



Summer 2020

**Class Day/Time:** Tu, Th 9:00 AM – 10:35 AM

[Zoom Room for Classes](#)

**Instructor:** Mrs. Schroeder

**E-mail:** [schroeder.1@osu.edu](mailto:schroeder.1@osu.edu)

**Office Hours:** W, 7:00 – 9:00 pm and other times by appointment

**Location:** [Zoom Room](#)

**TA:** Claire Neibecker **Office Hours:** We and Fr 1:00 – 3:00

**Location:** Claire's [Zoom Room](#)

**TA:** Yuqi Luo **Office Hours:** Mo 4:00 – 5:30, Sa 2:00 – 4:00

**Location:** Yuqi's [Zoom Room](#)

**Hybrid Course Design:** Synchronous lecture and recitation meetings with asynchronous videos and assessments.

**Course Description:** Business Management 2320 offers an introduction to the application of statistical tools used extensively in the business environment to assist the decision-maker. Topics covered include estimation and hypothesis tests about population means and proportions, chi-square tests for independence and goodness-of-fit, analysis of variance, regression analysis and model building, and forecasting with time series data. A wide variety of business problems are explored through mini-case presentations and data driven exercises, with procedural emphasis on method selection, statistical procedure, teamwork, and effective communication.

**Course Objectives:**

- To gain understanding of how a variety of statistical methods can be applied to decision-making under uncertainty in business.
- To improve problem-solving and communication skills.
- To develop soft skills necessary for success in a business environment.

**Pre-Requirements:** Statistics 1430 and CSE 2111 or 1113

**Required Text/Materials:** Pearson MyStatLab Access which includes e-text  
Title: *Business Statistics: A Decision-making Approach, 10e*  
Authors: Groebner, Shannon, Fry  
\*See details on page 2

**Evaluation Criteria:**

| Graded Components    | % of Total | Type  |
|----------------------|------------|-------|
| Section Tests        | 48         | N ↑   |
| Final Exam           | 30         | N ↑   |
| Practical Exercises  | 10         | CR 🍷  |
| Attend/Participation | 12         | CO 🗨️ |

**Requirements for each form of graded component. Failing to follow these will represent academic misconduct. See below.**

**Independent Work [N ↑]:** Strictly non-collaborative, original individual work. You may discuss this assignment with your instructor only. Discussions with other individuals, either in person or electronically, are strictly prohibited.

**Collaboration Required [CR 🍷]:** An explicit expectation for collaboration among students either in class or outside of class (i.e. group work).

**Collaboration Optional [CO 🗨️]:** Students are permitted, but not required, to discuss the assignment or ideas with each other. However, all submitted work must be one's original and individual creation.

**Academic Conduct:**

If a student is suspected of, or reported to have committed, academic misconduct in this course, I am obligated by University Rules to report my suspicions to COAM. If you have questions about the above policy or what constitutes academic misconduct in this course, please contact me. See OSU Prohibited Conduct – [Section 3335-23-04\(A\)](#)

**University Policies, Services and Resources**  
[go.osu.edu/UPolicies](http://go.osu.edu/UPolicies)



Fisher Undergraduate Handbook and QuickLinks  
[www.bsbalinks.com](http://www.bsbalinks.com)



Fisher Navigator Resource Portal  
[www.nav-1.com](http://www.nav-1.com)



## COURSE LEARNING OUTCOMES

Vast amounts of data are collected in today's global business and economic environment. The most successful decision-makers and managers are those individuals/groups that can put this information to work effectively to guide their decision process, are able to accurately communicate the statistical results that drive these decisions, can work effectively as a member of a diverse team, and present themselves in a manner appropriate for a business environment. Students completing this course should be able to:

- Evaluate a business scenario and determine which of the statistical tools introduced in the course, if any, is most applicable for generating information from data that can aid the decision maker.
- Successfully apply any and all of the statistical tools introduced in the course to answer a specific question.
- Write a concise report that details the problem solving process and conclusions.
  - Plan: Identify the salient points of a problem, describe the characteristics of the relevant variables/data, select a model/method, and validate necessary data conditions.
  - Do: Apply the selected method/model to perform the analysis. Students will be able to leverage statistical software to complete the mathematical computations.
  - Communicate: Summarize the findings of the analysis. Students will be able to communicate effectively to a broad audience the conclusions and recommendations in the context of the business problem
- Work effectively with a team of diverse individuals to successfully complete a challenging task.

