

BUSINESS STATISTICS

Concordia College
Fall 2026

Instructor: Brian H. Park **Time:** Tue & Thu 08:25 – 09:40
Email: hpark3@cord.edu **Venue:** Grant Center 032

Course Description:

This course provides an introduction to the fundamental concepts and methods of statistics. Students will learn how to organize, summarize, and interpret data, and how to use statistical tools to draw conclusions under uncertainty. Topics include descriptive statistics, data visualization, probability, probability distributions, sampling, confidence intervals, hypothesis testing, correlation, and an introduction to regression analysis. Emphasis is placed on understanding statistical reasoning, interpreting results correctly, and communicating statistical findings clearly and responsibly.

Office Hours:

Regular walk-in office hours will be held on Mondays and Wednesdays from 12:30 PM to 2:00 PM in Room 101 at the Grant Center. In addition to these designated hours, appointments can be arranged through <https://calendly.com/brianhwpark>. Students may select 15-minute time slots for appointments, and booking consecutive sessions is allowed. If these options are not suitable, students are encouraged to contact the instructor via email.

Textbook & Reading Material:

The following textbook is required for this course:

- Camm, J. D., et al. (2021). *Statistics for Business and Economics* (15th ed.). Cengage.

You may purchase the textbook at the College bookstore or directly from the publisher on their [website](#). Older editions may be acceptable, but it is recommended to use the 14th edition or newer.

Prerequisite:

There are no prerequisites to BUSN 320 Business Statistics.

Course Engagement Expectations:

On average, students should expect to dedicate 400 minutes of their time each week to BUSN 320, including the 150 minutes of class time. The remaining 250 minutes outside the classroom would primarily be spent reviewing lecture notes, completing homework assignments, occasionally drafting short essays, and reading the recommended textbook.

Learning Objectives:

Upon completing this course, the students will be able to:

1. Organize, summarize, and visualize data using appropriate descriptive statistical methods.
2. Apply fundamental concepts of probability to quantify uncertainty and evaluate random events.
3. Describe and interpret common probability distributions used in statistical analysis.
4. Construct and interpret confidence intervals for population parameters using sample data.
5. Conduct and interpret hypothesis tests for one-sample and two-sample problems.
6. Evaluate relationships between variables using correlation and basic regression analysis, and interpret the results in context.

Grading:

The final letter grade for BUSN 320 will be determined by each student's Grand Total score. The Grand Total score will be calculated as the highest of three grading schemes. Each grading scheme is designed to reflect a traditional balanced approach (Score #1), reward consistent performance over the semester (Score #2), or provide a catch-up opportunity (Score #3):

	Score #1	Score #2	Score #3
Check-ins	20%	25%	10%
Quizzes	40%	45%	25%
Homework	10%	20%	5%
Final	30%	10%	60%
Extra Credit	As Assigned		

For example, a student who earns an average score of 88/100 across weekly check-ins, 84/100 across four quizzes, 92/100 across three homework assignments, 79/100 on the final exam, and 1 extra credit point will have the following scores:

- Score #1: $88 \times 20\% + 84 \times 40\% + 92 \times 10\% + 79 \times 30\% + 1 = 84.9$
- Score #2: $88 \times 25\% + 84 \times 45\% + 92 \times 20\% + 79 \times 10\% + 1 = 87.1$
- Score #3: $88 \times 10\% + 84 \times 25\% + 92 \times 5\% + 79 \times 60\% + 1 = 81.8$

The student's Grand Total score is 87.1, and this score will be used to determine the student's final letter grade for the semester. Grand Total scores will not be rounded under any circumstances. Final letter grades will be assigned strictly according to the stated cutoff thresholds, and no exceptions will be made for scores that fall marginally below a cutoff. The letter grade cutoffs follow the grading scale below:

A	[93,∞)	B-	[80,83)	D+	[67,70)
A-	[90,93)	C+	[77,80)	D	[63,67)
B+	[87,90)	C	[73,77)	D-	[60,63)
B	[83,87)	C-	[70,73)	F	[0,60)

- **Attendance**

- Attendance may be checked during each class session.
- Students are expected to arrive on time and remain for the full class session. Repeated tardiness or early departures may be treated as partial or full absences at the instructor's discretion.
- Each student is permitted one unexcused absence per calendar month without penalty counting towards attendance. This allowance does not carry over across months and may not be used on scheduled in-class quiz or exam dates.
- Students are expected to notify the instructor in advance of any anticipated absence when feasible.
- Documentation for excused absences must be submitted within a reasonable timeframe. Failure to provide documentation may result in the absence being classified as unexcused.
- The form and adequacy of documentation will be evaluated at the instructor's discretion based on the nature of the request.
- While attendance does not directly factor into a student's Grand Total score, it will be used to determine recovery rates following each quiz.
- Five or more unexcused absences (excluding the monthly no-penalty absences) over the duration of the term will result in a failing grade, barring exceptional circumstances.
- The determination of whether an absence is excused or unexcused will follow Concordia College policy, with final discretion resting with the instructor.

