Westminster College  
Economics & Business Department  
Spring 2018 BA 220 – Statistics  
(4 S.H.)  

Instructor: Dr. Bob Badowski  
Office: Old Main 226  
Phone: 724-946-6831  
Email: badowsr@westminster.edu  
Class Times: T/R – 9:20-10:50 or M/W/F 10:30-11:30  
Office Hours: MWF – 8:30-9:20 and 11:30-2:00 and TR – 8:30–9:20 and 11:00–2:00  
Other times by appointment  

Catalog Description: An introductory course in the analysis and interpretation of quantitative data. Attention is given to the binomial distribution, the normal distribution, sampling, introductory probability theory and hypothesis testing. Real world applications are used with computer software for statistical analysis.  

Prerequisite: Successful completion of Precalculus or Calculus.  

Text:  

MyStatLab – Homework/Tests/Quizzes  

Supplies:  
Students are expected to bring the textbook, a pencil, eraser, calculator, and notebook to each class period. Programmable calculators and cell phones are not permitted. We will be using Excel for some of our statistical computations, so it would be beneficial to bring a laptop to class as well.  

School of Business Outcomes (SBO):  
1. Students will demonstrate competence in data analysis and statistical reasoning. (SBO1)  
2. Students will develop and exhibit effective oral and written communication skills, including interpersonal, leadership and team skills necessary for business professionals. (SBO2)  
3. Students will identify contemporary business issues and apply relevant knowledge, facilitating logically sound resolutions. (SBO3)  
4. Students will foster self-awareness, enabling the selection of an appropriate career path and will pursue career entry or graduate study. (SBO4)  

Course Objectives:  
By the end of this course, students should be able to demonstrate their proficiency in the following
• Designing and executing a statistical research project SBO 1, SBO 2, SBO 3, SBO 4 (as assessed by final statistics project)
• Creating and testing hypotheses SBO 1, SBO 3 (as assessed by participation/tests/quizzes/homework and final statistics project)
• Analyzing and interpreting quantitative data SBO 1, SBO 3 (as assessed by participation/tests/quizzes/homework)
• Interpreting normal and binomial distribution SBO 1, SBO 3 (as assessed by participation/tests/quizzes/homework)
• Showing why sampling is paramount in the field of statistics SBO 1, SBO 3 (as assessed by participation/tests/quizzes/homework)
• Evaluating introductory probability theory SBO 1, SBO 3 (as assessed by participation/tests/quizzes/homework)

Assignments:
If you are unable to hand in one of your assignments on time because of illness or other circumstances beyond your control, you may ask permission for an extension. A penalty of 20% will be applied to assignments that are handed in late without permission. Assignments that are more than a week late, will not be graded. Homework assignments should be completed prior to the class in which it is to be covered. All students are expected to participate in class discussion. Homework assignments will be collected at the discretion of the instructor.

Classroom Behavior:
It is essential that proper classroom decorum be maintained for learning to take place. Cell phones are to be turned off and texting is not permitted. Failure to comply will result in a reduction of your grade. Cheating will be handled as noted in the college catalog. Those who are late or disruptive may be required to leave.

Attendance:
In this course, attendance is an essential element in the learning process. The benefits which accrue are numerous and include: receiving lecture material first-hand, participation in classroom dialog, review of homework assignments, and completion of chalkboard exercises. Attendance is, therefore, expected at all regular scheduled classes. You begin the course with an attendance grade of 100 points. Those students who are absent or late three or less times will maintain this grade.

Testing:
All exams and quizzes are required. There will be no makeup exams or quizzes. An excused absence from an exam or quiz will result in a grade replacement based on the final exam. It is your responsibility to notify the instructor personally.

Final Exam:
There will be a comprehensive final exam in this course.

Grading:
Students will have the opportunity to earn points on projects, exams, quizzes, assignments, class discussion, etc. At any point during the term, your average can be calculated by dividing the number of points you have earned by the total possible points. Understand that your grade is at the discretion of the instructor and may relate to your overall business acumen.
Grading Scale:

- A ≥ 92%
- A- < 92 ≥ 90%
- B+ < 90 ≥ 88%
- B < 88 ≥ 83%
- B- < 83 ≥ 80%
- C+ < 80 ≥ 78%
- C < 78 ≥ 73%
- C- < 73 ≥ 70%
- D+ < 70 ≥ 68%
- D < 68 ≥ 63%
- D- < 63 ≥ 60%
- F < 60%

