

STAT 614 – Applied Statistics, Fall 2021

Instructor: Carly Metcalfe

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Office Hours:

Online – Monday/Wednesday/Friday 11:00am – 12:00pm

- <https://rit.zoom.us/j/92441314306>

Campus – Monday/Wednesday 12:00pm – 1:00pm

Class: Wednesday 5:00pm – 7:50pm GOS-2345

Course Description

Statistical tools for modern data analysis can be used across a range of industries to help you guide organizational, societal and scientific advances. This course is designed to provide an introduction to the tools and techniques to accomplish this. Topics covered will include continuous and discrete distributions, descriptive statistics, hypothesis testing, power, estimation, confidence intervals, regression, one-way ANOVA and Chi-square tests.

Class Expectations

You are expected to come to class on time, every time. Success in the course is highly correlated with lecture attendance. While in the classroom, it is expected that you will refrain from texting and other online activities. You have the option to use a graphing calculator and/or laptop in this course, I suggest having it accessible for classes.

Textbook

Probability and Statistics for Engineering and the Sciences, 9th Edition, Jay L. Devore

Course Prerequisites

MATH-251 or equivalent.

Grading Policy

Homework: 25%

Project: 15%

Midterm: 30%

Final Exam: 30%

A>90%, B>80%, C>70%, D>60%, F<60%

The +/- system may be used for those students whose averages are truly borderline at the end of the semester.

Homework

Problem sets are generally assigned weekly. Assignments are due before class on Wednesdays. Late assignments will NOT be accepted without permission in ADVANCE. The lowest homework grade will be dropped. All homework assignments containing equations or any symbols of any sort must be done in some sort of equation editor package. I suggest Microsoft equation editor, Tex or math type.

Project

The term project consists of finding a real-world dataset and demonstrating an analysis discussed in this class. You must then submit a report summarizing your data and analysis. The data set must be “real”; that is, you can’t use data from a statistics textbook. Good sources of data include research projects, data collected as part of thesis research, data from your work environment (if you’re not a full-time student), data published in a journal article, or there are lots of datasets online (data.gov, kaggle.com, espn.com, etc.).

Exams

There will be a midterm and a final exam. Both exams will be administered during class. They are open book, open notes, open software, you can use almost any resource other than another human being. You cannot work with anyone else; you cannot use Chegg or any other online resource to perform the work for you.

Software

We (I) will be using JMP Pro in this class (pronounced jump). You can download JMP Pro to your computer from the [ITS website](#) - this is free for RIT students. You are welcome to use other software (R, minitab, matlab, python, etc.), but I will be demonstrating class examples using JMP. You will need to use some sort of statistical software (package) for this course.

Student Academic Integrity:

I expect that you will conduct yourself with honesty and integrity.

“As members of an academic community, both students and faculty share responsibility for maintaining high standards of personal and professional integrity. If a student violates these standards, the Academic Integrity Process affords a fair resolution.”

Further details can be found at:

- <https://www.rit.edu/academicaffairs/policiesmanual/d080>
- <https://www.rit.edu/academicaffairs/policiesmanual/p030>

Counseling and Psychological Services

Many students at RIT face personal challenges or have psychological needs that may interfere with their academic progress, social development, or emotional wellbeing. The university offers a variety of confidential services to help you through difficult times, including individual and group counseling, crisis intervention, consultations, online chats, and mental health screenings.

These services are provided by staff who welcome all students and embrace a philosophy respectful of clients' cultural and religious backgrounds, and sensitive to differences in race, ability, gender identity and sexual orientation.

Located on the second floor of the August Center building (above the Student Health Center), Counseling and Psychological Services provides confidential and personalized services to meet the mental health needs of currently enrolled, undergraduate and graduate students on the Henrietta campus.

Our mission is to enhance the RIT student potential for learning and success and to promote the emotional health and well-being of the campus community through:

1. Providing responsive, empirically-based, and culturally competent mental health services that include:
 - Short-term individual psychotherapy
 - Group counseling and psychotherapy
 - Urgent Care crisis intervention
 - Assessment and evaluation
 - Psychiatric services
2. Providing graduate clinical training in counseling, psychotherapy and college mental health
3. Providing campus-wide consultation and education

Campus Location: 2100 August Center, second floor

Phone: During Business Hours: 585-475-2261

After Business Hours, Weekends/Holidays: 855-436-1245

Fax: 585-475-6548

Email: caps@rit.edu

NOTE: DO NOT USE E-MAIL IN AN EMERGENCY SITUATION, since you cannot be assured that a counselor will open it at your time of need.

Emergency Contacts:

For urgent matters during business hours, contact Counseling and Psychological Services at 585-475-2261.

For urgent matters that cannot wait for business hours, call 1-855-436-1245 to speak with a mental health provider or call Public Safety at 585-475-3333.

National Suicide Hotline: 1 800 273-8255

Crisis Text Line: Text HOME to 741741