



Department of Curriculum and Instruction
EDGR 5910 Introduction to Statistical Methods in Education
CRN: 42215
Fall 2020 (*August 24, 2016 to November 24, 2020*)
Tuesday, SOE 1079, 7:00 – 9:00 p.m.
Hybrid: Face-to-Face/Online

Instructor: John Short, Ph.D.

Contact Information	Office Hours
School of Education 700 Cecil Street Durham, NC 27707 Email: jshort10@ncsu.edu Telephone: (919) 530-7489 Fax: (919) 530-5353	Office: SOE 1079 Office Hours: Tuesdays, 6:00 – 7:00 p.m., and available by appointment

Course Description

Introduction to Statistical Methods in Education is a graduate level course in applied statistics relevant to education and social sciences. The course topics will include descriptive statistics, inferential statistics, and analyzing as well as interpreting data. Candidates will learn scales of measurement, constructing frequency tables, measures of central tendency, variability, probability, and standard scores. Candidates will learn to design and interpret educational research by testing a hypothesis using correlation, t-tests, and chi-square.

Vision of the School of Education

The School of Education at North Carolina Central University will become an international Community of scholars who are culturally responsive educators and practitioners.

Mission of the School of Education

The mission of the North Carolina Central University’s School of Education is to prepare educational professionals to serve and inspire excellence in teaching, administration, counseling, communication, technology and other related services. Central to our mission is the development of leaders who promote social justice and dedicate themselves to the well-being of a global community.

Textbook and Course Material Instructions

Text: Gould, R., Ryan, C., & Wong, R. (2016). *Essential statistics: Exploring the world through data* (2nd ed.). Pearson Education, Inc.

The textbook should be purchased in ebook form through Pearson as a bundle with the accompanying course companion (MyLab & Mastering), which provides access to the course assignments. To purchase the text and accompanying companion site follow the instructions below.

To register for EDGR 5910 Introduction to Statistics:

1. Go to <https://www.pearson.com/mylab>.
2. Under Register, select Student.
3. Confirm you have the information needed, then select OK! Register now.
4. Enter your instructor's course ID: short38685, and Continue.
5. Enter your existing Pearson account username and password to Sign In.
You have an account if you have ever used a MyLab or Mastering product.
 - » If you don't have an account, select Create and complete the required fields.
6. Select an access option.
 - » Enter the access code that came with your textbook or that you purchased separately from the bookstore.
 - » If available for your course,
 - Buy access using a credit card or PayPal.
 - Get temporary access.If you're taking another semester of a course, you skip this step.
7. From the You're Done! page, select Go To My Courses.
8. On the My Courses page, select the course name EDGR 5910 Introduction to Statistics to start your work.

To sign in later:

1. Go to <https://www.pearson.com/mylab>.
2. Select Sign In.
3. Enter your Pearson account username and password, and Sign In.
4. Select the course name EDGR 5910 Introduction to Statistics to start your work.

To upgrade temporary access to full access:

1. Go to <https://www.pearson.com/mylab>.
2. Select Sign In.
3. Enter your Pearson account username and password, and Sign In.
4. Select Upgrade access for EDGR 5910 Introduction to Statistics.
5. Enter an access code or buy access with a credit card or PayPal.

Required Access to Course Blackboard Site

NCCU Blackboard will be used to post important information for this course. You should check Blackboard at least once a day and prior to the scheduled class meeting to make sure you are informed about class updates.

Statement of Inclusion/Non-Discrimination

North Carolina Central University is committed to the principles of affirmative action and non-discrimination. The University welcomes diversity in its student body, its staff, its faculty, and its administration. The University admits, hires, evaluates, promotes, and rewards on the basis of the needs and relevant performance criteria without regard to race, color, national origin, ethnicity, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran's status, or religion. It actively promotes diversity and respectfulness of each individual.

