Statistics MAT 4512 Fall 2017
Dual Credit with BSU MATH 181
Mrs. Wright

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Office Hours:

Monday:	12 pm – 12:50 pm	
Tuesday:	11 am – 1 pm, 2 pm – 4 pm	*Also by appointment*
Wednesday:	12 pm – 12:50 pm	*If my door is open feel free to stop in!*
Thursday:	2 pm – 5 pm	
Friday:	12 pm – 12:50 pm	

Text: *Intro Stats* (fourth edition); by DeVeaux, Velleman and Bock; Pearson
Also Required: TI – 83 Plus or TI – 84 or higher calculator, or equivalent

Prerequisites: Advanced Algebra and Trigonometry (MAT 3001 and 3002), or appropriate score on the SAT/ACT, or appropriate scores on the mathematics placements tests, or permission of the department chairperson.

Course overview:
This course covers and guides students through discovering statistical concepts, explore statistical principles, and apply statistical techniques. The course focuses on developing statistical reasoning through analysis of genuine data. The students will learn to describe the distribution of a variable, compare the distributions of two or more variables, and describe the relationship between two variables. The course introduces the issues of sampling, surveys, and experiments. Probability is introduced through simulations and these simulations build an understanding of the Central Limit Theorem. Inferences from data include confidence intervals and significance tests for a proportion, a mean, the difference between two proportions, the difference between two means, both for matched pair designs and independent samples, and differences in distributions. Exploratory data analysis, data production issues and interpretation of results by the students are emphasized throughout.

Attendance:
You are required to attend every class session, in accordance with Indiana Academy attendance policies. I understand clocks can be a minute or two off, so I will grant leniency for the first few minutes of class, but at 5 or more minutes you are officially "Tardy" and after 15 minutes you are officially "Absent." However, class time is very valuable, so I strongly encourage you to get to class no matter how late you may be. This will make your process of learning what was covered in class that day much easier. Sleeping in class will result in an unexcused absence without notice.

Evaluation:
In this course you will be given a homework assignment every night, periodic quizzes, and a test every unit. The homework assignments are due the following class day, as listed on the course assignment schedule. The quizzes will generally take about 20 minutes and be worth 20 points each, over material covered the previous week. The tests are not cumulative in the sense that you will see questions directly from previous units, but statistics especially is a cumulative discipline so you will need to apply knowledge from previous units to help solve new problems. There will also be a final project, and it will be due the last day of class. The optional presentation of your project will take place during finals week. For dates of tests please refer to the most recent version of the course schedule.

Grading Scheme:
Your grade in this course will be determined by the following percentage values.

Tests – 35% total (5% each)
Final Project – 20%
Quizzes – 15%
Homework assignments – 20%
Participation – 10%

Letter grades are determined by the following scale:

93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
73-76	C
70-72	C-
69 and below	D*

Make-up work Policy:
NO LATE WORK WILL BE ACCEPTED. If you are absent (excused absence) that day it is your responsibility to get that work turned in to me as soon as possible **and** before the next class meeting. My office is in your dormitory building so it should be simple enough for you to be able to bring that assignment to my office and leave it under my door. If you will be missing a test you must contact me as soon as you know you will be missing it and schedule a time for you to take the test with me. **In the event of an <u>unexcused absence</u> or <u>suspension</u>, missed homework assignments, quizzes, test, etc. will NOT be accepted for credit** (except when missed work would fail the suspended student)**.** Make-up quizzes, exams, etc. generally are not taken during class time.

Other policies:
- Laptops will be helpful in class for some activities and simulations. When you use your laptop please keep the volume turned off, and use it exclusively for class related things. This means no email, Facebook, Tumblr, Twitter, games, etc. You may use the laptop for taking notes or writing out homework answers. If you write your homework solutions using the laptop, either print the assignment or email it to me *before coming to class*. While on the laptop in class do not hide toolbars; keep all items you are working on visible on the screen and available for teacher inspection. Keep the laptop turned off and closed during tests and quizzes. You are expected to bring your graphing calculator to class EVERY DAY, as well as your text book, both will be absolutely necessary.
- On your homework assignments the work should be your own but you are welcome to receive hints and help from me, other teachers, your peers, and others. However, any and all work on tests, quizzes and projects MUST be your own!

Academic Integrity
I support and abide by the academic integrity policy as set forth in the Student Handbook. While you are encouraged to work together in this course at times, here are a few examples of behavior subject to review under the Academic Integrity policy:
- Copying someone's work and turning it in as one's own
- The use of aids or other materials on quizzes and exams without expressed permission
- The use of calculators when explicitly asked not to do so
- Copying another person's work or answers on a quiz or exam

Ball State University aspires to be a university that attracts and retains a diverse faculty, staff, and student body. We are committed to ensuring that all members of the community are welcome, through valuing the various experiences and worldviews represented at Ball State and among those we serve. We promote a culture of respect and civil discourse as expressed in our Beneficence Pledge and through university resources found at http://cms.bsu.edu/campuslife/multiculturalcenter.

The teacher reserves the right to change this syllabus as situations arise, or add to it as needed.

Statistics Class Topic Schedule by Week

Weeks 1 and 2: Unit 1 "Exploring and Understanding Data" (Chapters 1 – 5)

Week 3: Review, Unit 1 Test, start Unit 2

Week 4: Unit 2 "Exploring Relationships Between Variables" (Chapters 6 – 8),
                  Group contracts due this week

Week 5: Review, Unit 2 Test

Week 6: Unit 3 "Gathering Data" (Chapters 9 – 11)

Week 7: Review, Unit 3 Test

Weeks 8 and 9: Unit 4 "Randomness and Probability" (Chapters 12 – 14)
                Project Proposals due Week 9

Week 10: Review, Unit 4 Test

Week 11: Unit 5 "Sampling Distributions" Chapter 15
                Study Design and Outline due this week

Weeks 12, 13: Unit 5 "Inference for One Variable" (Chapters 15 – 19)

Week 14: Review, Unit 5 test, begin Unit 6

Weeks 15 & 16: Unit 6 "Inference for Two Variables, and Chi-squared" (Chapters 20 – 22)

Week 17: Finish Unit 6, and Final Project Report due last day of class

Finals week: Presentations of Final Projects