# ST 430 Course Syllabus

## ST 430 – Introduction to Regression Analysis

**Section TBD**  
**FALL 2013**  
**3 Credit Hours**

### Special Notes

Introduction to Regression Analysis/Statistics for Management and the Social Sciences II. This course is only offered in the fall.

### Course Description

Regression analysis as a flexible statistical problem solving methodology. Matrix review; variable selection; prediction; multicolinearity; model diagnostics; dummy variables; logistic and non-linear regression. Emphasizes use of computer.

### Learning Outcomes

Regression analysis as a flexible statistical problem solving methodology. Students will gain considerable experience working with data. Data from examples and problems in the text are provided on a CD provided with the text, and are also available online. Students will use SAS or other statistical software to do most homework assignments.

### Course Structure

**Instructors**

| Dr. Peter Bloomfield (Bloomfld) - Instructor  | Email: peter_bloomfield@ncsu.edu  |
| Phone: 919-515-1913  |  |
| Fax: 919-515-1169  |  |
| Office Location: 5210 Sas Hall  |  |
| Office Hours: 10:00 a.m. - 12:00 noon, Tuesdays, Statistics Tutorial Room (1101 SAS Hall)  |  |

| Priyam Das (pdas) - Instructor  | Email: pdas@ncsu.edu  |
| Phone: 919-515-1913  |  |
| Office Location: Statistics Tutorial Room (1101 SAS Hall)  |  |
| Office Hours: 2:30 - 5:30 p.m., Tuesdays  |  |

### Course Meetings

**Lecture**

- **Days:** MW  
- **Time:** 3:00pm - 4:15pm  
- **Campus:** Main  
- **Location:** G111 Caldwell Hall  
  *This meeting is required.*

### Course Materials
Textbooks

A Second Course in Statistics: Regression Analysis. - William Mendenhall and Terry Sincich
Edition: The current edition is the 7th, but you may also use the 6th edition.
Cost: Varies
This textbook is required.

Expenses

None.

Materials

None.

Requisites and Restrictions

Prerequisites

(ST 302 or ST 305) and (MA 305 or MA 405)

Co-requisites

None.

Restrictions

None.

General Education Program (GEP) Information

GEP Category

This course does not fulfill a General Education Program category.

GEP Co-requisites

This course does not fulfill a General Education Program co-requisite.

Transportation

This course will not require students to provide their own transportation. Non-scheduled class time for field trips or out-of-class activities is NOT required for this class.

Safety & Risk Assumptions

None.

Grading

Grade Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Homework</td>
<td>10%</td>
<td>The homework grade will reflect completeness and timeliness, not correctness; you are encouraged to work together to master these exercises.</td>
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<tr>
<td>Component</td>
<td>Weight</td>
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<tr>
<td>Tests/Final Exam</td>
<td>30%</td>
<td>You will take two in-class midterm tests. Each test will cover specific parts of the topics listed above. Test questions will be similar to exercises on the preceding homework assignments. See the test schedule page. The tests are closed-book; for each test, you may prepare a single page (both sides) of handwritten notes for use in the test. You will also complete a final project, and present a 5-minute summary during the scheduled final exam period. See the project information page.</td>
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**Letter Grades**

*This Course uses Standard NCSU Letter Grading:*

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>A+</td>
<td>97 ≤</td>
</tr>
<tr>
<td>A</td>
<td>93 ≤</td>
</tr>
<tr>
<td>A-</td>
<td>90 ≤</td>
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<td>87 ≤</td>
</tr>
<tr>
<td>B</td>
<td>83 ≤</td>
</tr>
<tr>
<td>B-</td>
<td>80 ≤</td>
</tr>
<tr>
<td>C+</td>
<td>77 ≤</td>
</tr>
<tr>
<td>C</td>
<td>73 ≤</td>
</tr>
<tr>
<td>C-</td>
<td>70 ≤</td>
</tr>
<tr>
<td>D+</td>
<td>67 ≤</td>
</tr>
<tr>
<td>D</td>
<td>63 ≤</td>
</tr>
<tr>
<td>D-</td>
<td>60 ≤</td>
</tr>
<tr>
<td>F</td>
<td>0 ≤</td>
</tr>
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</table>