Student Disability Services

Students with disabilities (physical, learning, psychological, chronic or temporary medical conditions, etc.) who would like to request reasonable accommodations and services under the Americans with Disabilities Act must register with the Office of Student Disability Services (SDS) in Suite 120 in the Student Services Building. Students who are new to SDS or who are requesting new accommodations should contact SDS at (919) 530-6325 or sds@nccu.edu to discuss the programs and services offered by SDS. Students who are already registered with SDS may renew previously granted accommodations by visiting the SDS website at www.nccu.edu/sds and logging into *Eagle Accommodate*. Accommodations plans for law students are effective for one academic year and must be renewed every fall semester. All other students are expected to renew previously granted accommodations at the beginning of each semester, preferably during the first two (2) weeks of class.

Confidentiality and Mandatory Reporting

All forms of discrimination based on sex, including sexual misconduct, sexual assault, dating violence, domestic violence, and stalking offenses, are prohibited under NCCU's Sexual Misconduct Policy (POL 80.07.1). NCCU faculty and instructors are considered to be *responsible employees* and are required to report information regarding sexual misconduct to the University's Title IX Coordinator. The Sexual Misconduct Policy can be accessed through NCCU's Policies, Rules and Regulations website at www.nccu.edu/policies/retrieve.cfm?id=450. Any individual may report a violation of the Sexual Misconduct Policy (including a third-party or anonymous report) by contacting the Title IX Coordinator at (919) 530-6334 or TitleIX@nccu.edu, or submitting the online form through <http://www.nccu.edu/administration/dhr/titleix/index.cfm>.

Other Campus Programs, Services, Activities, and Resources

Other campus resources to support NCCU students include:

- *Student Advocacy Coordinator (formerly Student Ombudsperson)*. The Student Advocacy Coordinator is available to assist students in navigating unexpected life events (e.g. short-term illness/injury, loss of a loved one, personal crises) and

guide them to the appropriate University or community resources. Students may also receive assistance with resolving some emergency financial concerns; understanding NCCU policies, rules and regulations; or general problem-solving strategies. Contact Information: Student Services Building, G- 06, (919) 530-7492, studentadvocacy@nccu.edu.

- *Counseling Center.* The NCCU Counseling Center is staffed by licensed psychologists and mental health professionals who provide individual and group counseling, crisis intervention, substance abuse prevention and intervention, anger management, and other services. Contact Information: Student Health Building, 2nd Floor, (919) 530-7646, counseling@nccu.edu.
- *University Police Department.* The University Police Department ensures that students, faculty and staff have a safe and secure environment in which they can live, learn, and work. The Department provides a full range of police services, including investigating all crimes committed in and around its jurisdiction, making arrests, providing crime prevention/community programs, enforcing parking regulations and traffic laws, and maintaining crowd control for campus special events. Contact Information: 2010 Fayetteville Street, (919) 530-6106, nccupinfo@nccu.edu.

Writing Center

Educators are models and coaches of writing for their students, and must communicate effectively in writing with colleagues, parents, and others. For those reasons, educators are expected to write effectively and conventionally. If you need more help in meeting those expectations at the standard level of graduate scholarship --please contact the Writing Studio for additional services. Writing Studio: Phone number: (919) - 530-6035. Room 102 Taylor Education Building. writingstudio@nccu.edu.

Email Communication

Students are to use assigned NCCU emails to communicate in this course. The professor will only communicate with students using assigned NCCU emails. Students are accountable for all course information transmitted through assigned NCCU Blackboard and email addresses for this course.

Important Dates

- August 29th - First day for a student to initiate a withdrawal from a class (grade of WC) and student to request to be withdrawn from the institution (grade of W)
- September 28th - Last day to withdraw from the university with a prorated tuition and fee adjustment
- October 16th - Last day for graduate students to withdraw from a class with a grade of WC or from the university with a W grade
- November 16th - Last day of classes for graduating students and last day of class lecture for non-graduating students
- November 17th – 18th - Final examinations for graduating students
- November 17th – 24th - Final examinations for non-graduating students
- November 24th - Last Day of classes for all students
- December 5th - Graduate and Professional Commencement Exercises, 9 a.m.