Assessment Type | Points Possible
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Class Participation/Attendance | 100
Exams (2 x 100) | 200
Final Exam | 200
Statistics Project | 200
Quizzes/Homework (6 x 50) | 300
Total Points | 1000

Accessibility Statement:
Westminster College actively strives for the full inclusion of all our students. Students with disabilities who require access solutions for environmental or curricular barriers should contact Faith Craig, Director of Disability Resources, located in 209 Thompson-Clark Hall.
phone: 724-946-7192 e-mail: craigfa@westminster.edu
# Schedule of Classes/Lecture Topics/Assignments/Points

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<th>Week of Class</th>
<th>Lecture Topic</th>
<th>Assignments</th>
<th>Points Available</th>
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| Week 1 (Jan 16-19)  | Chapter 1 – Data and Decisions  
Chapter 2 – Displaying and Describing Categorical Data |                       |                  |
| Week 2 (Jan 22-26)  | Chapter 3 – Displaying and Describing Quantitative Data  
Chapter 4 – Correlation and Linear Regression | Quiz/Homework 1  
50                  |                  |
| Week 3 (Jan 29 – Feb 2)  | Chapter 5 – Randomness and Probability | Quiz/Homework 2  
50                  |                  |
| Week 4 (Feb 5 - 9)   | Chapter 6 – Random Variables and Probability Models | Assign Project |                  |
| Week 5 (Feb 12 - 16) | Chapter 7 – The normal and Other Continuous Distributions | Exam 1  
100                |                  |
| Week 6 (Feb 19 - 23) | Chapter 8 – Surveys and Sampling |                       |                  |
| Week 7 (Feb 26 – Mar 2)  | Chapter 9 – Sampling Distributions and Confidence Intervals for Proportions | Quiz/Homework 3  
50                  |                  |
| **Spring Break (Mar 3-11)** |                                   |                       |                  |
| Week 8 (Mar 12 - 16) | Chapter 10 – Testing Hypotheses about Proportions |                       |                  |
| Week 9 (Mar 19 - 23) | Chapter 11 – Confidence Intervals and Hypothesis Tests for Means | Quiz/Homework 4  
50                  |                  |
| Week 10 (Mar 26 - 28) | Chapter 12 – Comparing Two Means | Quiz/Homework 5  
50                  |                  |
| **Easter Break (Mar 29- Apr 2)** |                                   |                       |                  |
| Week 11 (Apr 3 - 6)  | Chapter 13 – Inference for Counts: Chi-Square Tests |                       |                  |
| Monday Classes Meet Tues. Apr. 3 | Chapter 14 – Inference for Regression | Project Due  
Exam 2  
150  
100                  |                  |
| Week 13 (Apr 16-20)  | Chapter 15 – Multiple Regression | Quiz/Homework 6  
50                  |                  |
| **Wed, Apr 18 (URAC Day) no classes** |                                   |                       |                  |
| Week 14 (Apr 23 - 27) | Chapter 16 – Introduction to Data Mining  
Presentation of Projects |                       |                  |
| Week 15 (Apr 30 – May 4)  | Presentation of Projects | Presentations  
50                  |                  |
| Final Exam (T/R Class: Wednesday,  
May 9, 8:00-10:30)(M/W/F Class  
Monday May 7, 8:00-10:30) |                       | Final Exam 200  
200                  |                  |
| **Total Points**      |                                                                 |                       | 900               |
Academic Integrity Agreement

"Central to the purpose and pursuit of any academic community is academic integrity. All members of the Westminster community, including students, faculty, staff, and administrators, are expected to maintain the highest standards of honesty and integrity, in keeping with the philosophy and mission of the College. Academic dishonesty is a profound violation of this code of behavior." - ACADEMIC INTEGRITY (Westminster College Catalog)

As a student in Westminster College's School of Business I, __________________________, agree to maintain the highest standards of honesty and integrity, in keeping with the philosophy and mission of the college.

I will not cheat, engage in misconduct, plagiarize, or provide false information as outlined in the Westminster College Catalog. I understand and agree that professionalism and ethics are the cornerstone of any educational or business pursuit, and I will strive to establish both.

I will also abide by the following School of Business electronic device policy which states:
1. Cell phones are not to be used during class for any purpose unless given specific authorization from instructor.
2. All cell phones are to be turned to silent and placed in some type of carrying bag (such as a backpack), that does not sit on your desk during class.
3. No recordings of any kind are permitted to be taken during class; including audio, video, photos, etc.

Student signature: ________________________________ Date: ________________

Personal Information

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