

الوصف التفصيلي لمقرر مبادئ الإحصاء و الإحتمالات (MS210)

القسم	الحاسب الالى	Department
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Principles of probabilities & Statistics	Course Name اسم المقرر الدراسي	MS 210	رمز المقرر: Course No. ٥
MS101	المتطلب السابق للمادة (Prerequisite)	3(2,2,0)	الساعات المعتمد Credit Hours
<p>This course introduces fundamental concepts of probability and statistics. It provides the background for studying the uncertainty in computer problems. It introduces some methods for statistical inference.</p> <p>This course presents basic statistical principles and methods. It focuses on descriptive statistics, probability theory, Binomial, Poisson, z, t, and Chi-square distributions, central limit theorem, confidence intervals and hypothesis testing. One hr/wk is spent in the microcomputer laboratory exploring software applications of statistical concepts presented in the lecture. No previous computer experience is assumed.</p>			الوصف المختصر Brief Description

<p>Upon completion of this course, students are expected to:</p> <ol style="list-style-type: none"> 1. be able to find the probability of events and distributions of random variables [POs: a]; 2. be able to solve problems involving some well-known probability distributions [POs: a]; 3. be able to solve some basic problems on statistical inference [POs: a]. 	أهداف المقرر: (Course Objectives)
<p>Introduction Probability Random Variables and probability Distributions</p>	موضوعات المقرر: (Course Topics)

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Mathematical Expectation Some Discrete Probability Distributions Some continuous Probability Distributions Fundamental Sample Distributions Test of Hypotheses		
1. Probability & Statistics for Engineers & Scientists, 8th Ed.*, Walpole, Myeres, Myers & Ye, Prentice Hall. 2. Statistics for Engineering and the Sciences, 5th Ed., Mendenhall & Sincich, Prentice Hall. 3. Introduction to Probability and Statistics, 4th Ed., Milton & Arnold, McGraw- Hill.	المراجع العلمية: (References)	
	نواتج التعلم من المقرر (المعرفة والمهارات) Learning Outcome (Knowledge& Skills)	
- درجة اختبار نهاية الفصل (٥٠) درجة - درجة الاختبار الشهري (٣٠) درجة - درجة المشاركة الصفية والتمارين (٢٠) درجة	طريقة التقييم وتوزيع الدرجات:- (Assessment Methods & Grade Determination)	
التوزيع الزمني: (Course Outline)		
الموضوعات Subjects	Enhanced E-R Model	الأسبوع Week
Introduction Sample space, events, counting the sample points	٣	1
probability Probability of an event, conditional probability	٣	2
Elementary probability Bayes' Rule	٣	3
Random Variables and Probability Distributions Concept of a random variable, discrete and probability distributions, joint probability	٣	4

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Mathematical Expectation Mean of a random variable, variance of a random variable, Chebyshev's theorem		5
Midterm	٣	6
Some Discrete Probability Distributions Discrete uniform distribution, binomial distribution, hypergeometric distribution, negative binomial distribution, geometric distribution and Poisson distribution.	٣	7
Some Continuous Probability Distributions Normal distribution, areas under the normal curve, normal approximation to the binomial, chi-squared distribution.	٣	9 + 10
Fundamental Sampling Distributions Random sampling, some important statistics, sampling distributions of means and (sample) variances, t-distribution.	٣	11+12
Tests of Hypotheses General concepts of testing a statistical hypothesis, one and two- tailed tests, tests concerning a single mean, tests on a single mean with unknown variance, tests on two means, tests concerning variances, goodness-of-fit test.	٣	13+14

	تاريخ الاعتماد Date of Approval		اعتماد رئيس القسم Approved by Dept. Chair
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معلومات إضافية: (يتم تحديثها في كل فصل دراسي وتعباً من قبل جميع أساتذة المقرر بعد استكمال الوصف من المنسق ويكون هناك نسخة لكل زميل يدرس المقرر)

Extra Information: (Updated every semester and filled by course instructor)

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