Course Information and Policies
Statistics 512 – Spring 2011
Applied Regression Analysis

Section 01 MWF 8:30-9:20am in REC 121

Instructor: Dr. Gayla Olbricht
Office: 510 Mathematical Sciences Building (5th floor, turn left from elevator)
Office Hours: 1:30-2:30 pm, Mondays and Wednesdays
Appointments: If you cannot come to scheduled office hours, you may arrange an appointment for another time. Please be courteous and make an appointment instead of just “dropping by”. You can arrange an appointment by email.
Email: ghobbs@purdue.edu – Please put STAT 512 in the subject line.

Grader: All homework will be graded by a student grader, who may also help grade the exams. The grader will not hold office hours.

Textbook: Applied Linear Statistical Models, 5th edition, by Kutner, Neter, Nachtsheim & Li. (Required). The text is large (and heavy, sorry!) and quite wordy, but it does provide lots of examples and graphs which are helpful. I can help you figure out which parts are really important and which parts you can skim over.

Applied Statistics and the SAS Programming Language, 5th edition, by Cody and Smith (Recommended). A lighter textbook, this book provides a gentle, fairly readable introduction to the SAS Programming Language which should prove helpful during all parts of the course.

This page will be used to provide you with information relevant to the course. Such information includes the syllabus, announcements, lecture notes, homework assignments, reading assignments, data sets, dates of exams, review sheets, and changes to office hours. Please check this page regularly for updates.

Blackboard Vista: A Vista site will be available for this course. Students enrolled in this course will automatically be given access to this site (“auto-populated”). The Vista site is limited to enrolled students and thus will be used to provide restricted information such as homework solutions.

Class Time: Division 1 meets at 8:30 MWF in REC 121. I plan to begin and end every class on time. Please plan to arrive at class on time and stay the duration of the lecture. Before or after class are usually not a good time to ask lengthy questions or make appointments, since I will be busy setting up the computer, arranging handouts, etc before class, and I have to go to another class afterwards. Please email or come to office hours instead. Brief on-topic questions during class are welcomed and encouraged.

Lectures: Lecture notes will usually be displayed on the computer projection screen during class, occasionally supplemented by blackboard sketches and/or overhead transparencies. The lecture notes will be made available to you on the class web page. Usually they will be available in advance of class. We will cover roughly 2 chapters per week, so lectures will go pretty quickly. You are always welcome to ask questions if I need to slow down.
Final Grade: Your final grade will depend on the following components with these proportions: homework (30%), exam 1 (25%), exam 2 (25%), final exam (20%). The percentage grades needed to achieve an A, B, C, or D will follow approximately the following scale: 90 – 100 = A, 80 – 89 = B, 70 – 79 = C, 55 – 69 = D, 0 – 54 = F. The minimum score needed for a given letter grade could be lowered if necessary but will not be raised. Plus and minus grades may be given in borderline cases.

SAS Computer Software: We will use SAS 9 (and 8) to perform data analysis in this class. The intent of using software is to allow the computer to perform routine calculations and graphing, while we focus on choosing the appropriate analysis tools and interpreting the results. Computer software is NOT a substitute for understanding the statistical methods, and you will not have access to a computer during exams. SAS is available in the Purdue computing labs. You may also obtain a copy of SAS for your own PC for class purposes free of charge by showing your student ID in Stewart G65. Learning SAS will be one of the biggest challenges in this course, and you should be prepared to devote some time to this, especially in the first few weeks. The only way to learn how to use SAS is to try it! There are several sources of SAS help available. Make use of the SAS help system within the program to look up specific details. Another tool that should not be overlooked is the Web for finding SAS help. If you need help in person, the Statistical Consulting Service provides a software consultant in MATH G-175, M-F, 10am-4pm; also they provide a document with a nice introduction to SAS (see the link on the class website).

