

Introduction to Statistical Methods

EDPS641 Spring 2026

1. Course Basics

Introduction to Statistical Methods

EDPS641, Section 800, CRN 15151, Spring 2026

Class meeting days: online asynchronous, no in-person meetings

2. Instructor Information

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Educational Psychology

Teachers College

Ball State University, Muncie, IN

3. Course Information

Course Description

A basic statistical course for graduate students in education. Problems taken from the fields of education and psychology and include the computation, interpretation, and application of such statistical techniques as measures of central tendency, measures of variability, correlation techniques, validity and reliability, standard scoring techniques, probability, tests of significance, chi square, and analysis of variance.

Prerequisites

Students must have a working knowledge of arithmetic and basic algebra.

Course Objectives

This course provides a survey of commonly used basic statistical procedures for social science research:

- To apply and interpret appropriate descriptive measures for your data.
- To learn to choose appropriate tests for your data and research questions.
- To apply the foundations of statistics to understand statistical significance.
- To become proficient with SPSS statistical software as it applies to basic statistical procedures.
- To be able to think critically about, through analyzing, the methods and results in published research. Not all studies are equally trustworthy!

Student Learning Outcomes

This course provides a survey of commonly used basic statistical procedures for social science research:

Specific course objectives align with the Ball State University Conceptual Framework

- Expertise:

- Students will learn to apply and interpret appropriate descriptive measures when analyzing data.
- Students will understand the foundations of statistics in order to understand statistical significance.
- Students will learn to choose appropriate tests for data and research questions.
- Students will become proficient with SPSS statistical software as it applies to basic statistical procedures.
- Engagement/Context
 - Students will learn to think critically about published research through analyzing the appropriateness of the methods and results. Students will learn to engage with not only the findings of published research but also the methodological quality of the published research.

Course Modality/Structure

EDPS 641 is a fully online, asynchronous graduate statistics course delivered through weekly Canvas modules. Each module opens at the start of the week and includes readings, brief lectures or walkthroughs, self-checks, practice problems, and graded work such as quizzes or SPSS assignments, which are typically due by 11:59 PM Eastern on the posted due dates. Students are expected to log in several times per week to stay engaged, keep pace with the sequence of topics, and complete assignments on time.

Course Materials

- Textbook: Fundamentals of Statistical Reasoning in Education (4th ed.) by Coladarci & Cobb
- Software: SPSS (access provided in Canvas)
- Additional readings and resources available in weekly modules

For more information about obtaining required course materials, see [Ball State First Day.](#)

4. Course Assignments and Assessments

Course Assignments

Graded Activities and Contribution to Final Grade

GRADED ACTIVITY	WEIGHT
Self-Checks (15)	15%
Module Quizzes (13)	25%
SPSS Assignments (7)	20%
Midterm Exam	20%
Final Exam	20%
TOTAL	100%

Assignment details, including instructions, relevant readings, due dates, and grading criteria/rubrics will be posted and updated on Canvas. Please check Canvas regularly to stay informed and on track.

Course Grading Scale

Letter Grade	Range
A	100% - 94%
A-	<94% - 90%
B+	<90% - 87%
B	<87% - 84%
B-	<84% - 80%
C+	<80% - 77%
C	<77% - 74%
C-	<74% - 70%
D+	<70% - 67%
D	<67% - 64%
D-	<64% - 61%
F	<61% - 0%

5. Required University Statements and Policy

University Statement

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.

Disability Statement

If you need course adaptations or accommodations because of a disability, please contact the instructor of record as soon as possible. Ball State's [Disability Services Office](#) coordinates services for students with disabilities; documentation of a disability needs to be on file in that office before any accommodations can be provided. Disability Services can be contacted at 765-285-5293 or dsd@bsu.edu.

Attendance

Regular attendance and participation are **essential** for success in class. You will be expected to log in to this course regularly, to complete and submit assignments, to participate in ongoing discussions of the module topics, and to interact with other students and your instructor regularly. Be sure to read and observe the following expectations:

- Submit work on time.
- Keep your instructor informed of your status.
- Review your instructor's feedback carefully and learn from it.

In the online environment, problems associated with power outages, networks being down, and ISP troubles inevitably result in legitimate reasons for delays; however, you should still be prepared to deliver your work by the stated deadlines. If you have a problem, let your instructor know as soon as possible. Students who turn in late work may be subject to penalties.