- **Check-ins**

- Short in-class check-ins will be administered on a roughly weekly basis.
- Check-ins are designed to assess understanding of recently covered material and to encourage consistent engagement with the course.
- Check-ins will include a mix of conceptual questions, short calculations, and interpretation-based questions.
- No notes, formula sheets, or electronic devices are permitted unless explicitly stated otherwise.
- The lowest three check-in scores will be dropped when calculating the check-in component of the Grand Total score.
- Because the drop policy is designed to accommodate occasional absences or off-days, there will be no make-up opportunities for missed check-ins under any circumstances.
- Students who arrive late may not be given additional time to complete a check-in.
- Check-ins are intended to be low-stakes and brief, and will typically take no more than 10–15 minutes of class time.
- Each check-in is graded on a 100-point basis. Assuming a total of N check-ins during the term, and letting S denote the set of check-ins excluding the three lowest scores, the check-in component of the Grand Total score will be calculated as:

$$\text{Check-ins} = \frac{\sum_{i \in S} \text{Earned Score of Check-in } i}{N - 3}$$

- In the event that fewer than three check-ins are administered, the drop policy will be adjusted accordingly.

- **Homework**

- A small number of data-based homework assignments will be assigned throughout the semester.
- These assignments are designed to reinforce key statistical concepts through hands-on analysis and interpretation.
- Students will use basic spreadsheet tools (e.g., Microsoft Excel) to organize data, perform calculations, and interpret the results.
- Emphasis will be placed on interpreting outputs, explaining results clearly, and connecting statistical findings to the underlying concepts.
- All data homework assignments must be completed individually unless explicitly stated otherwise.
- Assignments must be submitted in the required format (e.g., Excel file and/or PDF) with clear organization and labeling of all work.
- Late submissions will be governed by the course-wide late submission policy (see the Late Submission Policy section of the syllabus).
- Failure to submit an assignment will result in a score of zero.
- Each assignment is graded on a 100-point basis. Assuming a total of N assignments during the term, the data homework component of the Grand Total score will be calculated as:

$$\text{Homework} = \frac{\sum_{i=1}^N \text{Earned Score of Assignment } i}{N}$$

- **Quizzes**

- Four closed-book in-class quizzes will be administered throughout the semester.
- Unless explicitly stated otherwise, no notes, formula sheets, or electronic devices are permitted during quizzes.
- Quizzes will include a mix of definition, true or false, multiple choice, and short-answer questions.
- Because quizzes are designed to gently assess understanding at key points in the course, students will have opportunities to recover deducted points.
- To participate in grade recovery, students must review their graded material, demonstrate a clear understanding of the error, and present the correct answer to the instructor in person during office hours.
- Grade recovery must be completed in person. Submission of corrected answers without an in-person visit will not be considered.
- No quizzes will be dropped, as the grade recovery policy is designed to provide flexibility.
- Grade recovery deadlines will be 5 class days (inclusive of the day graded material is returned) after the distribution of graded material unless otherwise specified by the instructor. A “class day” refers to any day on which the College is in session.

- It is the student’s responsibility to complete grade recovery within the stated deadline.
- Regardless of the calculated recovery rate, the maximum number of points a student may recover shall not exceed 20% of the total points lost on each quiz.
- The proportion of points that a student can recover is directly tied to their attendance rate. Assuming a maximum recovery rate of $R\%$, the recovery rate is calculated as:

$$\text{Recovery Rate} = \min \left\{ R \times \left(\frac{\# \text{ Attended} + \# \text{ Excused Absences}}{\# \text{ Total Attendance Checks}} \right), 20\% \right\}$$

- Quizzes will be administered during regular class hours and will typically take no more than 60 minutes to complete.
- Students who arrive late may not be given additional time to complete the quiz.

- **Final Exam**

- A comprehensive final exam will be administered at the end of the semester during the officially scheduled final exam period.
- The final exam will cover all material presented throughout the course, including conceptual understanding, calculations, and interpretation of statistical results.
- Unless explicitly stated otherwise, no notes, formula sheets, or electronic devices are permitted during the final exam.
- The final exam is a required component of the course and must be completed to receive a passing grade.
- No grade recovery opportunities will be offered for the final exam.
- Students who arrive late may not be given additional time to complete the exam.
- A missed final exam without an approved reason (as defined by College policy) will result in a grade of zero.
- Any rescheduling of the final exam must comply with College policies and requires prior approval.
- Students may submit a written (e.g., email) regrade request within two calendar days of receiving their grades.
- The instructor reserves the right to re-evaluate the entire exam when a regrade request is submitted, which may result in an increase, decrease, or no change in the final score.