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## COURSE MATERIALS and COMMUNICATION

**E-mail communication** must be via official OSU e-mail to [schroeder.1@osu.edu](mailto:schroeder.1@osu.edu).

- Use only office osu.edu or buckeyemail.osu.edu accounts.
- If you have not previously activated your OSU e-mail visit <http://www.oit.ohio-state.edu/userpass.html> and click on 'how to activate' or call (614) 688-HELP.
- The "Subject" line must include BM2320.
- Expect a response by the next business day if not sooner. If you do not receive a timely response, and you have verified that you did all things correctly on your end, please re-send your inquiry. I am very responsive to e-mail.

**Course materials** will be housed on or accessed via Carmen Canvas (<https://carmen.osu.edu>). Find BUS MGT 2320 – Bus Statistics (3670).

**Class Meetings** will be synchronous and conducted using the following [Zoom Room](#).

**Pearson MyStatLab with eText** will be accessed through the MyLab and Mastering link in the course navigation in your BM2320 Carmen course (**Carmen > BUS MGT 2320 – Bus Statistics (3670) > MyLab and Mastering > Open MyLab and Mastering**)

- Purchase your access code within our Carmen course: Carmen > BM2320 SP20 > MyLab and Mastering > click on the orange button. If you have not previously purchased an Access Code for the Groebner, 10e text, you will be prompted to buy the code.
- If you have previously purchased an Access Code for the Groebner, 10e text, you should be granted access as soon as you click on the orange button. If have previously purchased an Access Code for the Groebner, 10e text, and you are not granted automatic access, you will need to have your access validated by Pearson representatives. Please alert me and I will make the request for validation on your behalf.
- Additional information can be found on **Carmen > BUS MGT 2320 – Bus Statistics (3670) > Modules > Syllabi and General Information > COURSE INFO: Pearson Getting Started and Help**.

## HOW THIS COURSE RUNS

The content in Business Management 2320 builds sequentially week to week, beginning with the foundation laid in Statistics 1430. Students who fail to keep pace in their study of the material with the presentation schedule will struggle to catch up once they fall behind. The successful student in Business Management 2320 is one who makes every attempt to master each new concept as it is presented. This course is designed to provide the framework for reasonably short but regular engagement with the material. We emphasize an approach to learning consistent with the according to the principles of the PLRS Learning Cycle accredited to Frank L Christ.

You can expect a regular weekly cadence of 1) preparation for the week's lecture, 2) participation in lecture, 3) review, 4) participation in recitation, and 5) practice and mindful study. To be successful in BM2320, follow the wheel:



The weekly cadence will be enhanced by two practical exercises (mini case studies) completed with a group of your peers, periodic assessments of understanding (tests), and a final exam to ensure the learning objectives for the course have been achieved to a satisfactory level.

The course design is hybrid, employing both synchronous and asynchronous components. The weekly materials will be posted in advance on your BM2320 Carmen Course in a Module identified as "Instruction Week # (dates) – title". Each module includes

- START HERE: Week # Overview
- Week # Videos
- Week # Lecture Agenda and Materials
- Week # Additional Practice
- Week # Recitation Agenda and Materials
- Week # Learning Outcomes

### **HYBRID DESIGN for weekly schedule:**

#### **1) Lecture Prep – Asynchronous on-line learning prior to your scheduled lecture**

- Watch assigned videos posted on Carmen in weekly instruction module or complete assigned readings in Groebner, *Business Statistics: A Decision-making Approach, 10e* on MyStatLab (average time requirement ≈ 30 minutes). See the "START HERE: Week # Overview" content page in each weekly module for details.
- This component prepares you for the lecture discussion to follow that week. To be successful in the class, you must invest in preparation for lecture.

