Central Connecticut State University  
Department of Mathematical Sciences

STAT 201  Business Statistics II  Spring 2021  
Section 05  Monday & Wednesday  1:40pm – 2:55pm  
ONLINE

PREREQUISITE
STAT 200 or equivalent (C- or higher).

CATALOG DESCRIPTION
Application of statistical methods used for a description and analysis of business problems. The development of analytical skills is enhanced by use of one of the widely available statistical packages. Topics include continuation of hypothesis testing, multiple regression and correlation analysis, residual analysis, variable selection techniques, analysis of variance and design of experiments, goodness of fit, and tests of independence. No credit given to students with credit for STAT 216, STAT 416 or STAT 453.

COURSE DESCRIPTION
This is the second course in statistics for students who are interested in how statistical analyses can be used to answer research questions in business. Our focus will be on some of the most widely used statistical methods that are available in business, 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
One of the primary goals in this course is to get you familiar with how to interpret and conduct quantitative research. We will continue notions of descriptive statistics, distributions, probability, inferential statistics, and regression modelling. Other topics may be added based on student interest and background. 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. Gurbakhshash Singh  
Office: Marcus White 107 (MW107)  
Phone: (860) 832-2834  
E-mail: gsingh@ccsu.edu  
My office hours for the Spring 2021 semester are:  
Monday 10:00am-11:00am & 3:00pm – 4:00pm (WebEx)  
Tuesday/Thursday 1:00pm – 3:00pm (WebEx)
GRADES

Grades will be based strictly on the following criteria:

- Two Examinations (20% each)
- Homework Assignments (35%)
- Attendance (50%+) (5%)
- Final Project (20%)

The letter Grades are determined as follows:

- A 93+
- A– 90 – 92
- B+ 87 – 89
- B 83 – 86
- B– 80 – 82
- C+ 77 – 79
- C 73 – 76
- C– 70 – 72
- D+ 67 – 69
- D 63 – 66
- D– 60 – 62
- F 0 – 59

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).

The Final Project is a problem based on a real-world data. You will also be asked to go beyond the methodology and assess assumptions and limitations of research questions or data.

Homework assignment will be given regularly on Blackboard. You must submit prior to the deadline listed.

All homework and exams are open book and open notes. Assistance is not allowed on any exams or homework. Anyone violating this will face academic misconduct procedures. If you miss a submission deadline, you will receive the grade of 0 for that assignment or exam.

The final exam is scheduled for Wednesday, May 12, 2021 from 1:00pm – 3:00pm. You can use a calculator and notes.

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. 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.

Note the last day to withdraw without instructor permission is Monday April 19, 2021.
COURSE ETIQUETTE

All class participants will act appropriately at all times. I expect that students will work together to create a productive learning environment that includes giving others a chance to speak and respecting the rights and opinions of others. Excessive chatting and interruptions during class is a distraction to others who are trying to learn. Students who are disruptive or who do not act appropriately will be reported to the Office of Student Conduct.

Lectures will be given using WebEx. A link will be provided to you on Blackboard for attending the lecture. Please mute your microphone throughout the lecture and unmute when you have a question or comment. Using your webcam is optional during lecture but will be required for exams.

COMPUTING AND DATA ANALYSIS

Statistical computing and data analysis are an integral part of statistical inference. We will be using Excel throughout the course. Instructions for downloading Excel can be found on Blackboard in the “Excel: Installing” section. You can expect there to be some amount of homework that will require you to use this software.

TENTATIVE LIST OF COURSE TOPICS

- Review Chapters 1-8 (key concepts – variables, graphs, probability, sampling distribution, confidence intervals)
- Chapter 9 Hypothesis Tests
- Chapter 10 Inference about means and proportions with two populations
- Chapter 12 Comparing multiple proportions, test of independence and goodness of fit
- Chapter 13 Experimental design and analysis of variance
- Chapter 14 Simple linear regression
- Chapter 15 Multiple regression
- Chapter 11*, 16*, 21* (*-time permitting)

RESOURCES AVAILABLE

1. If you need help, take advantage of the instructor's office hours. Do not wait until just before the first test to do so.
2. Free tutoring is available in The Learning Center - located in DiLoreto Hall Room D316. They can be reached at (860) 832-1900. A schedule for the hours the Center is open will be posted soon after the beginning of the semester.
3. A list of private tutors for hire is available in the Math Department office, Room 128 Marcus White, (860) 832-2835.

STATEMENT ON DISCRIMINATION, HARRASSMENT, AND MISCONDUCT

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 about 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.

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 or 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.

What is Academic Misconduct?

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.)