- **Late Submissions**

- This policy applies to all assignments unless otherwise specified.
- Late submissions will incur a deduction of 1% of the earned score for each hour of delay in submission.
- Any portion of a 1-hour period counts as a full hour of delay for the purposes of penalty calculation.
- Total late penalties are capped at 100% of the earned score.
- Late penalties accrue continuously from the stated deadline and are not paused for weekends, holidays, or any period during which the College is not in session.

- Students with approved documentation or cause may be granted a deduction-free extension at the instructor’s discretion.
- Late penalties are calculated based on the submission timestamp recorded by the course LMS or email service.
- Extensions should be requested in advance whenever possible. Retroactive extensions are granted only in exceptional circumstances.
- Only submitted work will be considered for grading. Completion without timely submission does not exempt an assignment from late penalties.
- Submitted files must be complete, readable, and in the correct format. Unreadable or incorrect submissions may be treated as non-submissions.
- Technical issues, including internet connectivity or file upload errors, do not constitute valid grounds for avoiding late penalties unless the student notifies the instructor prior to the submission deadline whenever possible and receives written approval for an exception.

- **Make-up Policy**

- Make-up assessments may differ in format and content from the original assessment, and the instructor cannot guarantee equivalence in complexity or perceived difficulty.
- Make-up quizzes and exams must be approved by the instructor and are granted only for documented or unavoidable conflicts, as defined by the course attendance policy.
- Examples of approved reasons include illness, non-routine medical appointments that cannot be reasonably rescheduled, family emergencies, and College-sponsored activities.
- Activities that are not officially sponsored or sanctioned by the College, including but not limited to athletic training, practice sessions, performances, rehearsals, or student organization events, do not constitute valid reasons for a make-up quiz or for rescheduling an already approved make-up quiz.
- Requests for make-up assessments must be made in advance whenever possible. Documentation must be provided in a timely manner.
- Make-up assessments will be scheduled at times determined by the instructor, which may include early morning hours. Students should expect limited flexibility, and these times may not accommodate personal or non-College-sponsored commitments.
- The instructor will offer a limited set of make-up options, and no further rescheduling will be permitted. Failure to attend the assigned make-up time will result in a grade of zero, except in cases of a new documented emergency.

Outline of Course Schedule:

The content, sequence, and pace of the course are subject to change at the instructor's discretion. Tentatively, the course will be organized according to the plan below:

Day	Dates	Content	Note	Chapters
1	08/27/2026	Introduction / Data and Statistics	-	1
2	09/01/2026	Descriptive Statistics: Visualization	-	2
3	09/03/2026	Descriptive Statistics: Numerical Measures	-	3
4	09/08/2026	Descriptive Statistics: Interpretation	-	2 & 3
5	09/10/2026	Recap: Chapters 1–3	Homework #1	1–3
6	09/15/2026	Quiz #1	-	1–3
7	09/17/2026	Introduction to Probability	-	4
8	09/22/2026	Introduction to Probability	-	4
9	09/24/2026	Discrete Probability Distributions	-	5
10	09/29/2026	Continuous Probability Distributions	-	6
11	10/01/2026	Continuous Probability Distributions	-	6
12	10/06/2026	Recap: Chapters 4–6	Homework #2	4–6
13	10/08/2026	Quiz #2	-	4–6
14	10/13/2026	Sampling and Sampling Distributions	-	7
15	10/15/2026	Sampling and Sampling Distributions	-	7
16	10/20/2026	Fall Interim (No Classes)	-	-
17	10/22/2026	Fall Interim (No Classes)	-	-
18	10/27/2026	Interval Estimation	-	8
19	10/29/2026	Interval Estimation	-	8
20	11/03/2026	Recap: Chapters 7 & 8	Homework #3	7 & 8

Outline of Course Schedule (continued):

The content, sequence, and pace of the course are subject to change at the instructor's discretion. Tentatively, the course will be organized according to the plan below:

Day	Dates	Content	Note	Chapters
21	11/05/2026	Quiz #3	-	7 & 8
22	11/10/2026	Hypothesis Tests	-	9
23	11/12/2026	Hypothesis Tests	-	9
24	11/17/2026	Two-Sample Inference	-	10
25	11/19/2026	Two-Sample Inference	-	10
26	11/24/2026	Recap: Chapters 9 & 10	Homework #4	9 & 10
27	11/26/2026	Thanksgiving Break (No Classes)	-	-
28	12/01/2026	Quiz #4	-	9 & 10
29	12/03/2026	Special Topics	-	-
30	12/08/2026	Special Topics	-	-
31	12/10/2026	Comprehensive Review	-	1–10

Final Exam Schedule

- Monday, December 14th, 2026, from 08:30 AM to 10:30 AM

Academic Integrity:

Academic dishonesty undermines the integrity and intellectual mission of the College. All students are expected to abide by the Concordia College [Academic Integrity policy](#). Examples of academic misconduct include, but are not limited to: plagiarism, cheating, unauthorized collaboration, and submitting identical work in multiple courses without prior approval. All suspected incidents of academic misconduct will be addressed in accordance with Concordia College policies.