Reading: I expect you to read the text as we cover the material, which is about two chapters every week. It can help to read about a topic before it is covered in class. This does not mean that I expect you to learn it all on your own. Rather, your reading before the class should be a "first pass" at the subject. The first time through, I just want you to read through it quickly, in order to get a general idea of the material – the "big picture". Don't get bogged down in formulas or details; just try to get a rough idea of the material and get familiar with the vocabulary. This will prepare you for what is to come in the class, and will make the class easier to follow. If, as you are reading, you find something hard to understand, don't be alarmed or discouraged. Just make a note of any parts you found confusing, or any questions that occur to you as you read. Often, you will find that those questions are cleared up in the following class. If not, please ask during class! Later, as you are working on problem sets and studying for tests, you will find it helpful to read the material again. This time, read at a much more detailed level. It will be a lot easier to follow then, since you have already covered the material in class. Repetition and practice are important learning tools.

Examinations: There will be two midterm examinations. The midterm examinations will be held during the evening. The first will (tentatively) take place during the week of February 21st; the second will (tentatively) take place during the week of March 28th. Two classes will be cancelled to compensate for the evening exams and these dates will be announced later in the semester. The final exam date will be decided by the university. Each examination will have both mathematical and conceptual (written) components.

In the event you must miss an exam for a university validated reason such as illness, university documented absence, or death in your family, you must (a) notify me by email or in person at least one week prior to the exam date AND (b) provide appropriate documentation in order to receive a makeup exam. If you are missing the exam due to an emergency, you must email me with details of your situation within 24 hours of the scheduled exam time and follow up with appropriate documentation. Also, please note that airline schedules, planned family trips, or work do not constitute valid reasons to receive a makeup exam – if you schedule something before the final exam schedule is published, you do so at your own risk.

Homework: Homework will be assigned on most Fridays and due the next Friday in class, by 8:30 am (at the beginning of class). Please check my web page for homework assignments. If you can not make the
class, please make arrangements with me prior to the homework due date. I will post the solution sometime after Friday's class. Homework solutions will be posted on Blackboard (accessible only to registered students).

My hope is that the graded homework will be returned by the grader within one week. Late homework will not be accepted under any circumstances (late = after 8:30am on due date). To allow for illness, family emergencies, conference travel, etc., your lowest two homework grades will be dropped.

Please do not pad your homework with endless printouts of SAS output. Only hand in those parts of the output that are directly relevant to your solution. You should edit any SAS output you plan to hand in by pasting it into an editor such as MS-Word, and getting rid of extra space or unnecessary output. It is helpful to circle or highlight the portions of the output to which you refer in your solution. As a rule of thumb, only hand in what you actually expect the grader to read. SAS output should be pasted into your solution as you are answering the questions. Your SAS input file should be attached at the end of the homework. The input is not given a grade per se, but it can be helpful to the grader in trying to figure out what you did wrong and in assigning partial credit.

Homework performs four vital functions in this course:
   i. it gives you an opportunity to practice what you have learned and to understand concepts by actually using them;
   ii. it gives you feedback on what you understand and on what areas need more work;
   iii. it helps you learn SAS
   iv. it contributes to your final grade.

You are encouraged to use homework as a learning tool. It is important to start work on it early, so as to have an opportunity to ask for help from the instructor if necessary during office hours. You may also wish to discuss homework with your classmates. However, outright copying is unacceptable, as well as pointless, and will be penalized. A good rule of thumb is that it is fine to talk together about how to do a problem, but then go do it and write it up yourself, possibly comparing answers afterwards. Do not copy another person's SAS code, but it is okay to ask someone to help you find your mistake. Remember that if you copy from a classmate without understanding it, only your classmate will pass the exam. If blatant copying is detected, all parties involved (copier and copied) will receive a score of zero for that assignment.

