ST 555: Statistical Programming I
2014 Summer Session I
TuWeTh 10:20 am -1:00 pm
* 1107 SAS Hall (SICL)

Professor: Dr. Reneé H. Moore
Office: SAS Hall 5220 **Email:** rhmoore@ncsu.edu
Office Hours: Thurs 2:00 – 3:00 pm or By Appointment

Teaching Assistant: Bo Ning
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Office Hours: Tues 1:30 – 2:30 pm and Friday 2:00 – 3:00 pm
Office Hours Location: 1101 SAS Hall (Tutorial Room)

Course Web Site: Course notes, homework, SAS programs, datasets, course policies, and supplemental materials will be available on the course website https://wolfware.ncsu.edu/ Students should insure that they have their Unity password to log into Moodle. Students also will submit course assignments via Moodle.

Course Prerequisite: an introductory course in statistical methods. Further training in Statistics will help in providing a perspective on why we may want to prepare the data in a particular fashion.

Course Goal: The first goal of this course will be the mastery of Base SAS programming, especially the DATA step. The second goal of this course is an introduction to R programming. In addition, the intention of this class is that you learn enough SAS for it to be helpful to you in your coursework and in your own research projects.

Required Software: SAS and R. As an NCSU student, you can obtain *SAS* for free at the following website http://software.ncsu.edu/vendor/sas/package/sas. This website will direct you on how to install SAS to your machine or access it via the Virtual Computing Lab (VCL). You can download and install R onto your machine via the following website http://cran.us.r-project.org/ . Both SAS and R will be available on the classroom machines in SICL.

Textbooks: There is no required textbook, but the following textbooks may be helpful:

- Lora Delwiche & Susan Slaughter, The Little SAS Book, SAS Institute (The third edition of this book is available online at http://www2.lib.ncsu.edu/catalog/record/NCSU1858431)
- Rebecca J. Elliott. *Learning SAS in the Computer Lab*. Second Ed. (2000) Duxbury.
- Norman Matloff, The Art of R Programming, No Starch Press, 2011.
- SAS Institute, SAS Certification Prep Guide (2nd ed), 2009
- SAS Institute, Step-By-Step Programming with Base SAS Software, 2001.

Note the majority of the SAS course notes posted on Moodle will come from SAS' Course Notes associated with the SAS Programming 1: Essentials and SAS Programming 2: Data Manipulation Techniques books.

Useful Websites: see above for links to download Required Software. The links below provide supplemental information on SAS, including information and discount on taking the SAS Basic Exam Certification:

http://www.stat.ncsu.edu/working_groups/sas/

http://software.ncsu.edu/vendor/sas/package/sas

http://support.sas.com/training/discounts/acad.html

Grades: It is the student's responsibility to be aware of his/her grades in the course and the appropriate level of work required. Your final grade in this course will depend on the following:

Item	**Percentage**
Homework and In Class Exercises (ICEs)	50
Midterm Exam Thurs June 5	20
Final Exam Tues June 24: 8:00 – 11:00 am	30
Total	100

Guaranteed course grades will be assigned as follows:

Grade	F	D	C-	C	C+	B-	B	B+	A-	A	A+
Score	<60%	60-70%	70-73%	73-77%	77-80%	80-83%	83-87%	87-90%	90-93%	93-98%	≥ 98%

Incomplete (IN) are given only as specified in university regulations.

Exams: All exams are closed book. For midterm and final exams students may use one 8 ½ X 11 page of notes (front and back). Students who are unable to attend the midterm exam for a legitimate unavoidable reason may take a make-up exam only if the student provides suitable documentation of the absence within 2 calendar days of the exam and takes the make-up within the time frame designated by Dr. Moore. The final exam must be taken at the University designated day and time.

Homework assignments: There will be homework assignments throughout the course. Most homework assignments will be delivered and submitted via Moodle. **Late homework assignments will not be accepted**. All SAS and R programs should follow the programming standards guidelines.

Working together on homework assignments to overcome obstacles is encouraged. Each student must compose and write his or her own solutions, programs, analyses, and reports. Do be sure to put your name on your assignment when you hand it in.

In-Class Exercises (ICE): In-class exercises are designed to help you better understand the material. These activities may not be announced ahead of time; there will be no make-ups. All SAS and R programs should follow the programming standards guidelines.

Attendance and Communication: Students are expected to attend all regularly scheduled meetings of the course. Students are expected to check their NCSU email regularly to receive course announcements. The appropriate time to ask for additional explanations of course material or assistance on assignments is during lecture or office hours. Course-related e-mail to the instructor or the TAs should be used sparingly, and primarily for administrative purposes.

Classroom policies: Courtesy and **Respect** in the classroom are required. Please come on time and do not start packing up before class is over. Please turn off all cell phones before class begins. Please refrain from conversations with your neighbor during class, except when you are instructed to do so during in-class exercises.

Classroom Recording: Please be advised this course is being recorded for current and potential future educational purposes. By your continued participation in this recorded course, you are providing your permission to be recorded.

Auditing: Students may register for auditor credit. Auditors must accumulate at least 80% on the weekly assignments, and attend lecture regularly. Auditors are welcome to take exams but the exam grade will not count.

Satisfactory/Unsatisfactory: With approval from Dr. Moore and student's advisor, students may register for the course as satisfactory/unsatisfactory. These students must complete all homework assignments and exams and following NCSU guidelines must achieve a C- or higher to receive a satisfactory grade. For additional information see:
http://catalog.ncsu.edu/undergraduate/academicpoliciesandprocedures/courses/grading/

Academic Misconduct: Cheating, plagiarism and other forms of academic dishonesty will not be tolerated. To create a fair and equitable environment, the instructor aggressively enforces the universities policies on academic misconduct. All exams are to be completed individually. Although working together on written assignments to overcome obstacles is encouraged, each student must compose and write his/her own analysis and reports. All cases of academic misconduct will be handled as set out in university policies. For additional information see:
http://policies.ncsu.edu/policy/pol-11-35-01

Students with disabilities: Reasonable accommodations will be made for students with verifiable disabilities. Any student who feels they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss your specific needs. In order to take advantage of available accommodations, students must register with Disability Services for Students at 1900 Student Health Center, Campus Box 7509, 515-7653. http://www.ncsu.edu/provost/offices/affirm_action/dss/ . For more information on NC State's policy on working with students with disabilities, please see
http://policies.ncsu.edu/regulation/reg-02-20-01

Feedback: Online class evaluations will be available for students to complete during the last two weeks of class. Students will receive an email message directing them to a website where they can login using their Unity ID and complete evaluations. All evaluations are confidential; instructors will never know how any one student responded to any question, and students will never know the ratings for any particular instructors. Evaluation website: https://classeval.ncsu.edu. Student help desk: classeval@ncsu.edu. Informal feedback provided to the teaching team during the course of the semester is encouraged.