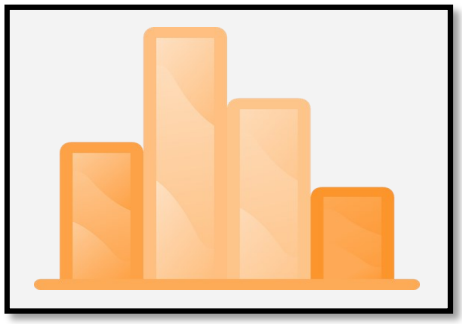
INTRODUCTORY BUSINESS STATISTICS

SUMMER 2021 STAT 3090 SYLLABUS VAGNOZZI

Welcome to **STAT 3090**! Review this syllabus to become familiar with the details of our class this semester — think of it as a contract between you, the student, and the instructor.

Class Section Details



Section Number: 242
Start Date: July 28, 2021
End Date: August 3, 2021
Semester: Summer II 2021
Location: Online
Modality: Asynchronous

Instructor

Anna Marie Vagnozzi avagnoz@clemson.edu

About Me: I completed my M.S. in Mathematical Sciences at Clemson University and my B.S. in Mathematics at Campbell University (Go Camels!). When not teaching math, you can usually find me hiking, cooking, gardening, or curled up with a good book and mug of coffee.

Teaching Assistants

Shih Yu Sung shihyus@g.clemson.edu
Joseph Swanson jeswans@g.clemson.edu

Commitment to Diversity & Inclusion

It is my goal to create a welcoming online course environment that invites different perspectives and respects individual differences. Students are expected to treat one another with respect and kindness at all times when interacting in the online course.

Communication

This course uses **Canvas** to post announcements, lecture materials, grades, assignments, exams, and other relevant information. You are responsible for checking Canvas regularly.

Your university email is the preferred method of communication with the instructor for this course. I will generally respond within 24 hours on weekdays. Emails sent after 5 PM ET or on weekends are not guaranteed to be answered before the next business day, but feel free to send an email at any time and I will respond as soon as I am able.

Optional **office hours** will be held virtually via Zoom for real-time communication with the instructor and TAs. See Canvas for details on dates/times and meeting links.

Course Description

This is an introductory probability and statistics course for business students, particularly those who will take MGT 3100. Topics include descriptive statistics, basic probability, probability distributions, one sample estimation and testing, and regression.

Prerequisites: MATH 1060 or MATH 2070 or MATH 2100.

Learning Outcomes

Upon successful completion of this course, a student will be able to:

1. Identify and distinguish between types of variables, and know which types of variables are required for statistical techniques.
2. Explain and apply measures of central tendency, spread, and relative standing, and how these different measures relate to each other in various distribution patterns.
3. Apply rules of probability, and extend those principles to discrete and continuous probability distributions.
4. Explain and apply the concept of sampling distributions, their role in developing confidence intervals, and their use in hypothesis testing, correctly utilizing the standard normal, t, and chi-squared distributions.
5. Calculate and interpret confidence intervals for mean and proportion in one-sample scenarios.
6. Identify the correct statistical test to be used for hypothesis testing in one-sample scenarios for mean, proportion, and standard deviation.
7. Clearly interpret the results of a statistical analysis in the context of a research question.
8. Correctly and appropriately use correlation and linear regression techniques, including model inference.
9. Use the statistical software JMP® to perform data analysis.

The above outcomes are evidenced by responses on homework and exams.

General Education Requirement

STAT 3090 satisfies the General Education requirement for Mathematics.

You may demonstrate mathematical literacy through solving problems, communicating concepts, reasoning mathematically, and applying mathematical or statistical methods, using multiple representations where applicable.

Copies of problems from homework and tests with examples of the following learning outcomes may be submitted as evidence of math competency:

- Demonstrate knowledge of simulations
- Use statistical models to calculate probabilities of events
- Perform full analysis of a hypothesis test
- Use linear regression techniques to determine the relationship between two quantitative variables

Required Materials

1. **Course Lecture Guide.** The lecture notes will be provided electronically on Canvas. Please note that in order to use your notes on tests, you must have a printed copy. You may not use notes stored on an electronic device such as a tablet during exams.
2. **Hawkes Learning System access.** Students are required to purchase access to the Hawkes Learning System, which includes the online homework and e-textbook, Discovering Business Statistics by Nottingham and Hawkes. Instructions for purchasing access will be made available on Canvas at the start of class. It is not necessary to purchase a physical copy of the textbook.
3. **Graphing Calculator.** A TI-83 or TI-84 graphing calculator is required. These calculators will be permitted on tests. Other calculators may be allowed at the discretion of the instructor.

