

**Statistics**     MAT 4514     Spring 2024  
*Dual Credit with BSU MATH 181*  
Mr. Asante

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**Office Hours:**

Monday: 11:00 am – 11:30 am

Tuesday: 10:00 am – 3:00 pm

Wednesday: 11:00 am – 11:30 am

Thursday: 12:00 pm – 4:00pm

Friday: 11:00 am – 11:30 am

*\*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.

**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 poster presentation. The project is due on Friday, May 3, 2024, and the poster session will take place on Monday, May 6, 2023.

**Grading Scheme:**

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

Tests – 40%

Final Project – 25%

Quizzes – 25%

Homework assignments – 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 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 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 unexcused absence, missed homework assignments, quizzes, tests, 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

Academic dishonesty in any form will not be tolerated. The student is responsible for knowing the policies and consequences as stated in the Academy handbook. For this course, students should be aware of the following ways in which these policies specifically apply:

- Cooperative group work on homework assignments is appropriate and is encouraged, but simple copying of an assignment from another or allowing another to copy your homework without collaboration is not acceptable.
- Artificial intelligence (AI) provides exciting new tools for academic work.
- It is appropriate to use AI to explore solutions and to discover methods of approaching problems in homework situations. In such cases, AI should be a learning tool that increases and supports understanding.
- AI also poses significant dangers for academic integrity. Passing off as your own any research, words, ideas, work, or solutions which you did not create is plagiarism. Whether the source is print, internet content, or generated by AI, copying work from outside resources and presenting it as your original work is not allowed. Use of AI should be documented.

- Giving information about the content of quizzes or tests to students yet to take the exam or solicitation of such information is a severe violation of academic honesty standards.
- In quiz or test situations, calculators or other materials should not be used unless the instructor expressly communicates that such aides are allowed on that section of a quiz or test.

**Commitment to Inclusion**

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 Course Schedule

## Spring 2024 Schedule\*

(\*subject to change at any time)

Date	In Class	Notes Quiz or Assignment Due Today
Jan 5	Syllabus	
Jan 8	Ch 1, Ch 2	Ch 1 and 2 Videos
Jan 10	Ch 3	Video 3
Jan 12	Ch 4	Video 4 and Pre-test
Jan 15	No Classes	Martin Luther King Jr. Day
Jan 17	Ch 5	Video 5
Jan 19	Ch 5	Z-score worksheet
Jan 22	Review	Unit 1 Mini Project presentation
Jan 24	Unit 1 Test	Group Contracts
Jan 26	Ch 9	Video 9
Jan 29	Ch 10	Video 10
Feb 31	Ch 11	Video 11
Feb 2	Ch 11	Final Project Group Contracts
Feb 5	No Classes	Long Weekend
Feb 7	Review	Unit 3 Mini Project
Feb 9	Unit 3 Test	
Feb 12	Ch 12	Video 12
Feb 14	Ch 13	Video 13
Feb 16	Ch 13	Project Proposal and Extra Credit Activity
Feb 19	Ch 14	Video 14.1
Feb 21	Ch 14	Video 14.2
Feb 23	Ch 14	
Feb 26	Review	14 Random Variable Worksheet
Feb 28	Unit 4 Test	
Mar 1	Ch 15	Video 15
Mar 4 – 8	Spring Break	
Mar 11	Ch 15	
Mar 13	Ch 16	Video 16
Mar 15	Ch 16	
	<b>In Class</b>	<b>Notes Quiz or Assignment Due Today</b>
Mar 18	Ch 17	Data Collection Plan
Mar 20	Ch 18	Video 18

Mar 22	Ch 19	Video 19
Mar 25	Review	
Mar 27	Unit 5 Test	Unit 5 Mini Project
Mar 29	Ch 20	Video 20.1
Apr 1	No Classes	Long Weekend
Apr 3	Ch 20	Video 20.2
Apr 5	Ch 21	Video 21
Apr 8	Mid Unit Review	
Apr 10	Ch 22	Video 22.1
Apr 12	Ch 22	Video 22.2
Apr 15	Review	
Apr 17	Unit 6 Test	
Apr 19	Ch 6	Video 6
Apr 22	Ch 7	Video 7
Apr 24	Ch 7	
Apr 26	No Classes	Long Weekend
Apr 29	Ch 8	Video 8
May 1	End Unit 8	Unit 2 Mini Project
May 3	Projects	Post-Test
May 6 – 10	Finals	Poster Session during Final Exam Time Slot