Expectations

Relationships and Interactions:

Actively participates in class, is considerate of others' ideas, and expresses personal ideas in a professional manner. Requests assistance proactively related to teaching, school and community culture working with other school personnel, and other personal or professional issues. Schedules and attends meetings with advisor. Remains open and responsive to feedback. Works cooperatively with instructors and school personnel; resolves differences respectfully following university policies. Observes and learns from experienced teachers.

Attendance Policy

The success of this course depends on your active participation. An active participant is someone who attends each class, arrives on time, and is prepared to participate in classroom activities and discussions. I expect you to participate in small and whole group discussions, read each assigned reading before class meets, and to complete written assignments that are part of the course sessions. NCCU requires class attendance for both undergraduate and graduate students. There is no minimum number of absences allowed for classes; numerous absences will result in instructor withdrawal of the student. For the purposes of attendance, a candidate is "in attendance" when he/she comes to class on time and remains throughout the whole class. The instructor will work with candidates individually who have absences due to circumstances beyond the candidate's control (e.g., death in family, serious/contagious illness, other emergencies) to ensure that they master course material. The University no longer designates "excused" or "non-excused" absences. There are also no more instructor-given withdrawal grades for non-attendance (formerly "NW" and "NF").

Food and Drinks and Drinks in the Classroom: No food or drinks are allowed in computer labs, rooms with computers, or the Curriculum Media Center.

Cell Phones: Cell phones and pagers should be silenced or turned off during class time.

Professionalism (aligned with NCCU EPP Dispositions):

Exhibit ethical conduct as defined by CEC Code of Ethics and North Carolina Professional Teaching Standards.

Attend class and group meetings on time to maintain a high level of success and professionalism
Exhibit academic honesty in all assignments and work. Maintain professional appearance appropriate to school and community setting. Maintain confidentiality of all students. Conduct self-assessment/s and use reflective skills to enhance teaching skills.

University Statement on Academic Integrity

The instructor supports the Academic Integrity Policy of North Carolina Central University. Students must realize that plagiarism (representing ideas and/or writing of another as one's own) or obtaining unauthorized assistance in any academic work is prohibited. Note that the use of the same report, paper, presentation, etc. to meet requirements in more than one course will also be considered a misrepresentation and a violation of the Academic Integrity Policy. Please review the consequences of and due process procedures for Academic Integrity Policy violations in the School of Education Graduate Handbook.

Honor Code: Class members are expected to abide by the University honor code.

Academic Integrity: As a center of learning, teaching, and research, North Carolina Central University charges its members including students

Academic Dishonesty: is defined as any conduct that is intended by the student to obtain for

him/her or for others an unfair or false evaluation in connection with any examination or other work for academic credit. Cheating, fabrication, plagiarism, and complicity are examples of conduct that is academically dishonest.

Cheating is the unauthorized use of materials in connection with an examination or other work for academic credit, including, but not limited to:

- The use of books, notes, outlines, etc. during an examination where the instructor has not authorized use of such materials or information;
- Seeking unauthorized materials or information from others in connection with an examination;
- Giving or attempting to give unauthorized assistance to another person in connection with an examination;
- Obtaining or attempting to obtain unauthorized copies of examinations;
- Copying or attempting to copy from the work of another student during an examination;
- Bringing to an examination, or attempting to use during an examination, unauthorized answers which have been prepared prior to the examination; and
- Submitting for evaluation in a course, part or the whole of a work for which credit has been given previously.

Fabrication is the invention, counterfeiting and/or alteration of quoted passages, data, procedures, experiments, sources or other information in connection with any academic exercise.

Plagiarism is the use of the ideas, words, or works of another without attribution when the information provided is not common knowledge either in content or form and includes, but is not limited to:

- Quoting from the published or unpublished work of another without appropriate attribution;
- Paraphrasing or summarizing in one's own work any portion of the published or unpublished materials of another without attribution;
- Borrowing from another's work, data, and facts which are not in the domain of common knowledge, and/or complicity is the giving of assistance or the attempt to give assistance to another for the purpose of perpetrating academic dishonesty.

Students may not copy work from other students, from web pages, or any other source. Any resources that are used for papers should be properly referenced using APA format, including information from web pages.