Required Technology

1. **JMP® Statistical Software.** JMP® is available as a free download for Clemson students at https://ccit.clemson.edu/support/current-students/software-and-applications/web-downloads/.
2. **Reliable internet access.** You will be responsible for accessing Canvas, your university email, and the Hawkes Learning System regularly.
3. **Computer access.** Your computer must have the ability to manage files and play audio/video.
4. **Microsoft Word and Excel.** Clemson students have access to Microsoft Office at the link above.
5. **Adobe Reader.** This will allow you to view PDFs of the course Lecture Notes. You can download it at https://get.adobe.com/reader/.
6. **Printer access.** You will need this to print physical copies of the Lecture Notes for use on tests. If you do not have a printer, check with your local library.
7. **Respondus LockDown Browser.** A version of LockDown Browser for taking online exams will be provided through the Hawkes Learning system.
8. **Web camera and microphone.** These are required for the online testing environment.

If you are experiencing hardware or software problems, contact the CCIT Service Desk at ITHELP@clemson.edu with a detailed description of your problem.

Structure of the Online Course

This course contains three units of material, each consisting of several chapters in the course Lecture Guide. For each weekly set of chapters assigned, students will generally do the following.

Print **guided chapter notes** from the *STAT 3090 Lecture Guide* available on Canvas. → Watch one or more **lecture videos** introducing content, filling in your notes as you go. → Complete **homework and quizzes** on the Hawkes Learning System.

The online, asynchronous nature of the course allows for flexibility to do coursework when it best fits your schedule, as long as you meet assignment deadlines. All assignment due dates, as well as a suggested content schedule, can be found in the **Course Calendar.** All deadlines are at 11:59 PM.

Assignments

- **Hawkes Learner's Options (HLOs).** There will be six (6) HLO lessons due on Hawkes. You will choose several lessons to complete for Mastery that go along with the assigned chapters in a week. You do not need to complete every lesson, but may select the ones you believe will help you the most. These lessons and their due dates are given in the To-Do List tab on Hawkes. *To allow for unexpected circumstances, one (1) low/missing HLO grade will be dropped.*
- **Hawkes WebTests.** There will be six (6) regular quizzes on Hawkes called WebTests. These WebTests and their due dates can be found on the To-Do List tab on Hawkes. You have two (2) attempts at each WebTest, and the highest of the two scores will be recorded. *To allow for unexpected circumstances, one (1) low/missing WebTest grade will be dropped.*
- **Projects.** There will be three (3) projects this semester. The projects consist of the type of problems that you may encounter in your future job and emphasize the utilization of JMP software. For each project, you will save your work as a single PDF document and submit it via Gradescope.
- **Exams.** At the end of units one and two, students will take a Unit Test in a proctored testing environment (see the **Exams** section for more information). At the end of the course, students will take a cumulative Final Exam in the proctored testing environment.

Late Work Policy

If you will miss an assignment deadline, **email your instructor prior to the deadline** to discuss the possibility of an extension. Late work without prior communication will only be accepted under extreme circumstances at discretion of the instructor.

Exams

There are two Unit Exams on July 9th and July 23rd, and the Final Exam is on August 3rd. Exams must be taken on the dates given in the Course Calendar using Hawkes and Respondus LockDown Browser. Each exam will consist of both multiple choice and free response questions. You will have 90 minutes for each Unit Exam and 150 minutes for the Final Exam. If you miss an exam, the test score will be zero. The Final Exam can be used to replace one low unit exam score. The Exams will open at 12:00 AM and close at 11:59 PM on the specified day. Be sure to sign in early enough so the full testing time will be allotted to you. No students are permitted to exempt the Final Exam.

Students may use calculators, tables and formula sheets (provided), and their printed notes on the exams. Cell phones and other devices such as smart watches will not be permitted during testing. **You may not contact anyone for assistance with the material while taking the exam.** If you encounter any technical difficulties, contact your instructor and the CCIT Service Desk immediately.

Grading Policy

To earn a passing grade for STAT 3090, a student must meet two conditions.

First Condition: A student must have either (A) a final exam score of 60 or higher, **or** (B) an exam average of 60 or higher. If neither (A) nor (B) is met, the final Letter Grade is F and the following computation of the course average does not apply.

Second Condition: If the First Condition is met, the final numerical average for the entire course is computed according to the more favorable of the two methods below.

Method 1	
2 Unit Exams @ 25% each	50%
3 Projects @ 5% each	15%
Hawkes Learner's Options	5%
Hawkes WebTests	5%
Final Exam	25%
Total	**100%**

Method 2	
Best Unit Exam	25%
3 Projects @ 5% each	15%
Hawkes Learner's Options	5%
Hawkes WebTests	5%
Final Exam	50%
Total	**100%**

Final grades will be recorded as in the table on the right, provided that the First Condition has been met.

