College of Business, Mississippi State University
Marketing, Quantitative Analysis, & Business Law
BQA 8443-501, Statistical Analysis for Business Decisions

Class meetings: Virtual/Online
Instructor: Dr. Iva B. Ballard
Office: 324Q McCool
E-mail: ibb@msstate.edu
Office Hours: E-mail, Blackboard Collaborate, Skype, MyStatLab Ask Instructor tool, or come visit if you can.
Monday, 9:00 am -11:30 am; Tuesday and Thursday 9:30 am - 11:00 am CST or anytime working or nonworking hours that we agree to talk. Note that I can be contacted through e-mail (the fastest way) or office phone 662.325.5767 most days, not just during office hours. I am willing to “meet” with you online almost anytime, just e-mail me.

Important Notes:
1. I will respond to emails (or discussion board questions in myCourses) within 24 hours, Monday-Sunday. I check e-mail at least 3 times daily.
2. When sending an e-mail, please include course code (BQA 8443) in the e-mail subject. Also, include your name and netid in the body of the e-mail.
3. I strongly encourage you to use Ask My Instructor (right side menu) tool within MyStatLab if you have a specific question about a homework problem. Make sure you include your name and netid within the body of the e-mail when using Ask My Instructor tool.
4. If you live locally and plan to visit during office hours, there is no need to make an appointment.
5. You should allocate at least 10 hours weekly to this course.
6. Throughout the semester (TBA), we will meet via Blackboard Collaborate to review for exam.

Catalog Description:
(Prerequisite: Proficiency with spreadsheet software.) Three hours lecture. Review of descriptive statistics, parametric inference procedures, analysis of variance, regression, nonparametric methods; business problem formulation for computer analysis using statistical packages.

Required Text:
MyStatLab with eBook - Instant Access - for
Statistics for Business and Economics (12th Edition)
OR
Statistics for Business and Economics,
Loose Leaf
ISBN-10: 032194531X

Note. Check with me prior to purchasing MyStatLab with eBook if you have questions, are unsure, or prefer a hardcopy.
Important Notes:
To access directions for purchasing *MyStatLab* with the eBook, please visit the MyStatLab/Homework link in myCourses. In here you will have the option to purchase *MyStatLab* using a credit card, or you may use an access code you have purchased through one of the bookstores. There is a 14 day temporary access option for *MyStatLab*. If you decide to use the temporary access, make sure that you purchase *MyStatLab* before the temporary access expires. For more details, please review the document found in MyStatLab/Homework folder.

Other Materials:
Notes and other important materials will be distributed through myCourses. Notes and lectures for each chapter will be available by noon of each Monday as assigned on the schedule below. To access the course website visit: http://myCourses.msstate.edu or https://my.msstate.edu. I will use Excel during demonstrative lectures, and I expect you to use it for completing the homework assignments or exams. After the second exam, you will need Data Analysis ToolPack for Excel. Directions on how to install the ToolPack are provided in myCourses under the Excel Resources folder. Most Mac users will not be able to install Data Analysis ToolPack. A calculator might be useful as you complete your assignments.

Course Objectives:
At the end of this course, given raw or summary data, you should be able to:
- Differentiate between descriptive and inferential statistics
- Utilize appropriate methods to describe data
- Recognize characteristics of normal and binomial distribution
- Apply Central Limit Theorem concepts to find probability of the mean
- Construct and interpret confidence intervals for one sample and two samples
- Test for differences in population means
- Test hypothesis for categorical data
- Set up and use simple/multiple linear regression models for prediction and estimation

Assessment:
Exams - There will be four exams during the semester. Each exam determines 20% of the course grade. The exams might contain multiple-choice, short answer, demonstration, or true/false questions. You will have 2 hours to complete the exam. Notes, textbook, and other digital or in print material can be used during the exam. The exams will be similar to the homework assignments; therefore, it is important to complete and understand the homework assignments. Although open notes and textbook can be helpful during an exam, relying heavily on them can waste your time. You may complete your exam at any time during the assigned week; however, once you open the exam, you have 2 hours to complete it. Exams will be available through MyStatLab or myCourses. I will provide more details as the semester progresses.

Homework - Homework for each chapter will be available starting on the Monday of the week and having a due date of midnight, Sunday of the corresponding week. Homework will be completed via MyStatLab. The average score of all of the homework assignments determines 20% of the course grade. You may attempt the homework 3 times until the due date. Each person will have different datasets/problems for the homework. If you did not receive credit for an answer you believe is correct, please let me know before Monday of the following week. If you have a question, please be specific, and I prefer you ask questions using the Ask My Instructor tool through MyStatLab. This way, I can look at the exact problem you are working in order to expedite my response. You will receive my respond via e-mail. Sometimes, I might add notes to an individual problem within MyStatLab. If a homework assignment is not completed, you will not have access to review the assignment as you prepare for the exam(s).
Course grade calculation will use the following weights and scales:

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Weight</th>
<th>Letter Grade</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam 1</td>
<td>20%</td>
<td>A</td>
<td>90 or above</td>
</tr>
<tr>
<td>Exam 2</td>
<td>20%</td>
<td>B</td>
<td>80-89</td>
</tr>
<tr>
<td>Exam 3</td>
<td>20%</td>
<td>C</td>
<td>70-79</td>
</tr>
<tr>
<td>Exam 4</td>
<td>20%</td>
<td>D</td>
<td>60-69</td>
</tr>
<tr>
<td>Homework</td>
<td>20%</td>
<td>F</td>
<td>59 or below</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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Grading Accuracy:
If there is a grading mistake, please let me know by Monday of the following week. Each exam and the homework average score will be rounded to the nearest whole number. For example, a final course average of 89.46 will be rounded to 89 – a B.

