

Statistics MAT 4514 Spring 2025

Dual Credit with BSU MATH 181

Mr. Asante

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Office Hours:

Monday: 4:00 pm – 5:00 pm

Tuesday: 12:00 pm – 3:00 pm

Wednesday: 4:00 pm – 5:00 pm

Thursday: 11:00 am – 4:00pm

Friday: 4:00 pm – 5:00 pm

**Also by appointment*

If my door is open feel free to stop in!

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, appropriate scores on the mathematics placement tests, or permission of the department chairperson.

Course overview:

This course covers and guides students through discovering statistical concepts, exploring statistical principles, and applying statistical techniques. The course focuses on developing statistical reasoning through the 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 one or two minutes of class, but 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.

Absence Policy:

It is the policy of the Indiana Academy that any absence from class is unexcused, except for illness, death in the family, college or school-related activities, and extenuating circumstances. When a student is absent from a class, the instructor reports the student absence to the Faculty Attendance Coordinator in the Office of Academic Affairs. Unless the absence is excused by a school official, it is considered unexcused. The decision as to whether an absence is excused is not determined by the instructor. Four or more unexcused absences in any particular class a student takes will lead to academic and residential consequences to be determined by the Office of Academic Affairs and the Office of Residential Life that may include detention, residential groundings, parent/principal conference, among others.

Evaluation:

In this course you will be given a homework assignment every night, periodic quizzes, and an exam after 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 exams 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 poster presentation as well as a final exam. The due date for the project and presentation will be communicated but it will be before May 5 – 9, 2025, and the final exam will take place on the Final Exam Period, May 5 – 9, 2025.

Grading Scheme:

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

Activities – 10%
Projects – 10%
Homework – 20%
Quizzes – 20%
Exams – 20%
Final Exam – 20%

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:

Since some of the work will be done outside the classroom or in groups, late work should not be much of an issue. If you and/or your group need an extension you must contact me as early in advance of the deadline as you can to arrange that. If you will be missing an exam you must contact me as soon as you know you will be missing it and schedule a time for you to take the exam. **In the event of an unexcused absence, missed homework assignments, quizzes, exams, etc. will NOT be accepted for credit** (except when missed work would fail the student). Make-up quizzes, exams, etc. generally are not taken during class time.

Other policies:

- Laptops/cell phones/tablets/other internet devices 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, Twitter, games, etc. While on the device in class do not hide toolbars; keep all items you are working on visible on the screen and available for teacher inspection. Keep the internet device turned off and closed during tests and quizzes. You are expected to bring your graphing calculator to class EVERY DAY, it will be absolutely necessary.
- 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 often, 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

IA Wireless Device Draft Policy

Pursuant to Indiana Code 20-26-5-40.7, The Indiana Academy for Science, Mathematics, and Humanities prohibits student use of wireless communication devices for non-instructional purposes in the classroom. As such, any and all portable wireless devices, that have the capability to provide voice, messaging, or other data communication between two or more parties, must only be used for academic purposes directly tied to the classroom activity or related educational task. Exceptions to this wireless device policy are eligible through academic accommodations, individualized education programs, or with instructor approval permitting the use of a wireless device for justification related to health, safety, and/or well-being. The improper use of a wireless device in an active classroom setting is subject to disciplinary action including but not limited to; a verbal warning, temporary seizure of said device by a school official, an unexcused absence for the class in question, written communication to parent/guardian, among other elevated consequences for repeated improper use.

Inclusive Excellence Statement

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. As a reflection of Ball State's commitment to respect, civil discourse, and the Beneficence Pledge, Inclusive Excellence at the Indiana Academy emerges as one of the priorities of our living and learning community. We strive to exist together respectfully and compassionately, creating an

environment where every member can thrive. Unfortunately, there might be occasions when something occurs that disrupts our progress toward meeting these objectives. In this case, we encourage any member of the Academy community to file a Campus Climate Report (CCR) https://bsu.qualtrics.com/jfe/form/SV_6mbRbL5acAntUTI. All reports will be taken seriously, and appropriate responses will be carried out by Academy administration.

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

COURSE SCHEDULE FOR STATISTICS (MAT 4514)

01/06	Syllabus / Chpt1	Chpt2	Chpt3
01/13	Chpt4	Chpt5	Chpt5
01/20	<i>MLK Day</i>	Exam Review	Exam 1
01/27	Project Presentation	Chpt6	Chpt7
02/03	<i>Extended Weekend</i>	Chpt7	Chpt8
02/10	Chpt9	Chpt10	Chpt11
02/17	Chpt11 / Project	Exam Review	Exam 2
02/24	Chpt12	Chpt13	Chpt13
03/03	<i>Spring Break</i>	<i>Spring Break</i>	<i>Spring Break</i>
03/10	Chpt14	Exam Review	Exam 3
03/17	Chpt15	Chpt15	Chpt16
03/24	Chpt16	Chpt17	Chpt18
03/31	Chpt19	Exam Review	Exam 4
04/07	Chpt20	Chpt20	Chpt21
04/14	Chpt21	Chpt22	Chpt22
04/21	<i>Extended Weekend</i>	<i>Final Exam Review</i>	<i>Final Exam Review</i>
04/28	<i>Final Exam Review</i>	<i>Final Exam Review</i>	<i>Final Exam Review</i>
05/05	<i>Final Exam</i>	<i>Final Exam</i>	<i>Final Exam</i>

Note: Dates for quizzes and projects will be announced during class time.