



Ministry of Higher Education and
Scientific Research - Iraq
Al-Mustaqbal University
College Of Sciences
Department of biology



MODULE DESCRIPTION

وصف المادة الدراسية

Module Information معلومات المادة الدراسية			
Module Title	Biostatistics	Module Delivery	
Module Type	Basic	<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code	UOMU035223		
ECTS Credits	3		
SWL (hr/sem)	75		
Module Level	2	Semester of Delivery	4
Administering Department		College	
Module Leader		e-mail	
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D.
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee ApprovalDate	01/06/2023	Version Number	1.0

Relation with other Modules العلاقة مع المواد الدراسية الاخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

اهداف المادة الدراسية ونتائج التعلم والمحتويات الارشادية

Module Aims اهداف المادة الدراسية	<ol style="list-style-type: none"> 1. To understand the student an idea of the probability theory. 2. To give an idea for the student about the random variable and types. 3. To learn about distribution, density function and continuous random variable 4. To develop the student skill in find expectation and variance. 5. To know the distribution and types of distribution.
Module Learning Outcomes مخرجات التعليم للمادة الدراسية	<ol style="list-style-type: none"> 1. Summarize what is meant by the probability theory? Law of probability and Bayes theory. 2. Discuss random Variable, discrete random variable, continuous random variable. 3. Define distributive theorem for random variable. 4. Explain distribution and density function continuous random variable 5. Study Expectation and Variance. 6. Study probability and mathematical statistics, moment, moment generating functions. 7. Define the concepts of distribution theory. 8. Recognize normal distribution, uniform distribution and exponential distribution.
Indicative Contents المحتويات الارشادية	<p style="text-align: center;">Indicative content includes the following.</p> <p style="text-align: center;">Basic concepts in probability, random experience, sample space event, operations on events counting sample points, the fundamental principle of counting, permutation, combinations, probability of an event, Conditional probability, independent events, Bayes theorem [3hrs]</p> <p style="text-align: center;">Random Variable, discrete random variable, continuous random variable, define distributive theorem for random variable [6 hrs]</p> <p style="text-align: center;">Distribution and density function continuous random variable, Expectation and Variance [6 hrs]</p>

	<p>Probability and Mathematical statistics, moment, moment generating functions[3 hrs]</p> <p>Define the concepts of distribution theory, distribution theory (for two or more random variable) [6 hrs]</p> <p>Probability mass function and Probability density function, Normal distribution, Uniform distribution and exponential distribution [18 hrs]</p>
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<h3>Learning and Teaching Strategies</h3> <p>استراتيجيات التعليم والتعلم</p>

<h3>Strategies</h3>	<ul style="list-style-type: none"> The main strategy that will be adopted in delivering this course is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through explaining the topic to the students and asking discussion questions during the lecture and discussed in class with students actively participating in the discussion to find out the students' understanding of the topic Office hours: students are encouraged to make full use of the office hours of their instructor, where they can ask questions, see their exam paper, and/or go over lecture material. Use of the Moodle site, where instructors post lecture notes, assignment instructions, timely announcements, as well as additional resources.
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<h3>Student Workload (SWL)</h3> <p>الحمل الدراسي للطالب</p>			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب اسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	27	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب اسبوعيا	1.8
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	75		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	4, 10	LO #1,2,3,4 and 5
	Assignments	3	10% (10)	Continuous	LO # All
	Projects / Lab.	-	-	-	-
	Report	1	10% (10)	12	LO # All
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO # 1-6
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Probability theory, Law of probability, Bayes theory.
Week 2-3	Random Variable, discrete random variable, continuous random variable, define distributive theorem for random variable.
Week 4	Distribution, density function and continuous random variable
Week 5	Expectation and Variance
Week 6	Probability and Mathematical statistics, moment, moment generating functions.
Week 7	Midterm Exam
Week 8-9	Define the concepts of distribution theory, distribution theory (for two or more random variable)
Week 10-11	Probability mass function and Probability density function
Week 12-15	Normal distribution, Uniform distribution and exponential distribution
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	Perm S. Mann : Introductory Statistics , John wiley and sons, Inc., 2001	Yes
Recommended Texts	Introduction to mathematical Statistics, R.Hogg and A.Grage , 1974	Yes
Websites		

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group(50 - 100)	A - Excellent	امتياز	90 – 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C - Good	جيد	70 – 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 – 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 – 59	Work meets minimum criteria
Fail Group(0 – 49)	FX – Fail	(راسب) قيد المعالجة	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