Artificial Intelligence and Academic Integrity

The emerging field of artificial intelligence will change traditional ideas of what it means to write, create and express knowledge. AI can serve many legitimate purposes in the classroom and instructors may allow or even require its use in their courses. However, Concordia wants to remind students that these apps must be used in ways that are ethical and in accordance with Concordia's

Academic Integrity Policy. Because the information derived from these tools is based on previously published materials, using these tools without proper citation constitutes plagiarism. Having AI generate answers that you claim are your own constitutes cheating. Additionally, be aware that the information derived from these tools may be inaccurate, incomplete, or may contain biased information.

Responsible and ethical use of AI tools includes:

1. Clearly identifying the use of AI-based tools in submitted work. Any work that utilizes AI-based tools must be clearly marked as such, including the specific tool(s) used. For example, if you use ChatGPT-3, you must cite "ChatGPT-3. (YYYY, Month DD of query). "Text of your query." Generated using OpenAI. <https://chat.openai.com/>" Material generated using other tools should follow a similar citation convention.
2. Being transparent in how you used the AI-based tool, including what work is your original contribution and what is the result of AI.

Concordia encourages students to read the college's Academic Integrity policy and understand what constitutes academic misconduct and consequences for it. If you are unsure about whether the use of AI tools in a course is in a violation of academic integrity, or if you are unsure of how to document and cite the use of an AI tool, please consult with your instructor.

Statement on Disability and Wellness:

Concordia College values diversity and inclusion. We are committed to providing students with access to mental health services and equitable access to learning opportunities.

The Counseling Center and Disability Services Office (Old Main 109A) is the campus office that helps students find solutions and relief through talk therapy and reasonable accommodations. Additional Community and Online Resources are also available on CobberNet.

- If you feel stressed, anxious, worried, or lonely, please consider contacting a staff member in the Counseling Center and Disability Services Office to learn more or to set up an appointment with a counselor. All appointments are free and confidential and can be arranged by emailing counseling@cord.edu, or calling (218) 299-3514, or by stopping in Lower Level, Old Main, room 109A.
- If you have, or think you may have, a disability (e.g., matters concerning mental health, attention, learning, autism spectrum disorders, chronic health, traumatic brain injury and concussions, vision, hearing, mobility, or speech impairments), please contact the Director of the Counseling Center and Disability Services Office to arrange a confidential discussion regarding equitable access and reasonable accommodations. Appointments can be arranged by emailing counseling@cord.edu, or calling (218) 299- 3514, or by stopping in Lower Level, Old Main, room 109A.
- Accommodations can be coordinated with the staff in the Counseling Center and Disability Services Office. To receive reasonable and appropriate accommodations in your course(s), you will need to share your Letter of Accommodation (LOA) with your class instructor(s) as soon as possible so necessary arrangements can be made. Accommodations can start only after the LOA has been shared with your instructor, and accommodations are not retroactive. Your information will be kept confidential.

- For additional information on accommodations (e.g., accommodation petition process or appeal process for accommodation plans) please see the Policy for the Accommodation of Students with Disabilities in the Concordia College Course Catalog.

Please contact me if you feel there are aspects of my instruction or design of this course that could better support your learning.

Diversity and Inclusion:

Concordia College aspires to be a diverse community that affirms an abundance of identities, experiences, and perspectives in order to imagine, examine, and implement possibilities for individual and communal thriving. Critical thinking grounded in the liberal arts compels us to participate in intentional dialogue, careful self-reflection, and honest interactions about difference, power, and inequity. As responsible engagement in the world calls us to recognize that are familiar or unfamiliar, visible or less visible, Concordia will act to increase and support diversity in all areas of college life. In building this community, we ask all members to:

- Share their unique experiences, values, and beliefs.
- Remain open to the perspectives of others.
- Honor the uniqueness of their colleagues.
- Appreciate the opportunity to learn from one another in this community.
- Value each other's opinions and communicate respectfully.
- Keep confidential any discussions of a personal or professional nature.

To help foster an inclusive environment, please reach out to the instructor if:

- You use a name and/or pronouns that differ from your official records.
- Circumstances are affecting your ability to participate fully.
- Your performance in class is being impacted by experiences outside of class.
- Something said in class made you feel uncomfortable or marginalized.
- You would like to discuss any other concern.