**Detailed Syllabus for Eco 213 midterm exam**

**Lecture Slides 1 ,2, 3 and 4**

I. Introduction and recap of basic ideas in probability and statistics, notion of causality in econometric analysis

**Chapters from Freund’s Mathematical Statistics with Applications.**

I.I Probability, Probability Distribution and Densities

*Random Variable and Probability Distributions, Continuous Random Variables and Probability*

*Density Functions. Multivariate Distributions. Conditional and Marginal Distributions.*

**Chapter 2**

2.1-2.8

**Chapter 3**

3.1-3.7

I.II Mathematical Expectations

*Expected Value of a Random Variable. Raw and Central Moments. Product Moments.*

**Chapter 4**

4.1-4.3

I.III Some Useful Distributions

*Uniform Distribution. Binomial, Poisson distribution. Geometric distribution*

**Chapter 5**

5.1-5.5, 5.7

**Chapters from Basic Econometrics by Gujarati Chapter 1, 2, 3, 5, 6, 7, 8, 9**

II. The simple regression model, Ordinary Least Squares, multiple regression analysis –estimation and inference, hypothesis testing and confidence intervals, Dummy variables

**Chapter 1**

1.1-1.7

**Chapter 2**

2.1-2.7

**Chapter 3**

3.1-3.7, Appendix 3A.2

**Chapter 5**

5.7, 5.8, 5.9

**Chapter 6**

6.1, 6.4, 6.5, 6.6, 6.7, 6.8

**Chapter 7**

7.1, 7.2, 7.3, 7.4, 7.5, 7.6

**Chapter 8**

8.1, 8.2, 8.3, 8.4

**Chapter 9**

9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.10