**Requirements for Credit-Only (S/U) Grading**

In order to receive a grade of S, students are required to take all exams and quizzes, complete all assignments, and earn a grade of C- or better. Conversion from letter grading to credit only (S/U) grading is subject to university deadlines. Refer to the Registration and Records calendar for deadlines related to grading. For more details refer to [http://policies.ncsu.edu/regulation/reg-02-20-15](http://policies.ncsu.edu/regulation/reg-02-20-15).

**Requirements for Auditors (AU)**

Information about and requirements for auditing a course can be found at [http://policies.ncsu.edu/regulation/reg-02-20-04](http://policies.ncsu.edu/regulation/reg-02-20-04).

Auditors are excused from the tests, but meet all other course requirements, including timely submission of homework.

**Policies on Incomplete Grades**

If an extended deadline is not authorized by the instructor or department, an unfinished incomplete grade will automatically change to an F after either (a) the end of the next regular semester in which the student is enrolled (not including summer sessions), or (b) the end of 12 months if the student is not enrolled, whichever is shorter. Incompletes that change to F will count as an attempted course on transcripts. The burden of fulfilling an
incomplete grade is the responsibility of the student. The university policy on incomplete grades is located at http://policies.ncsu.edu/regulation/reg-02-50-3.

**Late Assignments**

Homework will be accepted late only with prior approval from the instructor.

**Attendance Policy**

For complete attendance and excused absence policies, please see http://policies.ncsu.edu/regulation/reg-02-20-03

**Absences Policy**

None.

**Makeup Work Policy**

None.

**Additional Excuses Policy**

None.

**Academic Integrity**

Students are required to comply with the university policy on academic integrity found in the Code of Student Conduct found at http://policies.ncsu.edu/policy/pol-11-35-01

**Academic Honesty**

See http://policies.ncsu.edu/policy/pol-11-35-01 for a detailed explanation of academic honesty.

**Honor Pledge**

Your signature on any test or assignment indicates "I have neither given nor received unauthorized aid on this test or assignment."

**Electronically-Hosted Course Components**

There are no electronically-hosted components for this course.

**Accommodations for Disabilities**

Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, student must register with the Disability Services Office (http://www.ncsu.edu/dso), 919-515-7653. For more information on NC State's policy on working with students with disabilities, please see the Academic Accommodations for Students with Disabilities Regulation at http://policies.ncsu.edu/regulation/reg-02-20-01.

**Non-Discrimination Policy**

NC State University provides equality of opportunity in education and employment for all students and employees. Accordingly, NC State affirms its commitment to maintain a work
environment for all employees and an academic environment for all students that is free from all forms of discrimination. Discrimination based on race, color, religion, creed, sex, national origin, age, disability, veteran status, or sexual orientation is a violation of state and federal law and/or NC State University policy and will not be tolerated. Harassment of any person (either in the form of quid pro quo or creation of a hostile environment) based on race, color, religion, creed, sex, national origin, age, disability, veteran status, or sexual orientation also is a violation of state and federal law and/or NC State University policy and will not be tolerated. Retaliation against any person who complains about discrimination is also prohibited. NC State's policies and regulations covering discrimination, harassment, and retaliation may be accessed at http://policies.ncsu.edu/policy/pol-04-25-05 or http://www.ncsu.edu/equal_op/. Any person who feels that he or she has been the subject of prohibited discrimination, harassment, or retaliation should contact the Office for Equal Opportunity (OEO) at 919-515-3148.

Course Schedule

NOTE: The course schedule is subject to change.

Lecture MW 3:00pm - 4:15pm — Course organization and scope — TBD - TBD

1. Review and introduction
2. Simple linear regression
3. Multiple regression
4. Model building and variable screening
5. Residual analysis
6. Logistic and non-linear regression