Homework must always be stapled if it is longer than one page. If it is not stapled, only the first page will be graded. The first page of each homework set handed in must contain the following information:
   i. your name
   ii. my name (Dr. Olbricht)
   iii. the number of the homework set (e.g. Homework #2)
   iv. the due date
   v. Stat 512

This information is necessary to ensure that your grades are recorded correctly and that your homework is returned to you promptly. Remember that it is a challenge for both instructor and grader to keep track of 12 or more homework sets throughout the course. The grader also grades other courses and we don’t want to get them mixed up. Please make it easy for us to not lose your homework or grades!

Re-grades: Since the professor and grader are fallible human beings, occasionally errors will occur in grading. For this reason, students are able to request that such an error be corrected. Two types of error can occur. A type I error occurs if points are deducted for a correct solution. A type II error occurs if sufficient points are not deducted for an incorrect solution. Any request for a re-grade must be made in writing and must abide by the following procedure, or it will be ignored.
1) Attach a new piece of paper to the front of the work to be re-graded. This piece of paper should contain the following information:
   a) the word "re-grade" displayed prominently
   b) your name and section
   c) which homework set or midterm is involved (e.g. Homework #6)
   d) the relevant problem number(s) (e.g. Problem 7.23)
   e) a detailed explanation of the suspected error ("Please look at problem 4" is not considered a detailed explanation).
   f) the date of resubmission
2) Print out the appropriate pages of the solutions from the web page, and circle the relevant piece of the solution. Attach this behind the work to be re-graded.
3) Give this packet to me. A verbal explanation is neither necessary nor appropriate since a) I won’t remember it, and b) the grader will do the regrading anyway.

No exceptions will be made to this policy. The grader will be responsible for the re-grading and you will receive a written note from the grader explaining the outcome. I will review the grader’s response before returning it to you, to make sure the problem was resolved. Re-grade requests should be submitted within two weeks of the date the assignment is returned, with the last re-grade deadline during the last week of classes. If the above procedure is not followed, the re-grade request will be denied. Any rudeness accompanying a re-grade request will result in the assessment of a "technical foul" penalty equal to the total number of points for the disputed question. Please also note that a re-grade request is different from the questions "Can you help me figure out what I did wrong here?", or “I don’t understand the posted solutions”, which are entirely appropriate for office hours.

Campus Emergencies: In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances. Here are ways to get information about changes in this course: course webpage or by e-mailing me. General information about a campus emergency can be found on the Purdue website: www.purdue.edu.

General Comments: This is not a math course. However, as in many other science courses, we will make use of mathematics quite extensively, and most questions will have some quantitative component. The use of SAS software will simplify many of the more computational tasks. However, the primary focus of this course is on learning how to do good science. Doing science well requires, among other things, a good experimental design and a correct and appropriate statistical analysis of the scientific data. Therefore, knowing when and when not to use a certain statistical method, and why, and how to interpret the results, are all at least as important as knowing how to actually carry out the calculations. In order to do well in this course, you must be prepared to master all of these areas.

My Expectations: I expect that you will work hard in this course. I expect you to come to each class prepared to listen and understand. I expect that you will ask questions if things are not clear. I expect that you will use the textbook and other resources, and will read material as assigned. I expect you to attend class regularly, and that you will promptly catch up on any classes you miss. I expect you to make an honest attempt at assigned homework, and to ask for help when you need it. I expect you to behave appropriately and politely towards me and your fellow classmates at all times. This includes remaining quiet when others are speaking and being patient with the questions of others. I expect you not to misrepresent the work of others as your own, and to neither give nor receive unauthorized aid in examinations or homework.
Your Expectations: You can expect that I will work hard in this course. I will do my best to explain and illustrate the material in a way that makes sense to you. Sometimes I will need help and feedback from you in order to figure out the best way to explain something. I will listen to your questions with respect and never ridicule; if the answer to your question is beyond the scope of this course, I would be happy to discuss it with you outside of class. I will give you fair notice of all assignments and tests and do my best to let you know what is required of you. I will attempt to evaluate your work fairly and assign grades appropriate to your performance. If you have other expectations, hopes, or suggestions, please let me know. I will do my best to make this course a success for all of us.