Generalized Linear Models
STAT 7430

Instructor
Elly Kaizar
221 Cockins Hall
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Office hours
Wednesdays 10:30-11:25am, or by appointment.
(Check the website for announcements of any changes or cancellations.)

Lectures
Mon, Wed and Fri 9:10-10:05, 198 Baker Systems

Website
carmen.osu.edu

Aims
This course introduces the statistical theory and methods to extend regression to non-normal data. This course covers the construction and estimation of parameters in generalized linear models, including specific treatment of nominal and ordinal logistic regression, log linear models, poisson regression, gamma regression, models for dependent data, and other topics as time permits.

Prequisites
Stat 6910, 6950, 7410, and 6801-2, or permission of the instructor. Students should be particularly familiar with maximum likelihood estimation and linear models.

Required Text

Additional Resources will be listed on the course website

Computing
This course will be taught in the R computing language. If you are not already familiar with R programming, there are a plethora of online tutorials available. I would recommend the video tutorials by Dan Goldstein you can find here:

Requirements
Students are responsible for all material covered in class, in assigned readings, and on homework assignments. Attendance at all classes is strongly recommended.
Evaluation
Homework 15%
Quizzes (2) 10% each
Midterm Exam 30%
Final Exam 35%

Homework: Homework is due at the beginning of class on the day it is due. No late homework will be accepted. To allow you flexibility to deal with any emergencies that may arise in your personal life, one homework grade will be dropped from the final grade calculation. Please save this opportunity for such an emergency. You are encouraged to work together on the homework, but do not copy any part of a homework. Each student must produce his/her own homework to be handed in. Feel free to ask me for help after you have made an attempt of the questions. Homework solutions will be available on the class web site. I anticipate a total of 10 homework assignments. Each homework assignment will be equally weighted in the final grade.

Quizzes and Exams: Quizzes and Exams are closed book/closed notes. Calculators are allowed – communication devices are not. You may bring a single 8.5”x11” page of notes to the first quiz and the midterm exam. You may bring two 8.5”x11” pages of notes to the second quiz and the final exam. Statistical tables will be provided on exams as needed. Tentative dates for the quizzes and exams are:

<table>
<thead>
<tr>
<th>Quiz</th>
<th>Date</th>
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<tbody>
<tr>
<td>Quiz 1</td>
<td>February 8</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>March 4</td>
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<tr>
<td>Quiz 2</td>
<td>April 5</td>
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<tr>
<td>Final Exam</td>
<td>April 30, 8:00-9:45am</td>
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Tentative Schedule
A tentative schedule of topics and reading assignments will be maintained on the course website. I encourage you to check this schedule often to keep current with the reading assignments.

Academic misconduct
Cheating, plagiarism and other forms of academic dishonesty will not be tolerated. Any violation will be prosecuted to the fullest extent.

Disclaimer
This syllabus should be taken as a fairly reliable guide for the course content. However, I reserve the right to change due dates or methods of assessment. Official announcements will be those made in class or on the course website.

Special accommodations
Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. Please contact the Office for Disability Services at 614-292-3307 in room 150 Pomerene Hall to coordinate reasonable accommodations for students with documented disabilities.