## 2) Lecture – Synchronous 95-minute Zoom meeting ([Zoom Room](#))

- **Notes will be posted each week on Carmen > Modules > Week # > Lecture Agenda and Materials**
  - Reinforce and expand on videos/readings that were required for lecture prep
  - Demonstrate/apply new content
  - Real-world applications
- Attendance is required\* and necessary for successful completion of this course. Lecture attendance correlates positively with exam performance.
- The lecture will be recorded and posted on Carmen > Modules > Week # Lecture Agenda and Materials after the class meeting. Every attempt will be made to provide the recording within 24 hours.
- The student response system *Learning Catalytics* will be used throughout lecture to check comprehension. *Learning Catalytics* is available as part of your MyStatLab subscription. You will need to have a mobile device with you at each lecture class that allows you to connect to *Learning Catalytics*. While cell phones should work, in the past some students have experienced some loss of functionality; laptops, ipads, notebooks, tablets work better than phones.
  - Participation points are based on completion (50%) and accuracy of answer (50%).
  - The best 15 scores (lecture + recitation) will count toward your course grade.
  - There will not be any opportunity to “make up” the participation points if you miss the Zoom class meeting.

\* We have 22 class meetings (lecture + recitation). You can miss 7 (and only 7) classes with no grade penalty to allow you to deal with life’s speed bumps.

## 3) Additional Practice – each weekly module will include instructor composed questions with full explanation/solution

- See Carmen > Modules > Instruction Week # (dates) – *title* > Additional Practice
- No point value is attached to these practice exercises.

## 4) Recitation – Synchronous 95-minute Zoom meeting ([Zoom Room](#))

- Most weeks this time will be used for review/practice/reinforcement of the week’s content, however we will need to introduce new content (“lecture”) in 2 weeks. See the *Tentative Course Schedule* on pages 10, 11.
- Attendance is required\* and necessary for successful completion of this course. Recitation attendance correlates positively with exam performance.
- The student response system *Learning Catalytics* will be used throughout lecture to check comprehension. *Learning Catalytics* is available as part of your MyStatLab subscription. You will need to have a mobile device with you at each lecture class that allows you to connect to *Learning Catalytics*. While cell phones should work, in the past some students have experienced some loss of functionality; laptops, ipads, notebooks, tablets work better than phones.
  - Participation points are based on completion (50%) and accuracy of answer (50%).
  - The best 15 scores (lecture + recitation) will count toward your course grade.
  - There will not be any opportunity to “make up” the participation points if you miss the Zoom class meeting.
- We will plan to reserve the last 15 minutes of each meeting to answer individual questions – a sort of office hour time.

\* We have 22 class meetings (recitation + lecture). You can miss 7 (and only 7) classes with no grade penalty to allow you to deal with life’s speed bumps.

**5) Mindful Practice/Study – Wrap up the weekly module by “putting pen to paper” and quiz yourself while you are doing it. “Why am I being required to answer these questions in this order? What symbol would I use to replace this word? What would happen if I changed this value to something larger?** Reading and re-reading the notes and text will not be sufficient for you to understand the concepts and, by extension, for you to successfully complete cases and exams. Practice with a wide variety of problem scenarios is vital.

- Homework using Pearson MyLab is available each week, from which bonus points can be earned. Your best 10 HW scores will count toward your earned bonus points, to a maximum of 40 points:
  - 4 points if the HW score is 90% - 99.9999%
  - 3 points if the HW score is 80% - 89.9999%
  - 2 points if the HW score is 70% - 79.9999%
  - 1 point if the HW score is 60% - 69.9999%
- Pearson MyLab provides the Study Plan option, from which you can access multiple practice problems from each chapter of the text.

