



Course Weekly Outline

Course Instructor	Ahmed Aladilee				
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Title	Mathematical Statistics				
Course Coordinator	Probability and Statistics				
Course Objective	To let students know the most important concepts about statistical distributions and their applications with some other statistical concepts like estimation, confidence intervals and test hypothesis				
Course Description	There are many statistical concepts need to be learned so that students are able to make decisions and know the most important statistical tools that are used in life and applied studies				
Textbook	Introduction to Mathematical Statistics, R. Hogg, A.Graig, 6 th edition, Macmillan Co., Inc. New York,1998				
References	Introduction to Mathematical Statistics, R. Hogg, A.Graig, 6 th edition, Macmillan Co., Inc. New York,1998				
Course Assessment	Term Tests	Laboratory	Quizzes	Project	Final Exam
	As (40%)	As (0%)	As (10%)	----	As (50%)
General Notes	Students need to have an excellent experience in calculus and probability				



University:
College:
Department:
Stage:
Lecturer name:
Academic Status:
Qualification:
Place of work:

Course weekly Outline

week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1	1/10/2014	Introduction		
2	7/10/2014	Some special distributions, discrete type		
3	21/10/2014	Binomial, passion, geometric, distributions and their properties		
4	27/10/2014	Some special distributions, continuous type		
5	3/11/2014	Normal distribution and its properties		
6	17/11/2014	Transformation, p.d.f technique, discrete type		
7	24/11/2014	Transformation, p.d.f technique, continuous type		
8	1/12/2014	Sampling theory		
9	8/12/2014	Sampling distribution of sample mean and sample variance		
10	15/12/2014	Test1		
11	22/12/2014	Order statistics		
12	29/12/2014	Marginal and joint p.d.f of order statistics		
13	5/1/2015	Central limit theorem		
14	12/1/2015	Interval estimation theory		
15	19/1/2015	Definition and properties of I.V		
16	26/1/2015	Test2		

Half-year Break				
17	16/2/2015	Confidence Interval and random interval		
18	23/2/2015	Point estimation theory		
19	2/3/2015	Definitions and properties		
20	9/3/2015	Properties of a good estimator		
21	16/3/2015	Efficiency and mean square error		
22	23/3/2015	Sufficient and rao Blackwell theorem		
23	30/3/2015	Method of estimations		
24	6/4/2015	Moments method, max. likelihood method		
25	13/4/2015	Least square method and Bayesian method		
26	20/4/2015	Test3		
27	27/4/2015	Test of hypothesis		
28	4/5/2015	Introduction, definitions and properties		
29	11/5/2015	Sample from the normal distribution		
30	18/5/2015	Type one and two error		
31	27/5/2015	Significance level of the test and likelihood ratio test		
32	1/6/2015	Test4		

Instructor Signature:

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