Goals of course: Nonparametric statistics is an alternative way to do hypothesis testing, estimation, and confidence intervals. This class will strengthen your existing statistical skills by giving you a fresh perspective on the common normal-based statistical theory. By the end of this semester you’ll have gained practical experience with (1) using the software package, R, to analyze data sets and (2) presenting and explaining statistical ideas to others.

Hybrid Class: This class emphasizes using software because that is a skill that employers want to see. This is a hybrid class and we’ll live stream on Thursdays for lectures, R demos, discussing homework, and student presentations. Instead of class on Tuesdays, we’ll use discussion boards (1) to help each other fix programs that don’t work and (2) share and discuss ideas on programming.

Instructor:
Dr. Roger Bilisoly
Office: Marcus White 318
Phone: 860-832-2852
Email: BilisolyR@CCSU.edu
Because of the pandemic, the best way to contact me this semester is by email.

Office Hours and Other Appointments:
This semester, all lectures, office hours, and meetings outside class are online. Office hours during the semester are below. Office hours during final’s week will be announced toward the end of the semester.

Mondays, 3:00-5:00 pm
Tuesdays, 4:55-5:55 pm
Thursdays, 12:05-2:05 pm


Topics Covered:
- Learning how to use R.
- Comparing parametric vs. nonparametric statistics.
- Learning the base R nonparametric tests: binom.test(), chisq.test(), cor.test(), fisher.test(), friedman.test(), kruskal.test(), ks.test(), and wilcox.test.
- Simulation using R.

Prerequisites: STAT 201 (Business Statistics II), or STAT 216 (Statistics for Behavioral Sciences II), or STAT 416 (Mathematical Statistics II)
Homework: For homework, we’ll create a Homework Wiki. The list of problems is given on the class web page, which will be randomly assigned so that each problem (or set of related problems) has two people. The primary person will post their solution, code, and explanation, and the secondary person will double check the primary person’s solution. However, I encourage everyone to look at all problems because the take-home midterm will have similar problems. Also, any person can comment on any solution. Finally, I have posted a solution as an example.

Grading: R homework (20%), take-home midterm (40%), final project (40%).

Once you get your course grade, if you have questions or concerns about it, you must contact me within one calendar year.

Undergraduate midterm: The exam is take-home, open book, open notes, open resources. However, you are not allowed to get help from other people. The date is on the class web page.

Undergraduate final project: You have your choice between two projects. The first is making an 8-12-minute PowerPoint presentation on a dataset of interest to you. You will email me a copy and give an online presentation to the class. If the presentation is too short or long, your presentation grade will be reduced. Further details will be given later in the semester. Presentations will be given in 15th week and/or final’s week.

The second is a statistical analysis on a topic I will pick later in the semester. Details will be given after the midterm.

University’s Academic Integrity Policy: It is your responsibility to know the Student Code of Conduct (see http://web.ecsu.edu/studentconduct/codeofconduct.asp) and to read the Academic Integrity Website (see http://www.ecsu.edu/academicintegrity/). Some examples of misconduct are as follows: copying from another student’s exam; allowing someone to copy from your exam; using unauthorized materials during a test; taking an exam out of the classroom during a test; and disrupting class. However, for a thorough discussion, see these two links.

Withdrawing from Class: The last day to easily withdraw (receive a grade of W) from a course is November 17, 2020. Please consult with your academic advisor prior to deciding to withdraw. Cessation of attendance, notice only to the instructor, or telephone calls to the Enrollment Center does not count as an official notice of your intention to drop the course. After the above date, withdrawals require approval of both the department chair and me.

Resources Available: If you need help at some point this semester, remember that (1) I have online office hours, (2) the Learning Center, https://web.ecsu.edu/tlc/tutoring/default.asp, has free online tutoring for STAT 215, and (3) other students in this class are a potential resource for group studying and problem solving.

Disability Statement: Please contact me privately to discuss your specific needs if you believe you need course accommodations based on the impact of a disability, medical condition, or if you have emergency medical information to share. I must have a copy of the accommodation letter from Student Disability Services in order to arrange your class accommodations. Contact Student Disability Services, if you are not already registered with them. They maintain confidential documentation of your disability and will assist you in coordinating reasonable accommodations for this class.
**Statement on Discrimination and Harassment:** 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 this should contact the Office of Equity and Inclusion at 860-832-1652 or https://www.ccsu.edu/diversity/, Student Affairs at 860-832-1601, or his/her faculty member.

**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 or stalking, as defined in CCSU policies. For additional information, please consult the CCSU policies at http://www.ccsu.edu/diversity/policies/index.html.

**To file a report, contact:** Equity and Inclusion (860-832-1652); Student Affairs (860-832-1601); Student Rights and Responsibilities (860-832-1667) or the University Police (860-832-2375).

**For support and advocacy, contact:** The Victim Advocate at 860-832-3795; Student Wellness Services at 860-832-1926, the 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). For more information, see https://web.ccsu.edu/studentaffairs/resources/files/HowtoHelpBooklet2019.pdf.