### EVALUATION and GRADING SCALE

| Category                                      | Item Points | Item % | Category Points | Category % |
|---|-------------|--------|-----------------|------------|
| Best 3 Section Tests <b>N</b> †               | 80          | 16%    | 240             | 48%        |
| Final Exam <b>N</b> †                         | 150         | 30%    | 150             | 30%        |
| Practical Exercises <b>CR</b> †††             | 25          | 5%     | 50              | 10%        |
| Best 15 Attendance/Participation <b>CO</b> †† | 4           | 0.8%   | 60              | 12%        |
| Total   |             |        | 500             | 100%       |

**Grading Scale:** The class earned distribution will adhere as closely as possible to the Ohio State University recommended distribution. The *anticipated* distribution is:

|                   |                   |                   |                   |
|-------------------|-------------------|-------------------|-------------------|
| A = 93% and above | B+ = 87% to 89.9% | C+ = 77% to 79.9% | D+ = 65% to 69.9% |
| A- = 90% to 92.9% | B = 83% to 86.9%  | C = 73% to 77.9%  | D = 60% to 64.9%  |
|                   | B- = 80% to 82.9% | C- = 70% to 72.9% | E = below 60%     |

**Section Tests – In an effort to encourage and reward timely progress through the course material, 4 fairly evenly spaced tests will be given.**

- Only (the best) 3 of the 4 tests will count toward your course grade.
- MAKEUP tests will be considered only under the most extreme circumstances. The reason for only counting 3 of the tests is to provide every student the opportunity to deal with life’s unexpected speed bumps (or to enjoy life’s pleasures).
  - Illness, emergency, technical failure, vacation – you name it – are reasons for not counting one of the section tests.
- These will be administered on the MyStatLab platform.
- You will have 80 minutes within the two-hour window (Friday 8:00 PM – 10:00PM) during which you will take each test. If you have a work conflict with that time, inform me asap, and we’ll arrange an alternate time.
- Book/notes, Excel, StatCrunch allowed.
- You may **NOT** communicate with any other persons (physically, virtually, electronically, or otherwise).
- Test questions will include multiple choice, true false, fill-in, and numerical calculation.
- Detailed information regarding the Section Tests will be posted on Carmen > SU20 BUSMGT 2320 > Modules > Test and Exam Info > Section Test #.

**Final Exam – A comprehensive exam will be administered in Carmen during the University scheduled final exam time.**

- Book/notes, Excel, StatCrunch allowed.
- You may **NOT** communicate with any other persons (physically, virtually, electronically, or otherwise).
- Test questions will include multiple choice, true false, fill-in, and numerical calculation.
- Detailed information regarding the Section Tests will be posted on Carmen > SU20 BUSMGT 2320 > Modules > Test and Exam Info > Final Exam.

**Cases/Practical Exercises – Achieving success in a business career will require the ability to work effectively in teams.** Learning theory and techniques is necessary but not sufficient for statistical analysis in today's business world. Statistical analysis in support of business decisions requires the manager to understand statistical software and interpret statistical results. Whether you are charged with performing the statistical analysis or not, you must be able to determine whether presented statistical results make sense and are reasonable. The Practical Exercises are designed to provide a preview of real world projects.

- Require the use of statistical computing software:
  - Excel, Excel's Data Analysis Add-in, StatCrunch which is included in MyStatLab
  - Manual calculations will not be accepted unless the item instructions indicate otherwise.
- Detailed information for each case will be posted on Carmen > SU120 BUSMGT 2320 > Modules > Cases (Practical Exercises) > Case #.
- Teamwork: You will work with a group of your peers to complete each case. Collaboration among all team members is required on all parts of the assignment. You may *not* "divide and conquer" the assignment.
  - The members of each team will be determined by the instructor.
  - Teams will be assigned 3 – 4 members, depending on the number of students in the course to divide up.
  - We cannot control when a student will drop the class or simply refuse to participate, so be prepared to solve the entire case, no matter what.
  - Each case will allow you to practice and improve not only your statistical skills, but also your written communication skills. Your assignment submission should be worthy of presentation in a professional setting.
  - Each student's contribution to their group's case solution will be peer evaluated by the other team members. Negative peer evaluations for a team member will result in a lowered case grade for that student. The assigned grade for a non-participative student can be 0.
    - Be advised that students given low peer evaluation scores will be teamed together for the next case or may even be required to complete the next case alone.
- Your team will meet with me in Zoom for 15 – 20 minutes after the case instructions and data have been released to discuss your team's strategy. ([Zoom Room](#))

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## ADDITIONAL POLICIES AND RESOURCES

**Grade Appeal Policy:** Although we make every effort to grade in a consistent and fair manner, occasionally an error is made or a student feels that an error has been made. Any notification of a missing grade or request for re-evaluation of a grade must be **submitted, in writing, within two weeks** of grade availability. Any re-grading of work will result in the entire document being re-evaluated. You must check your scores in MyStatLab and in Carmen regularly. Claiming ignorance of a missing grade will not be accepted as a legitimate reason to revisit a grade after the two week deadline.