6. Recommended Statements, Policies, and Information

Freedom of Expression

In this course, we are committed to fostering a learning environment that values intellectual diversity, encourages free expression, and promotes open inquiry. As members of the Ball State Community, we treat each person in the Ball State community with civility, courtesy, compassion, and dignity and respect and learn from differences in people, ideas, and opinions. Please review Ball State University's [Statement on Freedom of Expression](#), the resources on Ball State's [Freedom of Expression webpage](#), and [Ball State's Beneficence Pledge](#).

Title IX

Ball State University is committed to providing a safe and inclusive learning environment for all students. If you or someone you know has experienced sexual harassment—including sexual assault, dating violence, domestic violence, or stalking, please know that you are not alone. The University offers support services and resources. For more information or to report an incident, please visit [bsu.edu/titleix](https://www.bsu.edu/titleix) or contact the Title IX Coordinator at 765-285-1545 or at titleix@bsu.edu

As your instructor, I am a mandatory reporter under the Title IX policy and required to report any information I receive about possible sexual harassment. This includes information shared in class discussions, assignments, or private conversations.

What happens after I report? The Title IX Coordinator will email the person who experienced sexual harassment (complainant) and invite them to schedule a meeting. If the complainant **chooses** to meet with the Title IX Coordinator,

- Title IX Coordinator will offer supportive measures (e.g., counseling, extensions on deadlines, course-related adjustments, changes to work or class schedules, and/or referrals to campus offices), review the policy, and discuss options to move forward.
- If a complaint is filed by the complainant or the University, an investigation will begin following University policy.

University Grade Appeal Policy

If you believe you received a final course grade that does not reflect your performance due to fairness or a procedural issue, you have the right to file an appeal within 5 school days after final grades are posted by the Office of the Registrar. Review the [University Grade Appeal Policy and Process](#).]

Student Academic Ethics Policy

Honesty, trust, and personal responsibility are fundamental attributes of the university community. Academic dishonesty and other forms of academic misconduct threaten the foundation of an institution dedicated to the pursuit of knowledge and will not be tolerated. To maintain its credibility and reputation, and to equitably assign evaluations of scholastic and creative performance, Ball State University is committed to maintaining a climate that upholds and values the highest standards of academic integrity. Visit the VPAA's [academic integrity website](#) (Students tab) for resources on understanding academic integrity, citing sources properly, and avoiding inadvertent academic dishonesty. To learn about BSU's academic integrity expectations and students' rights, please read the University [Student Academic Ethics Policy](#).

Academic integrity violations include giving or receiving an unfair academic advantage (cheating), presenting someone else's ideas or work as your own (plagiarism), and falsifying academic records. Unless otherwise indicated, you must work independently by yourself. Check with me if you are unsure whether something constitutes academic dishonesty. Examples of academic integrity violations include but are not limited to:

- Using resources not authorized by the faculty member (including devices, AI tools, hidden notes, and open books)
- Using commercial study websites to find answers to graded assignments (Chegg, Course Hero, StudyPool, OneClass, etc.).
- Without the instructor's written permission, giving away, buying, or selling graded assignments class notes, exams, study guides, or other course materials to other students or to third-party vendors (Course Hero, Chegg, 24HourAnswers, etc.).
- Working with another person on any assignment other than authorized group projects.
- Sharing or allowing others to access your files, whether done with permission or not.
- Reusing your own work from another semester, course, or section.
- Sharing answers with others during exams (passing notes, texting, whispering, gesturing)
- Discussing exam questions and answers with students who have not taken the exam.
- Soliciting others to complete work for you.

Generative AI Statement

All work conducted and/or submitted in this course should reflect your own ideas and demonstrate your current knowledge, abilities, and skills. Therefore, generative AI should not be used to complete any portion of the assignment(s). Doing so constitutes a violation of Ball State University's Student Academic Ethics Policy.

However, you may use generative AI tools (like ChatGPT or similar) to ask questions, check understanding, and practice explaining concepts in your own words. AI can be a helpful study partner, but it often makes mistakes, especially with calculations and statistical reasoning, so you should never rely on it without a strong, critical understanding of the material.

The Learning Center

The Learning Center offers free Tutoring and Academic Coaching for many courses at Ball State. Students can make appointments for online (Zoom) or in-person (NQ 350) appointments. To make an appointment, visit myballstate.bsu.edu and click on "Navigate" in the Academic Tools section, or just go directly to bsu.navigate.eab.com.

