

توصيف مقرر دراسي

جامعة : المنصورة

كلية : العلوم

قسم : الرياضيات

١- بيانات المقرر		
المستوى: الثالث	اسم المقرر : Probability Theory & Statistics	كود المادة : Math 331
عدد الوحدات الدراسية: ٢ ساعة معتمدة نظري ٢ : تمارين: ١ عملي: ٠		التخصص : رياضيات

<p>٢- هدف المقرر :</p> <p>For students undertaking this course, the aims are to:</p> <p>- 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.</p>	
٣- المستهدف من تدريس المقرر	
<p>a- Knowledge and Understanding</p> <p>On completing this course, students will be able to:</p> <p>a1 – Be aware by most of the continuous distributions</p> <p>a2 – Determining the moment generating function and the characteristic function of a random variable</p> <p>a3 – understand the techniques of finding the distributions of functions of random variables.</p> <p>a4- Understand how one can get the joint probability distribution, , conditional distributions and the conditional moments</p>	<p>أ- المعلومات و المفاهيم :</p>
<p>b- Intellectual Skills</p> <p>On completing this course, students will be able to:</p> <p>b1- Distinguish between the Moment generating function and characteristic function</p> <p>b2- Apply the techniques of finding the distributions of functions of random variables.</p> <p>b3- Be aware by the relation between the moment generating function and the distribution function</p> <p>b4- Be aware by the techniques of obtaining the joint distributions and the marginal</p>	<p>ب- المهارات الذهنية :</p>

distributions	
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 :
✓ 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 والتعلم :
The same as normal students, only skeletal disabilities are allowed in the faculty of science.	٦- أساليب التعليم والتعلم 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	ب- التوقيت

2- Oral exam	week	16	
3- Mid-Term Exam	week	7	
- Mid-Term Examination	10%		ج- توزيع الدرجات
- Final-Term Examination	80%		
- Oral Examination	10%		
- Practical Examination	0		
Total 100%			
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