**Course-specific Copyright Policy:** Material provided by the instructor may not be re-posted anywhere without the explicit permission of instructors. See University Copyright Policy.

**Disability Services:** The Office of Disability Services verifies students with specific disabilities and develops strategies to meet the needs of these students. Students requiring accommodations based on identified disabilities should contact the instructor at the beginning of the semester to discuss the student's individual needs. All students with specific disability needs are strongly encouraged to contact the Office of Disability Services to explore the potential accommodations that may be available to them.

**TITLE IX:** Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at [titleix@osu.edu](mailto:titleix@osu.edu)"

**ACADEMIC INTEGRITY (ACADEMIC MISCONDUCT):** Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's *Code of Student Conduct*, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's *Code of Student Conduct* and in this syllabus may constitute "Academic Misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University, or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's *Code of Student Conduct* is never considered an "excuse" for academic misconduct, so I recommend that you review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct.

If we suspect that a student has committed academic misconduct in this course, we are obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University's *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact one of the instructors.

Other sources of information on academic misconduct (integrity) to which you can refer include:

The Committee on Academic Misconduct web pages (<https://oaa.osu.edu/academic-integrity-and-misconduct>)

*Ten Suggestions for Preserving Academic Integrity* (<https://oaa.osu.edu/academic-integrity-and-misconduct/student-misconduct>)

**Student Counseling Services:** As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating, and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting [ccs.osu.edu](http://ccs.osu.edu) or calling 614-292-5766. CCS is located on the fourth floor of the Younkin Success Center and the tenth floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at 614-292-5766 and 24-hour emergency help is also available through the 24/7 National Suicide Prevention Hotline at 1-800-273-8255 or at [suicidepreventionlifeline.org](http://suicidepreventionlifeline.org).

| <b>Technology Help</b> |  |
|------------------------|--|
| <b>OSU</b>             | <p>For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at <a href="https://ocio.osu.edu/help/hours">https://ocio.osu.edu/help/hours</a>, and support for urgent issues is available 24x7.</p> <ul style="list-style-type: none"> <li>• <b>Self-Service and Chat support:</b> <a href="http://ocio.osu.edu/selfservice">http://ocio.osu.edu/selfservice</a></li> <li>• <b>Phone:</b> 614-688-HELP (4357)</li> <li>• <b>Email:</b> <a href="mailto:8help@osu.edu">8help@osu.edu</a></li> <li>• <b>TDD:</b> 614-688-8743</li> </ul> |
| <b>FISHER COB</b>      | <p>Lab facilities are available on the lowest level of Mason Hall <b>for use by students accepted to the FCOB</b>. These facilities are not open to non-FCOB students, and no exceptions are ever made.</p> <p>For questions related to the use of these labs that the lab monitors can't answer, get help at <a href="mailto:helpdesk@fisher.osu.edu">helpdesk@fisher.osu.edu</a></p>   |
| <b>PEARSON</b>         | <p>See document titled "Trouble-shooting in MyStatLab" posted on Carmen &gt; Modules &gt; Resources.</p>   |

## TESTIMONIALS

"I was asked to explain how I would attack a particular business problem in my interview with *L Brands*, and I was able to use what I learned from one of our case studies to respond. They were really impressed! I was offered an internship."

... and I was a student in your business statistics class during Autumn of 2015 at OSU. I'm currently interning at Cardinal Health as a marketing analyst, and I thought I would say thank you for all that you taught me during that class. Many of my projects require a deep understanding of the statistical models we learned about, and I've been simplifying most of the work using my experience in Minitab. Thank you for the thorough instruction and keep up the excellent work!