Testing accommodations for students with disabilities are available for students who have received the appropriate documentation from Disability Services. Tests may be administered in the Learning Center. Supplemental Instruction is available in select courses. If you have an SI leader for your course, that person will provide students with information the first week of school regarding weekly study sessions. For more information about Learning Center programming, visit bsu.edu/learningcenter or call 765-285-1006. Follow us on Instagram: [BallStateLC](https://www.instagram.com/BallStateLC).

The Writing Center

All writers improve with practice and feedback, so as a student in this course, you are encouraged to use the Writing Center (in Robert Bell 295 during weekdays, Bracken Library First Floor West in the evenings, or online during any of our regularly scheduled hours) to get additional feedback on your writing.

The Writing Center offers free planning, feedback, and accountability sessions (in person and online) to all students composing essays, reports, reflections, research projects, web content, lesson plans, slideshows, poster presentations, resumes, and other digital or print texts. To schedule a free appointment to discuss your writing, go to bsu.edu/writingcenter. Online and in-person appointments are available; however, plan ahead because appointments book quickly!

The Basic Needs Hub

If you are having difficulty affording enough food, do not have a safe and reliable place to sleep, and/or experiencing an emergency or crisis, help is available through the [Basic Needs Hub](#). The Basic Needs Hub has information, resources, and provides individualized support to students. To talk with a supportive staff member about your experience, receive one on one assistance, or learn more about resources, you can submit a [Basic Needs Assistance Form](#).

The Counseling Center

The Ball State University Counseling Center offers free and confidential services to all students. The Counseling Center is located in Lucina Hall, Room 320. To schedule an appointment, you can contact us at 765-285-1736. Ball State also offers a 24/7 Crisis Line, which can be reached at 765-285-HOPE (4673). The Crisis Line is a mental health resource for those who are struggling with any mental health concerns, including thoughts of self-harm and/or suicide.

At the Ball State Counseling Center, we see students for a variety of reasons, some of which include homesickness, relationship concerns, anxiety, and depression. At your first appointment, you will work with a therapist to create a plan that will connect you with resources that best fit your needs. We assist students with getting connected to therapy at our Center as well as connecting students to self-help resources, other on-campus resources, and community-based resources. All Ball State students also have access to several on-demand, self-help resources through a variety of different platforms. All of these resources, including a direct link to our website, can be found [here](#).

The Speaking Center

The [Speaking Center](#) is a free resource available to all members of the BSU community wanting to improve their public speaking abilities. We offer personalized coaching designed to help you become a more confident and effective speaker. Our trained coaches provide constructive feedback and support throughout the entire speech preparation process, whether you are in the early stages of brainstorming ideas and organizing your thoughts, or you need to practice your delivery and refine your message.

The Center is in the David Letterman Communication and Media Building, room 302. To schedule an appointment, please access us through your Navigate app or use this [direct link](#) to sign up for a time. Appointments are available both in person and on Zoom. Appointments are available in person, on Zoom, and in virtual reality (VR) for those interested in practicing in an immersive speaking environment.

Canvas Accessibility

Canvas provides a user experience that is easy, simple, and intuitive. Special attention has been paid to making Canvas screen-readable. The Rich Content Editor encourages users to create accessible content pages (i.e. text formatting is accomplished using styles). Canvas is designed to allow limited customization of colors and schemes to be accessible for all users. The National Federation of the Blind granted Canvas the Gold Level Web Certification in 2010. **Find more information by visiting the [Canvas Voluntary Product Accessibility Template \(VPAT\)](#).**

FERPA and Privacy

As a student, your educational records are considered confidential. Under FERPA (Family Educational Rights and Privacy Act), your records are confidential and protected. Under most circumstances, your records will not be released without your written and signed consent. However, some directory information may be released to third parties without your prior consent unless a written request to restrict this is on file. You can learn more about student rights to privacy by reading [Ball State's FERPA and Privacy and Protection](#).

Video Conferencing Recording

In this class, software may be used to record live class discussions. As a student in this class, your participation in live class discussions may be recorded. These recordings typically will be made available only to students enrolled in the class, to assist those who cannot attend the live session or to serve as a resource for those who would like to review content that was presented. Students who prefer to participate via audio only will be allowed to disable their video camera so only audio will be captured. Students who prefer to listen only must disable their audio capability and visual camera. If you have concerns, please discuss these options with me.

