

## DEPARTMENT OF STATISTICS

**EKT 720 - Statistical learning****QUESTION 1 - Due on 14/9**

Write an overview of the following concepts

- (a) Grouped data
  - (i) LPM (Gujarati)
  - (ii) Logit modelling (Gujarati)
  - (iii) Probit modelling (Gujarati)
- (b) Individual data
  - (i) LPM (Gujarati)
  - (ii) Logit modelling (STK 310 notes)
  - (iii) Logit modelling (Hastie)
- (c) Measuring goodness of fit
  - (i) Count  $R^2$
  - (ii) Hosmer and Lemeshow
  - (iii) Gini index / ROC curves

**QUESTION 2 - Due date tbc**

Write a SAS program to estimate a Logistic regression model for the given data

- (a) Using proc logistic
- (b) Using proc IML
- (c) Measuring goodness of fit / any software
- (d) Give a full discussion of the estimated results.