.... although the material had not been my favorite at the time, I learned much throughout your class. Currently, I am interning at GE Lighting in Cleveland, and **have used what you taught in class more than I thought! We are currently learning about Six Sigma with Green Belts and Black Belts, and, I understand much more than my fellow interns.** Specifically, the case studies you had used in class have helped a great deal. I just wanted to shoot you an email thanking you for the class. Even though the material was hard at first, **understanding even the basics have benefitted greatly in the workplace.**

I just want to thank you for helping me during office hours... Honestly, it was intimidating to come to the first office hour, but after getting to know each other better and you helping me answer my questions and understand concepts, I felt like I was a fool for not coming earlier before midterm 1!!! With all the professors I've had up until my 2nd year, I think you've been the most helpful and influential. Thanks you so much, again for a great semester!

I just wanted to send you a quick e-mail. I know I told you this in your office before the final but I wanted to let you know again how much I **appreciated your class**. I received a B this semester in your class and it was the hardest B I've ever worked for. **From your class I learned how to study and balance things on a whole new level** .....

*I wanted to reiterate today what I said in class and that is thank you. I believe your teaching structure to be very beneficial to students and time effective. **you truly care about the students and have always been willing to help no matter how simple the question.** Though this will most likely be my first C in my academic career I have learned a lot from the class and the experience overall. I hope the rest of the week goes well for you and you have an enjoyable break!*

I heard a lot of stories about how tough your class was going into this past quarter. But I actually really enjoyed your class and learned a lot of applicable skills that I will use in the future. So I'd like to thank you....

I took your class last fall. This fall I am taking a course in Six Sigma. Our current topic for our midterm next week is all about hypothesis testing and statistical analysis. So I just wanted to thank you for drilling it into our heads so well all those statistical concepts that I can now easily breeze through.



*I just want to thank you, from the bottom of my heart, for this past quarter! This class has been so hard for me and I know that I barely passed, I just want to thank you so much for dealing with me and not giving up on me! I'll always be grateful!*

.... thank you for a wonderful semester in your class. I thoroughly enjoyed having you as a teacher. It is very evident that you care a great deal about the success of your students, which is so encouraging. I hope you have a wonderful summer.

I can not begin to thank you for everything that you have done for me this semester. You have taught me so much about stats and ultimately how to be prepared in and out of the classroom. Thanks you for spending extra time with me on Tuesdays to further my knowledge about the recitation and the class. This time, on top of the countless hours I put in studying allowed me to be successful on the final exam. I am thankful to have had a professor that cared as much as you.

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## **SAMPLING OF APPLICATIONS**

### **Accounting**

- Estimate mean amount receivable among all customers
- Estimate costs by determining the relationship between a cost and some measure of the level of activity creating that cost, e.g., selling expenses and total sales, direct labor costs and batch size, electricity costs and hours of machine time

### **Finance and Economics**

- Estimate average returns on investment
- Measure risk associated with investment instruments or portfolios
- Estimate relationship between price and demand
- Estimate relationship between performance of individual stock and the performance of a stock index

### **Human Resources**

- Predict employee retention
- Assess relationship between employee screening tests and job success
- Estimate relationship between salary and employee characteristics to guard against discrimination or to explain severance packages

### **Marketing**

- Understand market segmentation - estimate characteristics of likely consumers of a product
- Estimate exposure to advertising
- Estimate market share

### **Operations Management**

- Estimate expected completion time of a project
- Estimate demand for a product during lead time
- Estimate relationships between revenues or costs and proximity to suppliers, skilled labor, etc.
- Determine service level

