PREREQUISITE

Graduate standing with at least one course in statistics or STAT 315 or permission of instructor.

CATALOG DESCRIPTION

Statistical techniques used to make inferences in experiments in social, physical, and biological sciences, and in education and psychology. Topics included are populations and samples, tests of significance concerning means, variances and proportions, and analysis of variance. No credit given to students with credit for STAT 201 or STAT 216.

COURSE DESCRIPTION

This is a second course in statistics for students who are interested in how statistical analyses can be used to answer research questions in the behavioral sciences. The focus will be on some of the most widely used statistical methods that are available, how to mathematically represent the phenomenon we are interested in studying, and how data analysis can be used to answer some of our questions.

GOALS

The primary goal of this course is to get you familiar with how to interpret and conduct quantitative research. We will be looking at some of the more common statistical methods that are often used in research, such as linear regression, multiple regression, analysis of variance, and perhaps even nonparametric inference (if time permits). This course can help prepare you to conduct your own quantitative research, and to become better prepared to understand research done by others.

INSTRUCTOR

Dr. S. A. Lesik
Phone: (860)832-2837
E-mail: lesiks@ccsu.edu

My virtual office hours (via WebEx) for the Spring 2021 semester are:

- Tuesday  4:00PM – 5:30PM
- Wednesday 10:00AM – 12:00PM
- Thursday  10:30AM -12:00PM

And by appointment.
**AVAILABLE TEXT**

*Applied Statistical Inference with Minitab*, 2nd edition (2019), by Sally A. Lesik, CRC Press (ISBN 978-1-4987-7998-2). This book is not required for the course, but it can be used as a general reference. There are numerous other books that you can refer to if you are looking for additional resources, or you can rely on the material that is provided on the course website.

**GRADES**

Grades will be based strictly on the following criteria:

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<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tr>
<td>Online Assessments (14 in total)</td>
<td>65%</td>
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<tr>
<td>Online Final Exam (Cumulative)</td>
<td>35%</td>
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<td>100%</td>
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In order to be fair to all students, extra-credit work will not be accepted at any time for any reason. **As a general course policy there are no make-ups allowed for missed or late work (this also includes what some refer to as “excused” absences).** There are no exceptions to this policy so please do not ask.

**STRUCTURE OF THE COURSE**

A total of 14 videos and 14 online assessments will be given throughout the course, and these will be posted on the course website. The general format is for you to watch the videos, and then attempt the online assessments. You must complete each online assessment in order to take the subsequent assessment. You will be allowed 3 attempts for each online assessment, and I will count your highest grade. The online assessments must be completed before their due date as is given in the course calendar on Blackboard. No extensions will be given under any circumstance.

The (cumulative) online final exam will be given at the end of the semester. You will only be allowed one attempt on the final exam. You can use your notes and Minitab. The final exam is a WebEx recorded final exam. This means that while you are taking the final exam, your camera must be on the entire time. You must have access to a web camera for the final exam. Students who are not recorded on WebEx for the entire final exam will be required to complete an oral exam or else receive the grade of F for the course.

Also, you must pass the final exam with a grade of 60 or better in order to pass the course. Students who score less than 60 on the final exam will receive the grade of F for the course.

If you are a student with a documented disability, and would like to request academic accommodations, you are encouraged to contact Student Disability Services (SDS) at 860-832-1952, or email disabilityservices@ccsu.edu. Please visit the SDS website at http://www.ccsu.edu/sds/ to download an Intake form and documentation requirements. Temporary impairments may also qualify for accommodations. Central Connecticut State University provides reasonable accommodations in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act for students with documented disabilities on an individualized basis.

**COMPUTING AND DATA ANALYSIS**

Statistical computing and data analysis are an integral part of statistical inference. We will be using both graphing calculators and the statistical software program Minitab throughout the course. You
can access Minitab virtually through the CCSU apps (http://apps.ccsu.edu). Many of the online assessments will require you to use this software.

