Course: STAT 604: Special Problems in Statistical Computations and Analysis – Fall 2016

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Office: Off-campus (Use email if individual consultation is required.)

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Scope: The intention of this class is that you become a good SAS programmer, learn enough SAS programming to pass the basic SAS certification exam, and that you learn enough of the basics of R programming to get through the R programming aspect of your graduate statistics courses here at TAMU.

Lectures & Interaction: Lectures will be conducted remotely via the Blackboard Collaborate web conferencing software on Tuesday and Thursday from 5:30 to 6:45 pm. (All references to time related to this course are for the Central Time Zone.) For your convenience, links to the Blackboard Collaborate sessions will be provided in the **Online Sessions** section on eCampus. Section 600 students will attend the lecture in room 457H of Blocker. Each class session will be interactive. Both local and distance students will be individually logged into Collaborate. All students will have the opportunity to ask questions at any time during the lecture period. Lectures will also be recorded and placed on eCampus for viewing by those unable to attend the live lecture and for later review. There will be no separate Q&A session for this course. Because of the large number of students, all questions not directly related to the current lecture must be posted to the eCampus discussion board for this course. Any questions that were not answered adequately on the discussion board of eCampus will be addressed during the next lecture session.

Almost all of the interaction between students and instructor will take place on the eCampus discussion board. Please post all course related questions there. Do not send an email directly to the instructor with a general course related question. There will be separate topics on the discussion board for lectures, assignments and exams. Please make sure you post under the appropriate topic on the discussion board for this class. Responses to your questions on the discussion board may help numerous students at one time. As a member of this class, you are expected to contribute to the discussion whenever you can provide assistance to your classmates. However, program code should never be posted in either questions or responses. Your answers to posted questions should be in the form of questions or suggestions that will point your classmates in the direction they need to go without giving them the explicit solution to their problem.

Textbooks: You are not required to purchase a textbook for this course. However, reading is still a required part of this class. The texts upon which this course is based can be found in the R Manuals, Prog 1 SAS Notes, and Prog 2 SAS Notes folders under the **Course Material** section in eCampus. Exam

questions will be based on these materials and the lectures. The material in the following textbook corresponds very closely to the R portion of this course: Norman Matloff. *The Art of R Programming*. (2011) No Starch Press. ISBN: 978-1-59327-384-2. The reading schedule includes the sections of this book that are relevant to each lecture. However, you are not obligated to purchase this book. No test questions will be drawn directly from this book since all students may not have a copy. The bookstore was not requested to stock this book so you will need to order it through your favorite book supplier. Should you feel you need additional resources, the following are suggestions:

- Michael J. Crawley. *The R Book*. (2012 or 2007) Wiley. ISBN: 978-0-470-97392-9 or 978-0-470-51024-7
- Phil Spector. *Data Manipulation with R*. (2008) Springer. ISBN: 978-0-387-74730-9
- Lora Delwiche and Susan Slaughter. *The Little SAS Book: A Primer, Fifth Edition*. (2012) SAS Institute. ISBN: 978-1-61290-343-9
- Ron Cody. *Learning SAS by Example: A Programmer's Guide*. (2007) SAS Institute. ISBN: 978-1-59994-165-3

Required Software:

NOTE: Both R and SAS are available for a number of operating systems. However, the exams, lectures, and assignments in this class will be based on their behavior in the Windows environment.

R for Windows, Mac or Linux. R can be downloaded free and installed from the following website: http://cran.r-project.org/

SAS® Foundation or SAS Studio

- The use of SAS Enterprise Guide is **NOT** permitted in this class. If you already have access to a license for SAS Foundation version 9.3 or higher, you may use that software to complete the assignments for this class.
- If you have a compatible PC and would like to obtain a full version of SAS Foundation to run on your PC you may obtain a license from TAMU. If you choose this option, you need to order the software immediately in order to be sure you have it installed by the time we need it for assignments. Ordering instructions will be posted on eCampus. Refer to the following web site to determine if your computer meets the SAS system requirements: http://support.sas.com/resources/sysreq/
- SAS Studio is a relatively new product that will allow you to have SAS functionality on a system that would not otherwise support SAS such as Mac or Linux. This product will be downloaded from SAS, installed on your computer, and run from within a web browser. Instructions for downloading SASStudio can be found under the **General Information** section on eCampus.

Distiller Software – You will need a software package of your choosing that is capable of converting text documents into PDF. (Note: Recent versions of Microsoft Office have this capability and will suffice.)

Course Grade:

EXAMS - There will be three exams and no makeup exams. More information on the exams will be given later in this syllabus. Each exam will count for 20% of the final grade. If you make a better score on the final exam than you did on Exam 2, the final exam score can be counted a second time to replace the lower Exam 2 grade. If you take the Base SAS Certification exam prior to the date of the final exam and are satisfied with the score you receive, you may use the certification score in place of the final exam and be exempted from taking the final exam. When a certification score is used in place of a final exam score, it replaces the final in every way. Please read the full policy for using certification scores. This policy is in a separate document on eCampus.

