STAT 333 (Spring 2025) Applied Regression Analysis

Classes: Professor: E-mail: Office Hours: Zoom office: Class materials: Credits:	TuTh 11:00PM - 12:15PM Karl Rohe karlrohe@stat.wisc.edu Friday 2:30 and by appointment; all in zoom room. https://uwmadison.zoom.us/my/karlrohe http://pages.stat.wisc.edu/~karlrohe/lr333/main.html 3.0	Room: Office:	Plant Sci 108 Medical Sciences Center 6110
TA (333): E-mail: Office Hours?: Office Hours?: Zoom link:	Sixu Li sli739@wisc.edu Wednesday 2:30 – 4:00 pm at MSC Room 6190 Friday 3:30 – 5:00 pm at MSC Room 1217C https://uwmadison.zoom.us/j/2108479541 (if needed) Section 311 meets in Social Work 110. Section 312 meets in Social Work 114. Section 313 meets in Social Work 106.		Mondays 9:55 - 10:45 am. Mondays 8:50 - 9:40 am. Mondays 2:25 – 3:15 pm.
Course Objectives:	This course provides a base of understanding in the methods of The ability to independently identify applications, apply the t	of regression	on and their applications.
Participation:	municate the findings will be stressed. In this course, the lectures are the primary material. You are expected to come and attend class. While we have two text books that we will consult, these are secondary sources. Attendance is mandatory; by this, I mean that I expect you to show up. I understand that you might not be able to make some courses due to obligations; I do not think you are a bad person if you miss class! I will take attendance roughly five times during the course at random classes; these are free points if you show up. You can miss one of those without losing any points. I expect you to take handwritten notes: see Exams and notes. As a courtesy to me I ask that you do not use laptops in class unless		
Text:	we are doing something together with laptops. We will use "Introduction to Statistical Learning with B", by Ja	mes. Witte	en. Hastie, and Tibshirani.
	referred to as ISLR. You may find ISLR at goo.gl/Pi5zs8. P will also consult "R for Data Science" (r4ds) which is available	rint versic	ons are also available. We ://r4ds.hadley.nz.
Homeworks:	Assignments should be neat and well organized. Homework st and complied to either a html or pdf. The content of the ht occurrences where there are issues, the Rmarkdown might be submitted through Canvas, generally due on Wednesdays at mi	hould be o ml/pdf wi be consult dnight. T	completed in Rmarkdown Ill be graded, and in rare ed. Assignments will be here is the possibility of a
Computing:	small number of quizzes and they would count as homeworks. We will make extensive use of the software R. It is assumed tha R (e.g. what would be gained in the prerequisites). The penulti ISLR is devoted to the R code necessary to perform the analysis section will focus on these steps. Moreover, r4ds is primarily al we will use this tartbook for these particular	t you are i imate sections es describ- pout using	familiar with the basics of ion within each chapter of ed in the text. Discussion ; "the tidyverse" in R and
Project:	There will be two projects. See "Topics Outline" for a schedule	e. More de	etails will be forthcoming.
Exams:	You can bring any handwritten notes to any exam. I would e class that would be helpful during the exam. There will be to (during the 7th week of class) and a final exam. Our final exam	encourage wo exams. n is sched	you to take notes during An in-class midterm on uled for . Location TBD.
Grading:	Homework is worth a total 200 points. Attendance/participat worth 200 points. The final project is worth 400 points. The fi 930 is an A. Over 900 is at least an AB. Over 850 at least a B is at least a C. Over 700 is at least a D.	tion is wo nal exam . Over 800	rth 100. The Midterm is is worth 100 points. Over 0 at least a BC. Over 750
Academic Honesty:	You are permitted, in fact encouraged, to talk to other stude about homework. However, you may not present other people's other students solving problems, make sure that you write up is not acceptable for one student to write a solution for another work is to be entirely your own.	nts, your work as yo your own s student t	teaching assistant, or me our own. If you work with solution independently. It o copy. – On exams, your

Academic integrity and data ethics:

By virtue of enrollment, each student agrees to uphold the high academic standards of the University of Wisconsin-Madison; academic misconduct is behavior that negatively impacts the integrity of the institution. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these previously listed acts are examples of misconduct which may result in disciplinary action. Examples of disciplinary action include, but is not limited to, failure on the assignment/course, written reprimand, disciplinary probation, suspension, or expulsion. For detailed information, please see https://conduct.students.wisc.edu/academic-misconduct/.

The members of the faculty of the Department of Statistics at UW-Madison uphold the highest ethical standards of teaching, data, and research. They expect their students to uphold the same standards of ethical conduct. Standards of ethical conduct in data analysis and data privacy are detailed on the ASA website, and include:

- Use methodology and data that are relevant and appropriate; without favoritism or prejudice; and in a manner intended to produce valid, interpretable, and reproducible results.
- Be candid about any known or suspected limitations, defects, or biases in the data that may affect the integrity or reliability of the analysis. Obviously, never modify or falsify data.
- Protect the privacy and confidentiality of research subjects and data concerning them, whether obtained from the subjects directly, other persons, or existing records.

By registering for this course, you are implicitly agreeing to conduct yourself with the utmost integrity throughout the semester.

Diversity and inclusion:

Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background-people who as students, faculty, and staff serve Wisconsin and the world. https://diversity.wisc.edu/

Accommodations for students with disabilities:

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform me of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. I will work either directly with the student or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA.

Accommodations for students with disabilities:

If you have a complaint about a TA or course instructor, you should feel free to discuss the matter directly with the TA or instructor. If the complaint is about the TA and you do not feel comfortable discussing it with him or her, you should discuss it with the course instructor. Complaints about mistakes in grading should be resolved with the instructor in the great majority of cases. If the complaint is about the instructor (other than ordinary grading questions) and you do not feel comfortable discussing it with him or her, contact the Director of Undergraduate Studies, Professor Cecile Ane, cecile.ane@wisc.edu.

If your complaint concerns sexual harassment, please see campus resources listed at

https://compliance.wisc.edu/titleix/resources/. In particular, there are a number of options to speak to someone confidentially.

If you have concerns about climate or bias in this class, or if you wish to report an incident of bias or hate that has occurred in any statistics class, you may contact the Chair of the Statistics Department Climate & Diversity Committee, Professor Jessi Cisewski-Kehe (jjkehe@wisc.edu). You may also use the University's bias incident reporting system, which you can reach at

https://doso.students.wisc.edu/services/bias-reporting-process/.

University level rules, rights, and responsibilities for students:

 $See: \ {\tt https://guide.wisc.edu/undergraduate/\#rulesrightsandresponsibilitiestext.}$