TENTATIVE COURSE TOPICS (DUE DATES)

Introduction
Video #1 Graphical Displays of Data (Thursday, January 28)
Video #2 Discrete Random Variables (Tuesday, February 2)
Video #3 Continuous Random Variables (Tuesday, February 9)
Video #4 Confidence Intervals for One-Sample Mean (Tuesday, February 16)
Video #5 Hypothesis Tests for One-Sample Mean (Tuesday, February 23)
Video #6 More on Statistical Inference (Tuesday, March 2)
Video #7 ANOVA (Tuesday, March 9)
Video #8 Multiple Comparisons (Tuesday, March 16)
Video #9 One-Sample Proportions (Tuesday, March 23)
Video #10 Two Sample Proportions (Tuesday, April 6)
Video #11 Simple Linear Regression (Tuesday, April 13)
Video #12 Simple Linear Regression Part 2 (Tuesday, April 20)
Video #13 More on Simple Linear Regression (Tuesday, April 27)
Video #14 Multiple Regression (Tuesday, May 4)

ABOUT THIS COURSE

This course is an asynchronous course. An asynchronous course allows you to move through the material in a self-paced manner. Instead of meeting for course lectures, videos and slides are available on the course website in Blackboard. Online assessments for each video will automatically open after you have at least one attempt on the previous assessment. There will also be an online cumulative final examination as is described above, that you can take once you have completed all of the online assessments.

SOME TIPS FOR DOING WELL IN AN ONLINE COURSE

✓ You need to be very disciplined and willing to spend time learning the material for the course.
✓ You need to be very comfortable using computers and be able to navigate through technical issues in a timely manner if/when they arise.
✓ YOU ARE THE TYPE OF PERSON WHO DOES NOT WAIT UNTIL THE LAST MINUTE TO COMPLETE YOUR WORK!

STUDENT DISABILITY SERVICES

Central Connecticut State University provides reasonable accommodations in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act for students with documented disabilities on an individualized basis.

If you are a student with a documented disability, and would like to request academic accommodations, you are encouraged to contact Student Disability Services (SDS) at 860-832-1952, or email disabilitieservices@ccsu.edu. Please visit the SDS website at http://www.ccsu.edu/sds/ to download an Intake form and documentation requirements. Once approved, SDS suggests that students discuss their approved accommodations with their professors, as well as any other
additional medical emergency needs. Temporary impairments may also qualify for accommodations. Please note that accommodations are not retroactive and must be requested each semester.

STATEMENT ON DISCRIMINATION AND HARRASSMENT

Central Connecticut State University strives to maintain our campus as a place of work and study for faculty, staff, and students that is free of all forms of prohibited discrimination and harassment based upon age, ancestry, color, gender identity and expression, intellectual disability, learning disability, mental disorder, physical disability, marital status, national origin, race, religious creed, sex, (including pregnancy, transgender status, sexual harassment and sexual assault), sexual orientation, or any other status protected by federal or state laws. Any student who has concerns should contact the Office of Equity & Inclusion (OEI) at 860-832-1652, Student Affairs at 860-832-1601, or their faculty member. The OEI is located on the main floor of Davidson Hall, room 119.

SEXUAL MISCONDUCT, INTIMATE PARTNER VIOLENCE AND STALKING

Central Connecticut State University (CCSU) will not tolerate sexual misconduct against students, staff, faculty, or visitors in any form, including but not limited to: sexual assault, sexual exploitation, sexual harassment stalking, as defined in CCSU policies. For additional information, please consult the CCSU policy at https://www.ccsu.edu/diversity/policies/index.html. All faculty members and staff have a duty to report incidents of sexual harassment including sexual misconduct, intimate partner violence and stalking to Pamela Whitley, Title IX Officer, Office of Equity & Inclusion, Davidson Hall, 119. To file a report, contact: Equity & Inclusion (860-832-1652), Student Conduct (860-832-1667) or Student Affairs (860-832-1601). For criminal complaints, contact the University Police (860-832-2375). For support and advocacy, contact: Office of Victim Advocacy at 860-832-3795, or jflanagan@ccsu.edu; Student Wellness Services at 860-832-1945 (confidential); Women’s Center at 860-832-1655; the local YWCA’s Sexual Assault Crisis Services Hotline at 860-223-1787 (confidential) and Prudence Crandall Center for Domestic Violence (confidential) at 888-774-2900 (24-hour hotline).

ACADEMIC MISCONDUCT

At Central Connecticut State University, we value personal integrity as fundamental to our interactions with each other. We believe that one of the purposes of a University education is for students learn to think critically, to develop evaluative skills, and to express their own opinions and voices. We place special weight on academic honesty in all of our intellectual pursuits because it is a value that is fundamental to academic life and scholarly practice. All members of the University community are obligated to uphold high standards of academic honesty in their scholarship and learning. Therefore, we expect students to take personal responsibility for their intellectual work and to respect and acknowledge the ideas of others. Academic honesty means doing one's own work and giving proper credit to the work and ideas of others. It is the responsibility of each student to become familiar with what constitutes academic dishonesty and plagiarism and to avoid all forms of cheating and plagiarism.

