# Generalized Linear Models
## STA 7249
## Spring 2018

**Course Content and Objectives**: In a generalized linear model (GLM), the response variable has a distribution in an exponential dispersion family and the mean response is related to covariates through a link function and a linear predictor. GLMs allow a unified theory for many of the models used in statistical practice, including normal theory regression and ANOVA models, loglinear models, logit and probit models for binary data, and models for gamma responses and survival data. This course will focus on the theory and applications of generalized linear models and related statistical topics. Questions on this material appear on the PhD qualifying exam in statistics.

**Prerequisites**: STA 6327 and STA 6208

**Instructor**: Kshitij Khare, 208 Griffin-Floyd Hall, [kdkhare@stat.ufl.edu](mailto:kdkhare@stat.ufl.edu) (Email)

**Class**: MWF 12:50 pm – 1:40 pm, Griffin-Floyd Hall, Room 230

**Office Hours**: MWF 10:30 am - 11:30 am

**Lecture Notes**: The main text for the class will be the GLM Lecture Notes compiled by Prof. Brett Presnell. We will also cover selected topics in Bayesian generalized linear models in the last few weeks of class, and related references will be specified accordingly.

**Homework**: Homework will be assigned periodically and graded. Homework assignments may require data analysis and other computations using a statistical package and/or programming language. Homework is worth 10% of the final grade. No late homework will be accepted.

**Exams**: Three exams will each count for 30% of the final grade. The schedule will be announced by the second week of class.

**Grading**: The usual 10 point scale (90% for an A, 80% for a B, . . . ) is tentatively adopted. The final grading scale will be announced after Exam 2.

**Policies**: Students are responsible for all material covered in class. If you are absent, make arrangements with a classmate to borrow the notes and any handouts from them. Handouts will be distributed once and only once.

*We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.*