VIBS 610 – Epidemiologic Methods II
Fall Semester – 2012

Schedule: 12:45-2:00 (lecture) and 2:20-3:35 (lab) on Tuesdays and Thursdays, beginning on August 28, 2012 (Both lectures and labs will be held in Building 1194, FAS 106)

Instructor:

Dr. Kevin Cummings
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Office hours: After lecture/lab or by appointment

Credit Hours: 4 Hours

Prerequisites: STAT 651 or equivalent; VIBS 608 or equivalent

Course Description: The overarching goals of this course are to (i) introduce students to the statistical methods commonly used in the analysis of epidemiologic data and (ii) illustrate the application of these methods using SAS to analyze various types of data.

Learning Outcomes: By the end of this course, students will be able to do the following:

1) Explain the proper use and interpretation of linear regression, logistic regression, Poisson regression, and survival analysis for studying epidemiologic data.
2) Perform basic and advanced methods of statistical analysis using SAS.
3) Discuss methods to deal with clustering of data.
4) Analyze various types of epidemiologic data using the methods listed above and describe the results in scientific paper format.

I am looking forward to getting to know each of you and working together as we accomplish these learning outcomes.

Course Outline: The following topics will be covered during this course:

1) Overview of SAS
2) Brief review: Measures of disease frequency and association
3) Brief review: Study design
4) Linear regression
5) Logistic regression
6) Poisson regression
7) Survival analysis
8) Clustering of data
9) Mixed models
10) Analysis of spatial data

**Grading:** Your grade for this course will be based on performance on the five homework assignments (worth 15 points each) and final project (25 points). The homework assignments will involve application of a statistical method to analyze a dataset, followed by a written description of the results. The final project will be of similar format but require more comprehensive analysis and description of results.

*Standard Letter Grading Scale:*

- A = 90-100
- B = 80-89
- C = 70-79
- D = 60-69
- F = < 60

**Attendance:** The University views class attendance as the responsibility of an individual student. Attendance is essential to complete the course successfully. Students are expected to attend all lectures/labs and to have read the assigned portion of the textbook beforehand. University rules related to excused and unexcused absences are located online at [http://student-rules.tamu.edu/rule07](http://student-rules.tamu.edu/rule07).

**Required Textbook:**


**Other Recommended Textbooks:**

*Categorical Data Analysis, 2nd* edition by A. Agresti, 2002.


**Honor Code and Professional Ethics:** Academic Integrity Statement and Policy: “An Aggie does not lie, cheat or steal, or tolerate those who do.” For additional information, please visit: http://aggiehonor.tamu.edu/.

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