Academic Honesty:

Unless otherwise announced by the instructor, all work is individual and collaboration with other students is not allowed. You may consult with other written resources (textbooks, web sites, etc.) as you complete the assignments and exams; however, you are not allowed to consult with peers or former students to receive help. If you have questions, ask me.

Before proceeding with your first regular assignment, copy the following to a document, read it, sign it, and submit it to me electronically (direction will be given on the first day of class). This is a pass/fail assignment, and you will not have full access to course content and grades until this assignment has been submitted.

Honor Code:

“As a Mississippi State University student I will conduct myself with honor and integrity at all times. I will not lie, cheat, or steal, nor will I accept the actions of those who do.”

Upon accepting admission to Mississippi State University, a student immediately assumes a commitment to uphold the Student Honor Code, to accept responsibility for learning, and to follow the philosophy and rules of the Student Honor Code. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the Mississippi State University community from the requirements or the processes of the Student Honor Code. For additional information, please visit: http://www.honorcode.msstate.edu

“I have read and understand the Honor Code. On my honor, as a Mississippi State University student, I will neither give nor receive unauthorized assistance on any academic work.”

Student Signature: _________________________________

Support Services:
Any student who feels s/he may need an accommodation based on the impact of a disability should contact the instructor privately to discuss specific needs. Student Support Services is available to assist in
determining classroom accommodations that are most appropriate for students with disabilities based on documentation of their disability. Examples of classroom accommodations are varied, but may include: Adapted testing arrangements, extended time on tests, assistance with ordering recorded texts, and access to special equipment. The Student Support Services web site is http://www.sss.msstate.edu/.

Course Schedule:
The course schedule is tentative and subject to change. I will notify you if adjustments are made to the schedule including but not limited to topics covered and homework assignments.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Reading</th>
<th>Homework*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: TBD</td>
<td>Introduction; Honor Code (HC); Chapter 1 – Statistics, Data, and Statistical Thinking</td>
<td>Sec. 1.1-1.6</td>
<td>Intro, HC &amp; Chapter 1</td>
</tr>
<tr>
<td>2: TBD</td>
<td>Chapter 2 – Methods for Describing Sets of Data</td>
<td>Sec. 2.1-2.7</td>
<td>Sec. 2.1, 2.2, 2.3, 2.4, 2.5,</td>
</tr>
<tr>
<td>3: TBD</td>
<td>Chapter 4 – Random Variables and Probability Distribution</td>
<td>Sec. 4.1, 4.2, 4.5, 4.6, 4.7</td>
<td>Sec. 4.1, 4.2, 4.6, 4.7</td>
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<tr>
<td>4: TBD</td>
<td>Exam 1 (Chapter 1, 2, &amp; 4)</td>
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<tr>
<td>5: TBD</td>
<td>Chapter 5 – Sampling Distributions</td>
<td>Sec. 5.1-5.3</td>
<td>Sec. 5.1, 5.2, 5.3</td>
</tr>
<tr>
<td>6: TBD</td>
<td>Chapter 6 – Inferences Based on a Single Sample, Estimation with Confidence Intervals</td>
<td>Sec. 6.1-6.5</td>
<td>Sec. 6.2, 6.3</td>
</tr>
<tr>
<td>7: TBD</td>
<td>Chapter 7 – Inferences Based on a Single Sample, Tests of Hypotheses</td>
<td>Sec. 7.1-7.5</td>
<td>Sec. 7.2, 7.3, 7.4</td>
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<tr>
<td>8: TBD</td>
<td>Exam 2 (Chapter 5, 6, &amp; 7)</td>
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<td>9: TBD</td>
<td>Chapter 8 – Inferences Based on Two Samples, Confidence Intervals and Tests of Hypotheses</td>
<td>Sec. 8.1-8.2</td>
<td>Sec. 8.2</td>
</tr>
<tr>
<td>10: TBD</td>
<td>Chapter 8 – Inferences Based on Two Samples, Confidence Intervals and Tests of Hypotheses</td>
<td>Sec. 8.3</td>
<td>Sec. 8.3</td>
</tr>
<tr>
<td>11: TBD</td>
<td>Chapter 9 – Design of Experiments and Analysis of Variance (ANOVA)</td>
<td>Sec. 9.1-9.3</td>
<td>Sec. 9.1, 9.2</td>
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<tr>
<td>12: TBD</td>
<td>Exam 3 (Chapter 8 &amp; 9)</td>
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<tr>
<td>13: TBD</td>
<td>Chapter 10 – Categorical Data Analysis</td>
<td>Sec. 10.1-10.3</td>
<td>Sec. 10.2, 10.3</td>
</tr>
<tr>
<td>14: TBD</td>
<td>Chapter 11 – Simple Linear regression</td>
<td>Sec. 11.1-11.7</td>
<td>Sec. 11.2, 11.3, 11.4, 11.5, 11.6</td>
</tr>
<tr>
<td>15: TBD</td>
<td>Chapter 12 – Multiple Regression and Model Building</td>
<td>Sec. 12.1-12.4, 12.8</td>
<td>Sec. 12.3, 12.4</td>
</tr>
<tr>
<td>16: TBD</td>
<td>Exam 4 (Chapter 10, 11, &amp; 12)</td>
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*Homework for each section within a chapter assigned for the week should be completed no later than Sunday (midnight, Central Time).