Note: In rare situations, it might happen that a student fulfills the First Condition, but the Course Average calculated in the Second Condition is less than 59.5, resulting in a final Letter Grade of F.

Please be aware that Canvas calculates grades based on Method 1. Canvas displays grades based on your current work and ignores assignments that are not yet due. This means that your grade as it appears on Canvas prior to the Final Exam may be inflated.

Course Average	Letter Grade
[89.5, 100]	A
[79.5, 89.5)	B
[69.5, 79.5)	C
[59.5, 69.5)	D
[0, 59.5)	F

Success in the Course

In order to be successful in this course, students must be dedicated to the coursework. Studying is critical for a student to master the learning objectives of this course (available on Canvas). Students are expected to manage their time well, develop a study plan, engage in regular practice with the course material, and seek help in a timely manner when necessary. Your instructor is available to support you in your learning — all you have to do is ask.

Academic Success Center

The Academic Success Center (ASC) provides free services, including tutoring, academic coaching, and academic skills workshops, for all Clemson students. STAT 3090 is supported by ASC tutoring and virtual tutoring sessions are available. Visit the ASC website for more information on tutoring and other services: http://www.clemson.edu/asc/

Academic Integrity

Students are expected to adhere to the following Clemson University Academic Integrity Policy: "As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a 'high seminary of learning.' Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form."

Copyright Notice

Materials used in connection with this course may be subject to copyright protection by Title 17 of the United States code. Students are not allowed to post course materials, included completed lecture notes and projects, to commercial websites such as Course Hero. Students that fail to comply with these restrictions may be liable for copyright infringement.

Privacy Policy

This course is designed with your privacy in mind. If you feel that an assignment or technology tool undermines your right to privacy, please contact your instructor immediately. We will work together to determine an alternative assignment that will help you achieve the course learning outcomes.

Agreement

If you disagree with any of the policies or procedures spelled out above or cannot accept the demands of the course (i.e. the amount of time and work required), you should drop the course as soon as possible. By remaining enrolled in the course, you agree to comply with all policies and procedures as described in this syllabus.

Course Coordinator

Dr. April Thomas (864) 656-3047

O-215 Martin Hall athomas@clemson.edu

All meetings with the course coordinator are virtual. Email is the best way to contact Dr. Thomas.

Student Accessibility Services

Clemson University values the diversity of our student body as a strength and a critical component of our dynamic community. Students with disabilities or temporary injuries/conditions may require accommodations due to barriers in the structure of facilities, course design, technology used for curricular purposes, or other campus resources. Students who experience a barrier to full access to this class should notify the professor and make an appointment to meet with a staff member in Student Accessibility Services (SAS) as soon as possible. You can make an appointment by calling (864) 656-6848, emailing studentaccess@lists.clemson.edu, or visiting Suite 239 in the Academic Success Center. Appointments are strongly encouraged — drop-ins will be seen if possible, but there could be a significant wait due to scheduled appointments.

Students who receive Academic Access Letters are strongly encouraged to present a copy to their professors as early in the semester as possible so accommodations can be made in a timely manner. It is the student's responsibility to follow this process each semester. You can access further information at https://www.clemson.edu/academics/studentaccess/. Provide your instructor with a copy of a letter stating any testing accommodations at least one week before the first exam.

Clemson University Title IX Statement

Clemson University is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender, pregnancy, national origin, age, disability, veteran status, genetic information, or protected activity (e.g., opposition to prohibited discrimination or participation in any complaint process, etc.) in employment, educational programs and activities, admissions, and financial aid. This includes a prohibition against sexual harassment and sexual violence as mandated by Title IX of the Education Amendments of 1972.

The University is committed to combatting sexual harassment and sexual violence. As a result, University faculty and staff who work directly with students are required to report any instances of sexual harassment and sexual violence to the University's Title IX Coordinator. This means that, as your professor, I am required to report any incidents of sexual harassment, sexual violence or misconduct, stalking, domestic and/or relationship violence that are directly reported to me, or of which I am somehow made aware.

There are two important exceptions to this requirement:

- Confidential Resources and facilitators of sexual awareness programs such as "Take Back the Night" and "Aspire to be Well" are not required to report sexual discrimination incidents when acting in those capacities.
- Disclosures about sexual harassment, sexual violence, stalking, domestic and/or relationship violence that are shared as part of an academic project, research project, classroom discussion, or course assignment are not required to be disclosed to the University's Title IX Coordinator.

This policy can be found at http://www.clemson.edu/campus-life/campus-services/access/title-ix/. Ms. Alesia Smith is the Executive Director for Equity Compliance and the Title IX Coordinator. Her office is located at 223 Holtzendorff Hall, and she can be reached at (864) 656-3181 or alesias@clemson.edu.