

توصيف مقرر دراسي

جامعة : المنصورة
كلية : العلوم
قسم : الرياضيات

١- بيانات المقرر		
المستوى: الثالث	اسم المقرر : Probability Theory	كود المادة : Math 331
عدد الوحدات الدراسية: ٢ ساعة معتمدة نظري ٢: تمارين: ١ عملي: ٠		البرنامج : الاحصاء وعلوم الحاسب

For students undertaking this course, the aims are to: - provide students by the techniques which help them to find the distribution of functions of random variable, and dealing with the distribution of the vector of random variables.		٢- هدف المقرر :
٣- المستهدف من تدريس المقرر		
a- Knowledge and Understanding On completing this course, students will be able to: a1 – Be aware by most of the continuous distributions a2 – Determining the moment generating function and the characteristic function of a random variable a3 – understand the techniques of finding the distributions of functions of random variables. a4- Understand how one can get the joint probability distribution, , conditional distributions and the conditional moments		أ- المعلومات و المفاهيم :
b- Intellectual Skills On completing this course, students will be able to: b1- Distinguish between the Moment generating function and characteristic function b2- Apply the techniques of finding the distributions of functions of random variables. b3- Be aware by the relation between the moment generating function and the distribution function b4- Be aware by the techniques of obtaining the joint distributions and the marginal distributions		ب- المهارات الذهنية :
c- Professional and Practical Skills On completing this course, students will be able to: c1 – Obtaining the moments and conditional moments for the univariate and bivariate random variables respectively. c2 - Use the moment generating function/ characteristic function to identify the distribution function c3 - Solve problems related to the functions of random variables and the random vectors		ج- المهارات المهنية الخاصة بالمقرر :
d- General and Transferable Skills On completing this course, students will be able to: d1- Encourage the students to express themselves in the class and to present their views d2- Work in a group		د- المهارات العامة :

<ul style="list-style-type: none"> – Continuous random variables – Moment generating function and characteristic function – Continuous distributions – Functions of random variables – Random vectors, marginal and conditional distributions – Independence, conditional moments 	٤- محتوى المقرر :
1- 3 hour lecturer weekly with exercise sheets and solution sheets 2- Weekly 1 hour tutorials in groups 3- Using Internet facilities	٥- أساليب التعليم و التعلم :
The same as normal students, only skeletal disabilities are allowed in the faculty of science.	٦- أساليب التعليم و التعلم للطلاب ذوي القدرات المحدودة
٧- تقويم الطلاب :	
1- Final exam to assess a1-a4 ,c1-c3, b1-b4 2- Oral exam to assess a1-a4, b1-b4, d1-d2 3- Mid-Term Exam to assess a1-a3,b1-b2, c1-c3	أ- الأساليب المستخدمة
1- Final exam week 16 2- Oral exam week 16 3- Mid-Term Exam week 7	ب- التوقيت
- Mid-Term Examination 10% - Final-Term Examination 80% - Oral Examination 10% - Practical Examination 0 Total 100%	ج- توزيع الدرجات
٨- قائمة الكتب الدراسية و المراجع :	
- Lecture Notes	أ- المذكرات
Rebert, V.H and Allan, T. Introduction to mathematical statistics.	ب- الكتب ملزمة
Douglas, C. and George, C. (2003). Applied statistics and probability for engineering. John Wiley & Sons. Inc	ج- كتب مقترحة
http://en.wikipedia.org/wiki/Probability_theory	د- دوريات علمية أو نشرات ... الخ

(أ) مصفوفة المعارف والمهارات المستهدفة من المقرر الدراسي

المحتويات للمقرر	اسبوع الدراسة	المعارف الرئيسية	مهارات ذهنية	مهارات مهنية	مهارات عامة
Continuous random variables	1	a1	b1	c1	
Moment generating function and characteristic function	2	a2	b1	c2	
Continuous distributions	3-5	a1	b2	c3	
Functions of random variables	6-9	a3	b2		
Random vectors, marginal and conditional distributions	10-12	a4	b3	c3	
Independence, conditional moments	13	a4	b4	c3	d1-d2

أستاذ المادة : ا.د. محمود طه ياسين

رئيس مجلس القسم العلمي : ا.د. مجدى الياس فارس