**Tentative** Course Schedule – Summer 2020

Optional MyStatLab Homework due each Saturday at 11:59 PM

| Week | Dates          | Topic   | Text Reference   | Deliverables  |
|------|----------------|---|------------------|---|
| 1    | Th, 5/14       | Intro to Carmen for BM2320<br>Intro to MyStatLab<br>Intro to Learning Catalytics<br>Review of Stat 1430 | Chapters 6, 7, 8 | Careful reading of syllabus before class.                           |
| 2    | Tu, 5/19       | Review/Practice Stat 1430 content   |                  |   |
|      | Th, 5/21       | Hypothesis Tests Part I [ $\mu$ and $p$ ]   | Chapter 9.1, 9.2 | Lecture Prep videos or readings                                     |
| 3    | Tu, 5/26       | NO CLASS<br>Monday lecture does not meet due to Memorial Day holiday, so we will not meet               |                  | Continue to review Stat1430 content through Hypothesis Tests Part I |
|      | Th, 5/28       | Review/Practice Stat1430 content<br>Sample Case   |                  |   |
|      | <b>F, 5/29</b> | <b>Section Test 1 – MyLab and Mastering – 8:00 PM – 10:00 PM (EDT)</b>                                  |                  |   |
| 4    | Tu, 6/2        | Hypothesis Tests Part II [ $\mu$ and $p$ ] – Type I Error, Type II error, Power                         | Chapter 9.3      | Lecture Prep videos or readings                                     |
|      | Th, 6/4        | Review/Practice – Hypothesis Tests Part II [ $\mu$ and $p$ ] – Type I Error, Type II error, Power       |                  |   |
| 5    | Tu, 6/9        | Comparisons [ $\mu_D$ , $\mu_1 - \mu_2$ , $p_1 - p_2$ ]   | Chapter 10       | Lecture Prep videos or readings                                     |
|      | Th, 6/11       | Review/Practice – Comparisons [ $\mu_D$ , $\mu_1 - \mu_2$ , $p_1 - p_2$ ]                               |                  |   |
|      | <b>F, 6/12</b> | <b>Section Test 2 – MyLab and Mastering – 8:00 PM – 10:00 PM (EDT)</b>                                  |                  |   |
| 6    | Tu, 6/16       | Chi-square Tests  | Chapter 13       | Lecture Prep videos or readings                                     |
|      | Th, 6/18       | Review/Practice – Chi-Square Tests  |                  |   |
| 7    | Tu, 6/23       | One-way ANOVA – Part I  | Chapter 12.1     | Lecture Prep videos or readings                                     |
|      | <b>W, 6/24</b> | <b>Group Case #1 Due by 11:59 PM (EDT)</b>  |                  |   |
|      | Th, 6/25       | One-way ANOVA – Part II   | Chapter 12.1     | Lecture Prep videos or readings                                     |

| Week | Date           | Topic  | Reading Assignment       | Deliverables                    |
|------|----------------|--|--------------------------|---------------------------------|
| 8    | Tu, 6/30       | Two-way ANOVA  | Chapter 12.3             | Lecture Prep videos or readings |
|      | Th, 7/2        | Simple Linear Regression – Part I                                      | Chapter 2.3, 14.1, 14.2  | Lecture Prep videos or readings |
| 9    | Tu, 7/7        | Simple Linear Regression – Part II (Inference)                         |                          | Lecture Prep videos or readings |
|      | Th, 7/9        | Review/Practice – Simple Linear Regression                             | Chapter 14.2, 14.3, 15.5 |                                 |
|      | <b>F, 7/10</b> | <b>Section Test 3 – MyLab and Mastering – 8:00 PM – 10:00 PM (EDT)</b> |                          |                                 |
| 10   | Tu, 7/14       | Multiple Regression – Part I   | Chapter 15.1             | Lecture Prep videos or readings |
|      | Th, 7/16       | Review/Practice – Multiple Regression Part I                           |                          |                                 |
| 11   | Tu, 7/21       | Multiple Regression – Part II  | Chapter 15.2, 15.3, 15.5 | Lecture Prep videos or readings |
|      | Th, 7/23       | Review/Practice – Multiple Regression Part II                          |                          |                                 |
|      | <b>F, 7/24</b> | <b>Section Test 4 – MyLab and Mastering – 8:00 PM – 10:00 PM (EDT)</b> |                          |                                 |
| 12   | Tu, 7/28       | Forecasting with Time Series   | Chapter 16               | Lecture Prep videos or readings |
|      | <b>W, 7/29</b> | <b>Group Case #2 due by 11:59 PM (EDT)</b>                             |                          |                                 |
|      | Th, 7/30       | Review/Practice – Forecasting with Time Series                         |                          |                                 |
| 13   | <b>M, 8/3</b>  | <b>Final Exam – platform tbd – 8:00 PM – 10:00 PM (EDT)</b>            |                          |                                 |