HOMEWORK - Homework assignments will count for 40% of the course grade. Assignment instructions will be placed on eCampus. All assignment responses must be uploaded to WebAssign (http://www.webassign.net). Do not email your homework files to the professor or the grader as they will not be accepted. It is your responsibility to check the due dates on WebAssign and ensure that the homework is submitted on time. Assignments are generally due at 8:00 a.m. Central Time. WebAssign will not accept uploads after the deadline for the assignment. It is also your responsibility to ensure that your uploaded files are successfully accepted by the WebAssign software. Depending on the circumstances, late work may be accepted, at the discretion of the professor, until the solution has been released. However, late work causes additional time and effort for the grader and the professor so any late work that is accepted will automatically be assessed a 10 point penalty. If you need to request consideration for an extension, please email the professor directly. Extensions are granted within WebAssign to allow you to upload your work after the deadline.

SUMMARY

HOMEWORK	40%
EXAM I	20%
EXAM 2	20%
FINAL EXAM	20%
TOTAL	100%

Grade Calculation

90% to 100%	A
80% to <90%	B
70% to <80%	C
60% to <70%	D
Below 60%	F

NOTE: At the end of the semester, the professor will not respond to emails or posts from students begging for a higher letter grade.

Exam Policy and Schedules: All exams will be administered through WebAssign**.** All exams are "closed book" meaning that you will **NOT** be allowed to access any resources, printed or electronic, during the exam.

All students in section **600 must** take all exams in the 457H Blocker classroom during the scheduled exam time. On-campus students in section 700 will **not** be allowed to take the exam in the classroom due to capacity limits. **All students** in **section 700** who are **not receiving their complete degree in an online p**rogram (both STAT and non-STAT) **must** take the exam at the same date and time as the on-campus students. Students must verify through an email to Penny Jackson that they are receiving their complete degree in an online program in order to take the exam outside the scheduled on campus exam time. Exams will be available for approved distance students 30 minutes after the classroom exam end time and must be completed within 24 hours.

All section 700 students **must** have an exam proctor. An online proctoring service, PROCTORU, is available for those with appropriate equipment. See eCampus for the details of using this service. Proctor arrangements must be made and activated in the Proctor Management System by **September 9**. If you are using a proctor, it is strongly recommended that you open and submit the WebAssign Demo Exam with your proctor to ensure there are no problems with the network or equipment that would prevent you from submitting the regular exam.

Please note the exam dates and times provided and make any special arrangements if necessary. All times shown are for the Central time zone. Exams will be administered according to the following schedule:

Exam 1 will be administered in the classroom and to local proctored students on **October 4** from 5:30 p.m. to 6:45 p.m. It will be made available to **authorized distance students** on **October 4** at 7:15 p.m. Once you begin the exam you will have 75 minutes to complete the exam. The exam must be completed and submitted by **distance students** no later than 7:15 p.m. on **October 5**. This exam will cover all of the material and lectures pertaining to R. This is the only time you will be tested over R in this course. This exam may not be missed. There are no alternatives to taking this exam during the scheduled exam window. If you experience any problems with this exam, you must contact the professor or STAT department staff immediately to determine what remedies, if any, are available.

Exam 2 will be administered in the classroom and to **local proctored students** on **November 8** from 5:30 p.m. to 6:45 p.m. It will be made available to **authorized distance students** on **November 8** at 7:15 p.m. Once you begin the exam you will have 75 minutes to complete the exam. The exam must be completed and submitted by **distance students** no later than 7:15 p.m. on **November 9**. This exam will cover the SAS Lessons 1 through 9.

NOTE: The Final Exam is deliberately scheduled at a **different time from the University's published schedule** in order to post grades by the deadline for distance students who are also degree candidates. If this schedule conflicts with another class, please notify the professor as soon as possible to resolve the issue. The Final Exam will be administered in the classroom and to local proctored students on Monday, **December 12** from 6:00 p.m. to 8:00 p.m. It will be made available to **authorized distance students** on **December 12** at 8:30 p.m. Once you begin the exam you will have 2 hours to complete the exam. The exam must be completed and submitted by **distance students** no later than 8:30 p.m. on **December 13**. This exam will be a comprehensive SAS exam, covering the material presented in all SAS lectures. However, the primary emphasis will be the material covered in SAS Lessons 10 through 17.

Statement on Disabilities: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Office of Disabilities Services in Disability Services building at the Student Services at White Creek complex on west campus. Their phone number is 845-1637. For additional information visit http://disability.tamu.edu.

Copyright Notice: The handouts used in this course are copyrighted. By "handouts," I mean all materials generated for this class, which include but are not limited to syllabi, quizzes, exams, lab problems, in-class materials, review sheets, and additional problem sets. Because these materials are copyrighted, you do not have the right to copy the handouts, unless I expressly grant permission.

Statement on Plagiarism: As commonly defined, plagiarism consists of passing off as one's own ideas, words, writing, etc., which belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without which research cannot be safely communicated. If you have any questions regarding plagiarism, please consult the latest issue of the Texas A&M University Student Rules, under the section "Scholastic Dishonesty."

Academic Integrity Statement: "An Aggie does not lie, cheat, or steal or tolerate those who do." The Aggie Honor Council Rules and Procedures are available at the web site: http://aggiehonor.tamu.edu.

In this course, the following activities are considered to be cheating:

- Exchanging (giving or receiving) course materials with a person who is not currently enrolled as a student in this class this semester.
- Working with one or more other students to produce a single solution to an assignment and submitting a personalized copy of that solution as your own work.
- Using a code generator software or service to produce program code for homework solutions.
- Accessing anything but the exam while taking an exam.
- Any other activity that is considered to be unethical by the University or society in general.