Instructor: Jason A. Osborne (jaosborn@ncsu.edu)
Office location: 5214 SAS Hall
Campus Phone: (919) 515-1922
Office Hours: Tues 3pm-5pm, Thur., 5pm-6pm (subject-to-change.)

Teaching Assistant: Maggie Du (xdu8@ncsu.edu)
TA Office Hours: Wednesday 3-4:30pm, Thursday 3-4:30 pm

Prerequisite: ST555 or Base SAS certification

Course website: All materials, announcement and assignments will be posted on or submitted using moodle. An NCSU unity id and password will be required to log on to the course webpage through https://wolfware.ncsu.edu

Course Description: This course continues development of statistical programming covered in ST555. These methods include programming necessary for simulation studies, data processing and introductory text processing. In particular, PROC SQL and the MACRO facility in SAS will be introduced along with regular expressions and web-scraping. Some illustrations using the R package will also be presented.

Software Requirement: SAS and R. NCSU students may obtain SAS through the NCSU IT website: software.ncsu.edu/campus/sas/.

Textbooks (recommended):  
• SAS SQL 1: Essentials  
• SAS Macro Language 1: Essentials
Graded Coursework:

- A course gradebook will be privately visible on moodle.
- Graded work comprised of the following elements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework Assignments (8)</td>
<td>5% each, total is 40%</td>
</tr>
<tr>
<td>Midterm Exams (2)</td>
<td>20% each</td>
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<tr>
<td>Final Exam</td>
<td>20%</td>
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</table>

- Students achieving

≥ 90% of the total points will receive an A- or better  
≥ 80% of the total points will receive an B- or better  
≥ 70% of the total points will receive an C- or better  
≥ 60% of the total points will receive an D- or better

Homework: Homeworks, submitted electronically, will involve questions that require computation, explanation and programming. Discussion of one another’s homework assignments will also be required and will be graded. Code must be submitted with each assignment and these programs should adhere to standards established the online document “programming_standards.pdf”. Homeworks will be due every other Thursday and discussions will be due on the following Thursday. Note: Homeworks that are submitted within 24 hours of the due date will have a penalty of 20 points (out of 100). Homeworks more than one day late cannot be accepted.

Exams:
The first Midterm Exam must be taken on Tuesday, Feb. 21 or Wednesday, Feb. 22. The second Midterm Exam must be taken on Tuesday, March 28 or Wednesday, March 29. 
The Final exam must be taken on Monday, May 1, Tuesday, May 2 or Wed., May 3. These exams must be taken at a Distance Education Proctoring Office, or for non-residents, an approved Off-Campus Proctoring site.

Academic Integrity: Academic misconduct, such as cheating on exams will not be tolerated. Please see the NCSU policy at this link: http://policies.ncsu.edu/policy/pol-11-35-01
Course content/schedule:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Week</th>
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<tbody>
<tr>
<td>Simulation tools (some R)</td>
<td>1-4</td>
</tr>
<tr>
<td>Macro facility</td>
<td>5-9</td>
</tr>
<tr>
<td>PROC SQL</td>
<td>10-14</td>
</tr>
<tr>
<td>Advanced Programming Topics</td>
<td>15</td>
</tr>
</tbody>
</table>

Additional notes

- As we learn, we will probably have questions. The following resources are available to help us get answers and additional information:
  1. the General Discussion Forum on moodle
  2. Office hours on moodle (with Blackboard Collaborate)
  3. Email (for administrative matters only, not for explaining material)

- Disputes about grades must be put in writing within two days of receipt of the grade on any homework or exam.

- If a documented medical situation should prevent a student from taking one of the two midterm exams, the other midterm exam will count 30% and the final 30% of the course grade.