According to the Student Code of Conduct and Statement of Judicial Procedures, academic misconduct “includes, but is not limited to, providing or receiving assistance from another, in a manner not authorized by the instructor, in the creation of work to be submitted for academic evaluation (including papers, projects and examinations).”

“Plagiarism is defined as presenting, as one’s own, the ideas or words of another person, for academic evaluation, without proper acknowledgment. Plagiarism includes, but is not limited to: (i)
copying sentences, phrases, paragraphs, tables, figures, or data directly or in slightly modified form from a book, article, or other academic source without using quotation marks or giving proper acknowledgment to the original author or source; (ii) copying information from Internet Web sites and submitting it as one’s own work; (iii) buying papers for the purpose of turning them in as one’s own work; and (iv) selling or lending papers to another person for submission by that other person, for academic evaluation, as his or her own work.”

Examples of Academic Misconduct

Exams:

- Copying from another person's paper or receiving unauthorized aid from another person during an examination;
- Use of unauthorized materials or devices during an examination or any other form of academic evaluation and grading; e.g., use of signals, notes, books, or calculators during an examination when the instructor has not approved their use;
- Knowingly allowing another person to copy from one’s paper during an examination;

Improper Behavior:

- Use of another person as a substitute in any form of academic evaluation or acting as a substitute for another person in any form of academic evaluation. e.g., a student cannot have another person take an examination for him/her;
- Acquisition or distribution of improperly acquired examinations; e.g., stealing examinations before the test period or taking a copy of an examination from a testing room without the permission of the instructor; (Examinations which have been distributed by an instructor are legitimate study tools);
- Submission of another's material as one’s own for academic evaluation;
- Preparation of work for another student to submit for academic evaluation;
- Unauthorized collaboration in the preparation of materials to be submitted for academic evaluation; e.g., working with another student on an assignment when the instructor has not authorized working together;
- Submission of the same work, or substantially similar work, in more than one course without prior consent of the evaluating instructor(s);
- Disruption in classroom, lab, or research and study areas; any conduct or actions that grossly or persistently interferes with the academic process. (See the CSU, Rights and Responsibilities, "Proscribed Conduct," No. 7, CCSU Student Handbook.)

Falsification or Misuse of Academic Information:

- Falsification or misrepresentation of one’s own academic record or that of anyone else; e.g., altering a transcript for admission, hacking into the University's computer system and changing a grade, having another student take an examination in one’s place, signing someone else's name to an attendance sheet.
- Unauthorized use of information in University computer records or the computer files of other students (see Computer Use Policy);
- Using unauthorized materials or fabricated data in an academic exercise; e.g., falsifying data in a research paper or laboratory activity; conducting research on human or animal subjects without review by the appropriate panel or supervisor.

Plagiarism:
• Copying sentences, phrases, paragraphs, tables, figures or data directly or in slightly modified form from a book, article, or other academic source without using quotation marks or giving proper acknowledgment to the original author or source.
• Copying information from internet websites and submitting it as one's own work;
• Buying papers for the purpose of turning them in as one's own work;
• Selling or lending of papers for the purpose of violating academic honesty policies (this may also be an academic crime, see Connecticut General Statutes, §53-392a.)

How to Avoid Plagiarism

Plagiarism is presenting another person’s work without acknowledgements, whether in the same or in slightly modified form. In academic practice this is regarded as theft, intended to gain undeserved credit. Like other forms of academic dishonesty, plagiarism is cheating. To academicians, a well-documented paper is more impressive than one which arouses the suspicion of a reader familiar with the student's work and alert to echoes from other writers. The proper use of outside sources does not necessarily mean that a paper is lacking in originality, nor does the presence of quotation marks in the text. In fact, the purpose of research and documentation is to share useful information with the reader. The penalties for plagiarism greatly exceed the unlikely reward of gaining credit by getting away with it. Students must be careful to avoid plagiarism and are responsible for learning how to present the ideas of others in their own work. For current documentation practice, consult the instructor and a style manual. When material is borrowed from another person, the source must be indicated. There are three ways in which another writer's material may appear:

1. By putting quotation marks around short passages borrowed verbatim (word for word); or by setting off from the text, without quotation marks, for longer quotations.
2. By precis; condensing part of a writer's argument.
3. By paraphrase: interpretation of a writer's ideas.

All three must be acknowledged either in footnotes or informally in the text.

This material is adopted from the original Policy on Academic Misconduct that was approved by the Faculty Senate on 11/05/01, which is superseded by the Disciplinary Procedures for Academic Misconduct approved by the Faculty Senate on 5/10/10 and amended on 2/14/11. This material is provided as a resource for understanding and preventing academic misconduct.