



Sub.	Course Syllabus	توصيف مقرر	الموضوع	 كلية المعرفة ALMAAREFA COLLEGE
Year	1436/1437 - 2015/2016		العام	


College	AIMAAREFA COLLEGE
Department	Preparatory Department

Course Code	STAT 103
Course Name	Statistical Methods
Credit Hours	3 (3 + 0 + 1)
Instructor	HasanIdriss Omer
Office & Office Hours	CABIN NO.13, 2nd floor Sunday - 9:00 to 10:00 Tuesday – 9:00 to 10:00 Thursday - 9:00 to 10:00
Email	homer@mcst.edu.sa

Course Description	This course is designed to provide the students with a basic understanding of statistics. The course covers of descriptive statistics with concepts of dispersion, central tendency measurements. Simple inferential statistics involving probability, sampling, confidence intervals and tests of significance are presented. Simple linear regression and correlations are also covered.
Prerequisite(s)	MATH 101 , MATH 102
Textbook(s) & Supplementary Materials	Primary: Probability and Statistics for Engineers and Scientists. By:R.E.Walpole and R.H.Myers Optional:
Student Outcomes (SO) Addressed by the Course	Students who successfully complete this course should be able to correctly : <ol style="list-style-type: none"> 1. Describe the key features of data. 2. Present the data graphically and numerically. 3. Calculate and interpret mean, median, mode, ranges, variance, standard deviation and confidence intervals. 4. Prepare and apply tables, graphs and charts such as histograms, scatter diagrams, pie chart and box plot. 5. Perform statistical inference such confidence intervals and test of significance. 6. Make use of computer statistical software to carry out all the calculations.
Major Topics Covered	1) Preliminary data analysis <ol style="list-style-type: none"> a) Definitions- variables (discrete and continuous). b) Graphical representation of data – Histogram , ogive , dot plot , bar diagram and stem leaf plot c) Frequency Distributions 2) Measures of Central Tendency <ol style="list-style-type: none"> a) Mean, median , mode b) Measures of Dispersion (Range, Variation, standard deviation) c) Measures of Asymmetry (Skewness) 3) Probability

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	a) Definitions , conditional probability distribution b) Discrete and continuous probability distributions 4) Probability distributions Binomial, Normal and Poisson distributions. 5) Inferential statistics a) Elementary sampling and sampling distributions. b) Estimation unknown parameters. c) Test of hypothesis and significance 6) Simple Linear Regression and Correlations.	
Assessment & Evaluation Plan for the Course *	<i>Homework Assignments</i>	5 points
	<i>Quizzes</i>	5points
	<i>Tutorial</i>	5points
	<i>Project/Presentations</i>	5points
	<i>Two Midterm Exams</i>	20points each
	<i>Final</i>	40 points
Policies *	1. Type all homework, you may use some tools e.g., MS Office, Visio, etc. 2. Students can discuss homework, but no copying!, according to the college bylaws the minimum penalty of plagiarism is failing the course. 3. Late Submission Penalty is negative marking .	

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CALENDAR & OUTLINE OF TOPICS

WEEK	DATE	TOPICS	DUTIES/TASKS DUE DATES
1	17/01/2016	Course Orientation	
2	24/01/2016	Organizing and Displaying data	
3	31/01/2016	Organizing and Displaying data	QUIZ 1
4	7/02/2016	Basic summary statistics	
5	14/02/2016	Basic summary statistics	HW 1
6	21/02/2016	Probability	
7	28/02/2016	Probability	MIDTERM 1
8	6/03/2016	Probability distributions	
9	13/03/2016	Midterm Vacation	
10	27/03/2016	Poisson and Binomial	QUIZ 2
11	3/04/2016	Normal distributions , Z- table	
12	10/04/2016	Estimation	MIDTERM 2
13	17/04/2016	Hypothesis Testing	
14	24/04/2016	Correlation and Linear Regression	HW 2
15	1/05/2016	General Revision	
16&17	8-15/05/2016	FINAL EXAMS	FINAL EXAMS

* According to the department council approval