Plagiarism Detection

The campus subscribes to Turnitin, a plagiarism prevention service, through Canvas. You may need to submit written assignments to Turnitin. Student work will be used for plagiarism detection and for no other purpose. The student may indicate in writing to the instructor that he/she refuses to participate in the plagiarism detection process, in which case the instructor can use other electronic means to verify the originality of their work.

7. Course Expectations and Policies

Instructor Communication and Feedback

I am committed to maintaining clear and consistent communication throughout the course. Just as I have expectations for you, the following is what I will do (at a minimum) to ensure efficient teaching and learning.

- **Course Announcements:** I will post weekly announcements to keep you informed about upcoming assignments, deadlines, and course updates. Please check the course homepage regularly.
 - I may also send you email for reminders or important communication as needed.
- **Email Communication:** You can contact me anytime via the email address in the syllabus. I will work to respond to all student questions and emails within 24 hours during the week and within 48 hours during the weekend. If your question requires a more detailed conversation, we can arrange a virtual meeting.
- **Virtual Office Hours:** While this course is asynchronous, I will offer regular virtual office hours via zoom. These are optional, but provide you with great opportunities to ask questions or get feedback. You may also request a one-on-one meeting if needed.
- **Assessment Grades and Feedback:** I will provide grades and feedback on all activities and assessments within one week of the submission date. When relevant to the assessment, I

will offer written comments and rubric-based evaluations to help you understand your performance and guide your improvement.

- **Progress Support:** If I notice any concerns with your progress, I will reach out with suggestions and resources. You're also welcome to contact me at any time for a personal check-in.

Please feel free to communicate openly with me—I'm here to support your success.

Time Commitment

Taking an online course is not easier or faster. On the contrary, it will take as much time as taking a face-to-face class or more. If you normally go to class 3 hours per week per course, you will need to devote that same amount of time to your online course. In addition to online time, you should spend several hours per week studying and working with course materials offline. It will be helpful to set aside regular study time when you can work uninterrupted. Offline time could be spent in composing messages to post online, reading, studying, and working homework problems.

The time it will take you to complete the coursework will depend on many factors, which vary from person to person. Students should expect to spend anywhere from 8-15 hours per week on this course. Consult the Course Schedule and your instructor to be sure you are on schedule, keeping up with the material, and completing work on time.

As a general rule, in this course you will be expected to:

- Log in regularly to check messages from your instructor and other students.
- Read all communication from your instructor.
- Study, read online materials, and complete all assessments in each module.

Conduct

You are expected to refrain from profanity, crudeness, and slurs of any kind. In other words, you are expected to behave and treat your fellow students and instructor fairly, just as you would in the traditional classroom.

Proper conduct applies to all forms of communication in the course. Just as you would listen to others speak in the classroom, you are expected to read and respond politely and thoughtfully to others in the online course. You should demonstrate good netiquette (online conduct) by observing the following procedures:

- Practice manners and civility, and be polite and respectful of your instructor and classmates in all your communication.
- Use correct grammar and punctuation in all your communication ('Dear Professor xxx' not 'Hey').
- Capitalize words only to highlight an important point or to distinguish a title or heading. Capitalizing whole words that are not titles is generally termed as SHOUTING!
- Cite all quotes, references and sources and respect copyright and license agreements.

Due Dates and Late Policy

All work in this course is due according to the dates on the [Course Schedule](#).

Late Work: There is no provision for late work in this course. Therefore, late work will not be accepted without prior communication with the course instructor regarding extenuating circumstances. Medical and emergency exceptions must include appropriate documentation; deadline extensions are granted at the discretion of the course instructor. Late work cannot be submitted after the course has been completed (the last official day of the class). See additional policy regarding make-up work.

Make-Up Work: Late work submission or alternative assignments will be determined by the instructor and at the sole discretion of the instructor. These assignments may or may not exactly duplicate the original and will not entitle other students to the same alternatives since they may not have experienced the same situations.

8. Course Schedule

To support a learning experience that is responsive to the needs, interests, and pace of our class community, the course schedule may shift over the semester. The most current version of the schedule will always be available on Canvas. I encourage you to check Canvas regularly for updates and contact me if you have any questions.

9. Subject to Change Statement

This syllabus is subject to change in the event of extenuating circumstances.