Students who turn in work that is not their own will not receive credit for the assignment. Similarly, students who use data or information in their assignments that they did not actually collect on a student will not receive any credit for the assignment. Students who plagiarize or cheat in a course may fail the course or be dismissed from the program. If you have any doubts about when you should reference one of your sources, read the examples at this web site from Indiana University. <http://plagiarism.iu.edu>

Copyright Statement:

Some materials in this course are copyrighted. They are intended for use only by candidates registered and enrolled in this course and only for instructional activities associated with and for the duration of the course. They may not be retained in another medium or disseminated further. They are provided in compliance with the Teach Act.

Inclement Weather and Unpredictable Events:

If weather conditions lead the NCCU administration to decide to cancel classes, our class *will not* meet. Call the Academic Affairs Office at (919) 560-6230 or listen to 90.7 FM if you want to verify any cancellations. If I have to miss class because of an emergency, a message will be posted on Blackboard and/or a note will be placed on the classroom door. Please check Blackboard prior to coming to class for cancellation announcements. You will be expected to use the scheduled class time to work on class assignments or evaluation requirements. *Students are encouraged to sign up for Eagle Alerts on the NCCU Emergency webpage.*

Satisfactory Progress and Academic Dismissal:

When a candidate's cumulative grade point average falls below 3.0, he/she is automatically put on academic probation for up to one calendar year. During that year, the student is to maintain contact with the advisor, program coordinator, and/or Associate Dean for graduate programs for advice and assistance. Failure to raise the cumulative grade point average to 3.0 within one calendar year will be cause for dismissal.

If a candidate receives a grade of "C" in a course, s/he should meet with their advisor to develop a support plan before the next semester. A student who receives a grade of "F" or two "C's" may not continue in graduate school unless his/her program coordinator submits in writing an acceptable recommendation to the Dean of the School of Education. If a student fails (earns a "C" or "F") a second time, he/she is dismissed from the degree program. The student may appeal the dismissal to the Graduate Council through the Dean of the School of Education.

Confidentiality

Your experiences are an important part of your learning and you will be discussing them in this course. Please respect the privacy and dignity of the children and families with whom you work and use discretion. In casual conversations or social situations, do not relate stories from classrooms or schools that might be embarrassing to teachers or students or that include sensitive information about a child or family. When discussing classroom situations in class, do so carefully. Mask the name of the student on any written or visual work shared in class or used in an assignment. If discussing teaching practice you have observed, be mindful of maintaining a tone of professional courtesy.

Submission of Assignments

Late Assignments Policy

All assignments must be completed and turned in on the due date. Late assignments will drop 10% of the possible total points for the assignment from the first day late. No assignments will be accepted 5 days past the due date. No make-up examinations will be administered, except in cases of documented emergencies.

The Incomplete (I) Grade Policy

The grade of "I" is assigned at the discretion of the instructor when a candidate who is otherwise passing (completed 75% of course work) has not due to circumstances beyond his/her control, completed all the work in the course. The missing work must be completed according to the written and signed agreement between the instructor and the student within the deadline set by the

instructor, not to exceed one year from the end of the semester in which the “I” was assigned. The signed written agreement must be filed in the office of the department chair or dean and a copy must also be placed in the instructor’s file at the same time that final grades are due. If the “I” is not removed during the specified time, it will automatically turn into an F.

Grading Method and Scale

All requirements must be completed for a grade to be given at the end of the semester.

Assignment Grading Scale

Assignments	Weight Values %
Homework	30%
Quizzes	20%
Exams	30%
Final Exam	20%
Total	100%

GRADING SCALE

Grading Percentage Values Range	Max Weight Point Values Range	Grade
90% - 100%	95 - 105	A
80% - 89%	84 - 94	B
70% - 79%	74 - 83	C
69% and below	73 and below	F

Grade Appeal

Upon receipt of a grade, a student has up to 5 days (including weekends) to submit an email request for a discussion and/or review for that specific assignment. The instructor will not honor requests for discussion beyond this point. *A discussion does not necessarily indicate that a grade will be changed.*

Assignments

Overview of Assignments

Details of guidelines (including directions and due dates for each assignment/activities) will be presented and discussed in class in ample time prior to due dates. Guidelines will also be posted on Blackboard.

