Instructor: Hyungjin Myra Kim, ScD; 3550 Rackham, 647-8158, myrakim@umich.edu

Website: CTools; notes will be posted by midnight Sunday (for Tues lectures) and by midnight Tuesday (for Thu lectures)  
Some notes will be posted; others will only be distributed in class.  

Description: A second course in statistics and first course in regression analysis, focusing on regression methods commonly employed in the health sciences. The primary objective of the course is to provide students with the skills necessary to carry out regression analyses. The course is intended for students who will subsequently take BIOSTAT 560 the following Fall semester. Statistical software will be used to manipulate data into an analyzable form, fit regression models and perform model diagnostics. The focus will be on linear regression and logistic regression. The statistical computing language used throughout will be SAS.  

Topics (approximate time spent)  
Review (1 lecture); simple linear regression (3 lectures), multiple linear regression (10 lectures: main effects models, interactions, ANOVA, categorical covariates, transformations, collinearity, model selection, residual diagnostics, influence diagnostics); logistic regression (11 lectures)  

Pre-requisite: BIOSTAT 553 (or 503, with permission of instructor).  

Co-requisite: None.  

Lectures: Tues/Thu: 8:30-10:00  
SPH II Auditorium (1020, SPH II).  

Office Hours: Instructor: Tuesday and Thursday: 10:00-11:00 (M3039)  
GSIs:  

Labs: SPH II Computer Lab (basement of SPH II)  
Note: Labs start during the second week (1/14, but no lab on 1/21 (Monday))  
* First lab: "Introduction to SAS" (do not miss!)  
Lab Date:  


Computing: SAS  

Exams: There will be three tests:  
- Test #1: Tue, February 18, 8:30 (sharp) – 10:00 am
Tests will be in-class and closed book. Cheat-sheets are not permitted, although a formula sheet will be provided by the instructor for each test.

**Grading:**
- Homework: 20%
- Tests #1, 2: 50% (25% each)
- Test #3: 30%

**Academic Integrity:**

The faculty of the School of Public Health believes that the conduct of a student registered or taking courses in the School should be consistent with that of a professional person. Courtesy, honesty and respect should be shown by students toward faculty members, guest lecturers, administrative support staff and fellow students. Similarly, students should expect faculty to treat them fairly, showing respect for their ideas and opinions and striving to help them achieve maximum benefits from their experience in the School. Student academic misconduct refers to behavior that may include plagiarism, cheating, fabrication, falsification of records or official documents, intentional misuse of equipment or materials (including library materials), and aiding and abetting the perpetration of such acts. The preparation of reports, papers, and examinations, assigned on an individual basis, must represent each student’s own effort. Reference sources should be indicated clearly. The use of assistance from other students or aids of any kind during a written examination, except when the use of aids such as electronic devices, books or notes has been approved by an instructor, is a violation of the standard of academic conduct.
Core Competencies (Biostatistics):

1. Describe the roles biostatistics serves in the discipline of public health.
2. Describe basic concepts of probability, random variation, and commonly used statistical probability distributions.
3. Distinguish among the different measurement scales and the implications for selection of statistical methods to be used based on these distinctions.
4. Apply descriptive techniques commonly used to summarize public health data.
5. Apply common statistical methods for inference.
6. Apply descriptive and inferential methodologies according to the type of study design for answering a particular research question.
7. Interpret results of statistical analyses found in public health studies.