

King Fahd University of Petroleum and Minerals
 Department of Mathematics and Statistics
STAT-436: Generalized Linear Models - STAT 436-(Term 211)

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Course Description: Topics include: Nonlinear, Poisson and Logistic regression, Linear models, Multivariate Normal and the distribution of Quadratic forms, Link function, The generalized linear model, Estimation (Estimation of Full and reduced rank models. OLS, GLS, ML and Quasi-likelihood. Fisher Scoring), Evaluation of Models (Including Deviance Residuals), Inference (Gauss-Markov theorem, Wald test), Computational aspects and Computer applications for categorical and continuous data with an emphasis on the implementation using statistical software, toolboxes, and libraries like R,

Textbook: Generalized Linear Models with Applications in Engineering and the Sciences (2nd ed.) John Wiley and Sons.

Recommended Text:

Alan Agresti, Foundations of Linear and Generalized Linear Models, Wiley series in Probability and Statistics, 2015.

Assessment*

Activity	Weight
Classwork (home works, assignments, attendance, bonuses, etc.)	5%
Quizzes	15%
First Major Exam	20%
Second Major Exam(with Lab test)	25%
Final Exam (Comprehensive)	35%

Important Notes: .

Excuse: Only an excuse issued by *Deanship of Student Affairs* will be accepted for not attending a class, a quiz or an exam.

Blackboard: All contacts or announcements between the instructor and the students are supposed to be through Blackboard, so the student must check his Blackboard at least once a day.

Academic Integrity: All KFUPM policies regarding ethics and academic honesty apply to this course.

Cheating and Plagiarism: This course is composed of individual assignments. It is important that your individual assignment be completed with your own efforts instead of copying it from your fellow student. KFUPM instructors follow “*zero tolerance*” approach with regard to cheating and plagiarism. During examinations (quizzes, major exams, lab tests) cheating or any attempt of cheating by use of illegal activities, techniques and forms of fraud will result in a *grade of F* in the course along with reporting the incident to the higher university administration.

Important Notes:

- In accordance with University rules, 20% unexcused absences will automatically result in a grade of DN.
- Attendance on time is very important. Mostly, attendance will be checked within the first five minutes of the class. Entering the class after that, is considered as one late, and every two times late equals to one absence.
- Use of mobile is banned during the class.