

Math 4813 (5813): Regression Analysis

Section 01, Spring Semester 2019

Instructor: Fengrong Wei

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Class Time and Place: online, Jan 5 to May 7, 2019.

Office Hours in office: By appointment.

Hours Credit: 3 hours

Prerequisites: MATH 4203

Texts:

- Textbook: Applied Linear Statistical Models, Fifth edition by Kutner, Nachtshein, Neter and Li. (McGraw-Hill)

Course Description: In this course, simple linear regression as well as multiple regression will be studied. Attention will be given to methods of model building, diagnostics for examining the appropriateness of a model, and remedial measures that may be helpful when the model is not appropriate. An understanding of introductory statistical concepts is required.

Objectives: The objective of this class is to study and analyze regression models. In this study, familiarity with hypothesis testing, confidence intervals, scatter plots, correlation coefficients, and the coefficient of determination will be necessary, after completion of this course, the student will be able to analyze and develop their own regression models.

Homework, Examinations and Grading:

- Course Orientation Quiz: There will be a quiz after reading the course syllabus worth 5 points, due Jan 15, 12:00pm at noon. (Open from Jan 5, 2019 to Jan 15, 2019.)
- Homework: There will be homework assignments after every section which are needed to be turned in before homework deadline 12:00pm at noon on due day. The deadline of each homework assignment is available in Table 1 at the end of this syllabus. The homework assignment of each section is in the corresponding lecture notes.
- Final (100 points): The final exam is **online** and **COMPREHENSIVE** for everyone. The final exam will be uploaded to CourseDen April 25, and final exam submission is open from April 25 to May 4. **The deadline for final exam submission is May 4, 2019, 12:00pm at noon.**

	5% Orientation Quiz	5pts
• Grade in Course:	65% Homework	70pts
	30% Final Exam	25pts

Grades will be assessed using the standard decade scale: 90-100=A, 80-89=B, 70-79=C, 60-69=D, <60=F.

Communications with Professor:

- Students should check their UWG email accounts on a daily basis. As UWG e-mail is the official means of communication, only UWG issued e-mail addresses will be answered by Professor. CourseDen email is not utilized by the Professor (neither read nor answered).
- Please contact me directly through my UWG email (fwei@westga.edu) for anything that is confidential or private. All e-mails to the Professor are to be sent to fwei@westga.edu. If you would like to ask questions via email, please make sure you use MATH4813 or Math 5813 as the subject line, so that I recognize that it is from one of you, and so that my spam filter do not accidentally delete your message. Emails will be answered within hours if not immediately. Although attempts will be made to reply as quickly as possible, you should not assume that all the emails sent after 10:00 PM or over the weekend will be replied on the same day. I REPLY TO ALL EMAILS. IF YOU DO NOT GET A REPLY WITHIN A 24-HOUR PERIOD, ASSUME I DID NOT RECEIVE IT AND PLEASE RESEND.
- Students with any kind of disability are encouraged to contact me at the beginning of the semester so that I can make appropriate arrangements with Disability Services.
- You can come and meet me by appointment in my office (Boyd 222). Please feel free to come and talk to me about any problems related to the course.

Graded Assignment Rules:

1. Each graded homework is due at noon, 12:00 pm (EST, at noon) on the date listed on the calendar. All assignments are available after the first day of class, WORK AHEAD. EXPECT DELAYS and/or COMPUTER PROBLEMS.
2. Students need to read the appropriate reading materials on CourseDen, textbook Chapters, and do the homework assignments. All the graded assignments will cover the topics in the lecture notes on CoursenDen.
3. **There is NO homework make up and NO Final Exam make up.**
4. I expect you to finish graded assignments on time. I do not offer partial credit, so you only have one chance of submitting the assignment correctly. Failing to do so will result in a zero on the assignment.
5. All graded assignments must be submitted on CourseDen. No additions or corrections will be accepted once assignments have been submitted for grading. If an assignment is submitted in a format that I am unable to open, you will not have the opportunity to resubmit that assignment; therefore, you will receive a zero on that assignment.
6. IT IS YOUR responsibility to keep up with (store and secure) your work. Do not store your work on a lab PC, they are regularly purged of files.
7. Students are responsible to find out about any changes in due dates and course content.
8. All work must be done individually by students. Any student caught cheating will receive a failing grade and may be reported to the Office of Student Affairs.

