

BIOLOGICAL STATISTICS
STAT 3615, CRN: 15962
Spring 2012

Instructor: Yiming Peng
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Class: MW 2:30 – 3:45; SEIZE 300
Office: Hutcheson 403 V
Office Hours: MW 3:45-5:00 and by appointment

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Office Hour: F 9:00-10:00

Course Description and Objectives: Students taking this course typically have varying levels of mathematical abilities and academic interests. As such, I hope to provide a broad overview of and introduction to the field of statistics with a focus on descriptive and inferential statistics in a biological context. Fundamental principles, one- and two-sample parametric inference, simple linear regression, and frequency data are some of the topics that will be covered. The emphasis in the course will be on the application of statistical methods and interpretation of their results. It is my ultimate goal that you leave this course with a basic knowledge of major statistical concepts. I am more than happy to work with you to reach this end and encourage you to approach me in regards to any questions or problems you may have. Stat 3615 partially duplicates Stat 3005 and Stat 4604; only one may be taken for credit.

Materials:

Text: Baldi, Brigitte & Moore, David S. (2009). *The Practice of Statistics in the Life Sciences*. New York: W. H. Freeman and Company.
*Can be purchased online at <http://www.whfreeman.com/customstore/vt/holtzman/>

Calculator: A basic scientific calculator with statistical functions will be needed. TI-83, TI-83 Plus, TI-84, or TI-84 Plus calculators are preferred and allowed for exams as long as the memory of the calculator is cleared before each exam.

Supplemental materials:

In conjunction with the textbook, we will use three additional resources throughout the semester:

1. Scholar – Assignments, announcements, lecture example slides, etc.
 2. Textbook CD – Contains datasets used throughout the semester.
 3. JMP – Statistical software packages for data analysis (free through VT).
- * See “Installing and Using JMP” on Scholar.

Grading: Grading for this course will be conducted on the standard 10 point scale, with plusses/minuses assigned when appropriate. The grading breakdown is as follows:

Homework/Quizzes:	20%
Exam 1:	15%
Exam 2:	20%
Exam 3:	20%
Final:	25%

Grade Scale:

F < 59.5 < D- < 62.5 < D < 66.5 < D+ < 69.5 < C- < 72.5 < C < 76.5 < C+ < 79.5
79.5 < B- < 82.5 < B < 86.5 < B+ < 89.5 < A- < 92.5 < A

Homework: Homework will be assigned, and due, on a regular basis. Due dates may vary, but will be announced in class as well as posted on Scholar with the assignment. Solutions will typically be provided. Some guidelines for homework are as follows:

1. Late homework will not be accepted, no exceptions.
2. Your lowest homework or quiz grade will be dropped.
3. For the homework problems, you may work with others but you must submit your own answers. If cheating is suspected, then all materials will be submitted to the Honor Court.
4. Work must be shown in order to receive credit and JMP must be used where appropriate.
5. All problems on some homework sets may not be graded. You are responsible for checking your answers with posted solutions on Scholar.
6. The solutions found on Scholar are the level of work expected for the class.
7. From the day the homework grades are posted, you have one week to dispute the grade – please talk to the grader first before contacting me.
8. Homework problems should be compiled in the correct order.
9. Staple multiple pages together.
10. Put your name on it! If we don't know whose work it is, we can't give you a grade.
11. Your homework should be neat and clear.

Failure to do any of the last four may result in a deduction of points from that homework.

Attendance/Quizzes: From time to time we may have announced or unannounced quizzes in class or on Scholar. They will be on any material covered to date, including assigned reading. Along these lines, attendance is not required per se, but it will be your loss if you miss an unannounced quiz.

Exams: There will be three exams during the course of the semester. The exams are closed book and closed notes. The dates will be announced in class, at least one week in advance. There are no make-up exams unless I receive a letter from the dean of your college indicating you have an approved reason for missing the scheduled exam date. Tentative dates are as follows:

- Exam 1 – Wednesday, February 15th
- Exam 2 – Wednesday, March 28st
- Exam 3 – Wednesday, April 18st

Final: The final is comprehensive, closed book and closed notes. It is scheduled for Wednesday, May 9th from 10:05 – 12:05.

Special Requests: If for any reason you need special considerations please let me know as soon as possible. We can work together to make sure your needs are met. All requests must be approved by the university. Feel free to visit www.ssd.vt.edu for additional info.

Honor Code: The Virginia Tech Honor Code will be strictly enforced in this course. All graded assignments must be composed of your own work. More information about the Honor Code can be found at www.honorsystem.vt.edu.

All dates and policies are subject to adjustment as the class progresses. In such instances, I will give you sufficient notice.