Homework:

Homework is in “MyLab and Mastering,” which is an interactive web site. Homework is worth 30% of your class grade. Homework usually has several forms of help available, including Help Me Solve This, View an Example, Animation, Textbook, StatCrunch, Tech Help, Calculator, and Ask My Instructor. Before you do the MyLab homework questions, read the textbook and the MyLab instructions for that section. You may rework each exercise an unlimited amount of times within the available time period given. Late MyLab homework questions lose 10% credit for each day that they are late. You will be able to drop your two lowest scores (a missed homework is a zero).

Quizzes:

Quizzes are also in MyLab and Mastering. Quizzes are worth 20% of your class grade. Quizzes are a review of the homework, to reinforce what you have learned. Quizzes are open-note, but the only help available online in quizzes is StatCrunch and a Calculator. You may not communicate with other people or use outside internet resources for the quizzes. You will be able to drop your lowest score (a missed quiz is a zero).

Tests:

You will have two tests in MyLab and Mastering that together will be worth a total of 30% of your grade. Tests are open-note, but the only help available online in tests is StatCrunch and a Calculator. You may not communicate with other people or use outside internet resources for the tests.

Unlike homework and quizzes, you will only have a three-hour window, 7:00 – 10:00 p.m. on the assigned day, for each test. Please plan ahead! I will allow make-up tests only

under exceptional circumstances on a case-by-case basis.

Final Exam:

The final exam will be cumulative (it will cover the entire course). The final exam is worth 20% of your grade. As with the tests it will be available only from 7:00 – 10:00 p.m. on the assigned day. You may not communicate with other people or use outside internet resources for the tests.

Course Schedule

Date	Topic	Assignment	Due Date
Week 1 August 23-29	Overview of Course		
Week 2 August 30 – September 5	Chapter 1: Introduction to Data	Homework 1.1 – 1.4 Chapter 1 Quiz	September 6, 11:59 p.m.
Week 3 September 6 – September 12	Chapter 2: Picturing Variation with Graphs	Homework 2.1 – 2.5 Chapter 2 Quiz	September 13, 11:59 p.m.
Week 4 September 13 – September 19	Chapter 3: Numerical Summaries of Center and Variation	Homework 3.1 – 3.5 Chapter 3 Quiz	September 20, 11:59 p.m.
Week 5 September 20 – September 26	Chapter 1 – 3 Exam		September 22, 7:00 – 9:00 p.m.
Week 6 September 27 – October 3	Chapter 4: Regression Analysis: Exploring Associations between Variables	Homework 4.1 – 4.4 Chapter 4 Quiz	October 4, 11:59 p.m.
Week 7 October 4 – October 10	Chapter 5: Modeling Variation with Probability	Homework 5.1 – 5.4 Chapter 5 Quiz	October 11, 11:59 p.m.
Week 8 October 11 – October 17	Chapter 6: Modeling Random Events: The Normal and Binomial Models	Homework 6.1 – 6.3 Chapter 6 Quiz	October 18, 11:59 p.m.
Week 9 October 18 – October 24	Chapter 4 – 6 Exam		October 20, 7:00 – 9:00 p.m.

Week 10 October 25 – October 31	Chapter 7: Survey Sampling and Inferences	Homework 7.1 – 7.5 Chapter 7 Quiz	November 1, 11:59 p.m.
Week 11 November 1 – November 7	Chapter 8: Hypothesis Testing for Populations	Homework 8.1 – 8.4 Chapter 8 Quiz	November 8, 11:59 p.m.
Week 12 November 8 – November 14	Chapter 9: Inferring Population Means	Homework 9.1 – 9.6 Chapter 9 Quiz	November 15, 11: 59 p.m.
Week 13 November 15 – November 21	Final Exam	November 17, 7:00 – 9:00 p.m.	

Changes in Syllabus: Please note that this syllabus is a working document. The instructor reserves the option to make *minor* changes as necessary. Any changes will be noted in class and placed on Blackboard. *Due dates for major assignments will not be changed, so plan accordingly.*