Extra Credit: There is no extra credit for this course.

Academic Honesty Policy:

- At the University of West Georgia we believe that academic and personal integrity are based upon honesty, trust, fairness, respect and responsibility. Students at West Georgia assume responsibility for upholding the honor code. West Georgia students pledge to refrain from engaging in acts that do not maintain academic and personal integrity. These include, but are not limited to, plagiarism, cheating, fabrication, aid of academic dishonesty, lying, bribery or threats, and stealing.

- You are responsible for the safeguarding of your computer account. Your account and network connection are for your individual use. A computer account is to be used only by the person to whom it has been issued. You are responsible for all actions originating through your account or network connection. You must not impersonate others or misrepresent or conceal your identity in electronic messages and actions.

Americans with Disabilities Act: If you are a student who is disabled as defined under the Americans with Disabilities Act and require assistance or support services, The Office of Disability Services will help you understand your rights and responsibilities under the Americans with Disabilities Act and provide you further assistance with requesting and arranging accommodations. If you need course adaptations or accommodations because of a disability or chronic illness, or if you need to make special arrangements in case the building must be evacuated, please notify your instructor using the course email system within five business days after the beginning of the course and attach a PDF copy of your Student Accommodations Report (SAR) which is available only from the Office of Disability Services. Accommodation requests require appropriate notice and paperwork.

Academic Grievances: Any student who believes that he or she has been discriminated against because of race, creed, color, sex, sexual orientation, national origin, religion, age, veteran status, or handicapped status should visit Appendix D in the Student Handbook to find the steps needed to be taken to file a claim. This can be found at <http://www.westga.edu/handbook/doc/SH-current.pdf>.

Student Rights and Responsibilities: Please carefully review the information at the following link: http://www.westga.edu/assetsDept/vpaa/Common_Language_for_Course_Syllabi.pdf. The document at this link contains important information pertaining to your rights and responsibilities in this class. Because these statements are updated as federal, state, university, and accreditation standards change, you should review the information each semester.

Additional Information:

- Information Technology Services Helpdesk at 678-839-6587
<http://www.westga.edu/its/index.5035.php>
- Distance Learning Student Guide 678-839-6248
<http://www.westga.edu/distance/distancestudents/>
- <https://www.westga.edu/UWGSyllabusPolicies>

Course Schedule	Date
Read syllabus and Orientation Quiz	Jan 5–Jan 15
Review Mathematical Probability	Jan 7–Jan 11
Section 1 Linear Regression with One Predictor Variable	Jan 15, Jan 17, Jan 22, Jan 24, Jan 29
Homework for Section 1 due Jan 31	
Section 2 Inferences in Regression and Correlation Analysis	Feb 5, Feb 7, Feb 12, Feb 14
Homework for Section 2 due Feb 19	
Section 3 Diagnostics and Remedial Measures	Feb 21, Feb 26, Feb 28
Homework for Section 3 due Mar 5	
Section 4 Simultaneous Inferences in Regression Analysis	Mar 7, Mar 12
Homework for Section 4 due Mar 14	
Section 5 Multiple Regression Part 1	Mar 26, Mar 28, Apr 2, Apr 4, Apr 9
Homework for Section 5 due Apr 11	
Section 6 Multiple Regression Part 2	Apr 16, Apr 18, Apr 23
Homework for Section 6 due Apr 25	
Review for Final exam	Apr 30
Final exam due May 4	

Table 1: Course Calendar. The instructor reserves the right to change the schedule and/or requirements.