



Korea University International Summer Campus (KU ISC) 2018

Embark on a unique summer

June 26, 2018 ~ August 2, 2018

ISC207A - Statistics

I . Instructor

Professor : Dr. Anurag Agarwal
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Home Institution : University of South Florida, Florida, USA
Office : 315 Woodong Hall
Office Hours : M, T, W 1 to 2 p.m. and by appointment

II. Textbook

Required Textbook : None

Recommended : Notes will be provided through Blackboard
Additional Readings

III. Course Description and Objectives

In this course we will learn the fundamentals of Statistics, which is basically the science of collecting, summarizing, describing, analyzing and interpreting data. Data can be about any aspect of the real world that we want to study. Statistics is used to perform empirical research and to test various hypotheses about the world, in almost every discipline of study, whether it is the hard sciences or the social sciences or business.

The topics covered are:

- Descriptive Statistics (Types of Data, Frequency Distribution, Graphs, Measures of Central Tendency, Measures of Variability)
- Probability and Probability Distributions (Binomial, Poisson, Hypergeometric, Normal, t, Uniform, Chi-Square and F)
- Population and Sample and Sampling Distributions (Central Limit Theorem)
- Confidence Intervals of Means and Proportions
- Test of Hypotheses (Z-test, T-test, one-population, two populations, proportions)
- Correlation and Simple and Multiple Linear Regression Analysis
- Analysis of Variance (F Tests)
- Categorical Data Analysis (Chi-Square Tests)

IV. Grading

Attendance	:	10%
Midterm Exam	:	15%
Final Exam	:	30%
Quiz	:	40%
Behaviour and Attitude	:	5%

V. Class Outline

Date	Topic	Chapter	Remarks
June 26 (Tue)	Orientation Day		
June 27 (Wed)	Data and Descriptive Statistics	1	
June 28 (Thu)	Data and Descriptive Statistics	1	
June 29 (Fri)	Probability	2	
July 2 (Mon)	Probability	2	
July 3 (Tue)	Probability Distributions	3	
July 4 (Wed)	Probability Distributions	3	Quiz-1
July 5 (Thu)	Sampling Distributions and Central Limit Theorem	3	
July 9 (Mon)	Confidence Intervals of Mean and Proportions	4	
July 10 (Tue)	Hypothesis Testing	5	
July 11 (Wed)	Hypothesis Testing	5	Quiz-2
July 12 (Thu)	Hypothesis Testing	5	Exam-1
July 16 (Mon)	Hypothesis Testing	5	
July 17 (Tue)	Analysis of Variance	6	Quiz-3
July 18 (Wed)	Categorical Data Analysis	7	
July 19 (Thu)	Categorical Data Analysis	7	
July 23 (Mon)	Correlation and Simple Regression Analysis	8	
July 24 (Tue)	Correlation and Simple Regression Analysis	8	Quiz-4
July 25 (Wed)	Correlation and Simple Regression Analysis	8	
July 26 (Thu)	Multiple Regression Analysis	9	
July 30 (Mon)	Multiple Regression Analysis	9	Quiz-5
July 31 (Tue)	Review		
Aug 1 (Wed)	Final Exam		
Aug 2 (Thu)	Grade Review		