday	3/10/2021	SALG Evaluation closes at 11:59 PM
	Thursday	3/11/2021	Work on Data Viz
	Friday	3/12/2021	Data Viz Final Video Presentation & Submission Due by 11:59 PM
	Monday	3/15/2021	Data Viz Group Member Evaluation & Self Reflection due 11:59 PM
	Tuesday	3/16/2021	Module 3, Part 2 Problem Session (Probability Distributions) <ul style="list-style-type: none"> <li>Textbook Sections: 6.1- 6.2</li> </ul>
Week #8	Wednesday	3/17/2021	

	Thursday	3/18/2021	<b>Sampling Distributions Lab</b>
	Friday	3/19/2021	<b>Module 3 Part 2 Due</b> (Homework and Quiz due 11:59 PM)
	Monday	3/22/2021	
	Tuesday	3/23/2021	Module 4 Problem Session (CLT) <ul style="list-style-type: none"> <li>Textbook Sections: 7.1, and 7.2</li> </ul>
Week #9	Wednesday	3/24/2021	
	Thursday	3/25/2021	<b>Wellness Day</b>
	Friday	3/26/2021	<b>Module 4 Due</b> (Homework and Quiz due 11:59 PM) <b>Inferential Proj. Updated Group Contract &amp; Timeline due 11:59 PM</b>
	Monday	3/29/2021	
	Tuesday	3/30/2021	<b>Bootstrapping &amp; Confidence Intervals Lab</b>
Week #10	Wednesday	3/31/2021	<b>Exam 2 (Modules 3 &amp; 4) opens at 12:01 AM</b>
	Thursday	4/1/2021	<b>Exam 2 (Modules 3 &amp; 4)</b> <b>Last day to drop with a "W" and Credit/No Credit deadline</b>
	Friday	4/2/2021	<b>EXAM 2 (Modules 3 &amp; 4) due by 11:59 PM</b>
	Monday	4/5/2021	
	Tuesday	4/6/2021	Module 5, Part 1(a) Problem Session (Confidence Intervals for Means & Proportions) <ul style="list-style-type: none"> <li>Textbook Sections: 8.1 - 8.4</li> </ul>
Week #11	Wednesday	4/7/2021	
	Thursday	4/8/2021	Module 5, Part 1(b) Problem Session (Confidence Intervals for two-samples) <ul style="list-style-type: none"> <li>Textbook Sections: 10.1- 10.2, pp. 444-453 &amp; 461-466</li> </ul>
	Friday	4/9/2021	<b>Module 5, Part 1 Due</b> (Homework and Quiz due 11:59 PM)
	Monday	4/12/2021	<b>Wellness Day</b>
	Tuesday	4/13/2021	<b>Introduction to Hypothesis Testing</b>
Week #12	Wednesday	4/14/2021	
	Thursday	4/15/2021	Module 5, Part 2 Problem Session (Hypothesis Tests for one-sample Means & Proportions) <ul style="list-style-type: none"> <li>Textbook Sections: 9.1 - 9.4</li> </ul>

	Friday	4/16/2021	<b>Module 5, Part 2 Due</b> (Homework and Quiz due 11:59 PM) <b>Inferential Analysis Project Plan due 11:59 PM</b>
	Monday	4/19/2021	
	Tuesday	4/20/2021	Module 5, Part 3 Problem Session (Inference for 2 Samples) <ul style="list-style-type: none"> <li>Textbook Sections: 10.1 - 10.4</li> </ul> <b>Pulse Lab</b>
Week #13	Wednesday	4/21/2021	
	Thursday	4/22/2021	Module 6, Part 1 Problem Session (SLR Inference) <ul style="list-style-type: none"> <li>Textbook Sections: 12.1-12.4</li> </ul>
	Friday	4/23/2021	<b>Module 5, Part 3 Due</b> (Homework and Quiz due 11:59 PM)
	Monday	4/26/2021	<b>Inferential Analysis Rough Draft due by 11:59 PM</b> <b>Team Improvement Process Formative Evaluation due by 11:59 PM</b>
	Tuesday	4/27/2021	Module 6, Part 2 Problem Session (MLR Inference) <ul style="list-style-type: none"> <li>Textbook Sections: 13.1-13.4</li> </ul>
Week #14	Wednesday	4/28/2021	<b>We encourage you to complete Module 6, Part 1</b> (Homework and Quiz by 11:59 PM) as it will be on the exam!
	Thursday	4/29/2021	<b>Exam 3 (Module 5 &amp; Module 6 Part 1) opens at 12:01 AM</b>
	Friday	4/30/2021	<b>EXAM 3 (Module 5 &amp; Module 6 Part 1) due by 11:59 PM</b>
	Monday	5/3/2021	
	Tuesday	5/4/2021	<b>Regression Lab Activity</b>
Week #15	Wednesday	5/5/2021	
	Thursday	5/6/2021	<b>Group meeting w/instructor or GA completed by today</b> <b>Module 6, Part 2 Due</b> (Homework and Quiz due 11:59 PM)
	Friday	5/7/2021	<b>Wellness Day</b>
<b>FINAL EXAMS - May 10 - 15, 2021</b>			
<b>Final Project Report due Thursday, May 13, 2021</b>			
<b>Final Group Member Evaluation and Self Reflection due Friday, May 14, 2021</b>			

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