**AP Statistics**    MAT 4825    Spring 2019
*Dual Credit with BSU MATH 181*
Mrs. Megan Wright

**Office**: Wagoner 151                **Email:** mewright@bsu.edu                **Telephone:** 285-7401
**Office Hours:**

| | |
|---|---|
| Monday: | 11 am – 12:50 pm |
| Tuesday: | 10 am – 12:50 pm |
| Wednesday: | 11 am – 12:50 pm |
| Thursday: | 11 am – 12:50 pm |
| Friday: | 11 am – 12:50 pm |

*Also available afternoons
by appointment.
If my office door is open feel free to stop in!*

**Required materials:**
**Textbook:** *Stats: Modeling the World* by Bock, Velleman, and De Veaux.  Fourth edition.
Pearson Education, Inc., 2015.  ISBN 978-0-321-85401-8
**Calculator:** Texas Instruments TI-83, TI-84, or TI-Nspire (or comparable) graphing calculator

**Course objectives:**
        This course covers the objectives of the Advanced Placement Statistics examination.  The topics are broadly organized into exploring data, obtaining data (experiments and surveys), probability, and statistical inference.

**Outline of content:**
  I.      Exploring data.
          A.  Describing and comparing distributions.
          B.  Normal distributions as models for data.
          C.  Describing the relationship between two quantitative variables.
          D.  Predicting one quantitative variable from another.
          E.  Linear and nonlinear models of relationships.
          F.  Relationships between two categorical variables.
  II.     Gathering data.
          A.  Samples.
          B.  Surveys
          C.  Experiments.
  III.    Probability
          A.  Simulations.
          B.  Randomness.
          C.  Probability models.
          D.  Random variables.
          E.  Binomial distributions.
          F.  Geometric distributions.
          G.  Sampling distributions.
          H.  Central limit theorem.

IV.   Statistical inference.
   A. Confidence intervals.
   B. Significance tests.
   C. Inference for the mean of a population.
   D. Comparing two means (independent samples and matched pairs)
   E. Inference for a population proportion.
   F. Comparing two proportions.
   G. Test for goodness of fit.
   H. Test for homogeneity of proportions.
   I. Test for independence.
   J. Inference about a regression model.
   K. Inference about prediction.
   L. Checking regression assumptions.

**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 2 minutes of class, but at 3 or more minutes you are officially "Tardy" and after 10 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.

**Evaluation:**
In this course you will be given an online video and homework assignment for each chapter, periodic quizzes, and a test every unit. The videos and homework assignments are due as listed on the course assignment schedule. The quizzes will generally take about 15 minutes, 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 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 exam, and it will be cumulative, and it will take place during finals week. Additionally, the AP Statistics national exam is May 16, 2019, and is cumulative. For dates of tests please refer to the most recent version of the course schedule. All tests and quizzes use AP Statistics question formats.

**Grading Scheme:**
Your grade in this course will be determined by the following percentage values. Remember that you EARN your grade, I do not give them out, so if you want a better grade be proactive about getting more help, there are many resources available to you! All grades are based on the AP grading rubric for those types of questions.

Tests – 42% total (7% each)
Final – 23%
Quizzes – 20%
Homework assignments – 10%
Participation – 5%

Letter grades are determined by the scale to below:

| Score | Grade |
|---|---|
| 90-100 | A |
| 80-89 | A- |
| 75-79 | B+ |
| 70-74 | B |
| 65-69 | B- |
| 60-64 | C+ |
| 55-59 | C |
| 50-54 | C- |
| 49 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 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 it is a paper assignment. If the assignment is electronic then it is due before the next class period you attend of this class. If you will be missing a test or quiz you must contact me as soon as you know you will be missing it and schedule a time for you to make it up 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)**.** Tests missed with an unexcused absence may be made up for fractional credit. Make-up quizzes, exams, etc. generally are not taken during class time.

**Other policies:**
- Laptops will be helpful in class for many 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, messaging, social media, games, etc. You may use the laptop for taking notes or other appropriate class activities that aren't for a test or quiz. 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. Additionally, you are expected to bring your graphing calculator to class EVERY DAY, it 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 and quizzes 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.*