

Ministry of Higher Education and Scientific Research

Mustansiriyah University /College of Science

Department of .....

College State

(الخطة الدراسية للمساق)

Course Plan

<u>Course No.:</u> <u>Course Name:</u> Probability1 Course Website: <u>Time Division</u>: 3hr Theoretical and 1hr Practical <u>Semester & Year:</u> First, 2022 / 2023

## **Course Description:**

This subject presents the Permutation, Combination, Events, Probability, Independent events, Conditional Probability, Bayes Theorem, Random Variables, Probability Mass Function, Probability Density function, Cumulative Distribution Function, Mathematical Expectation, Variance, Moments, Moment Generating Function.

**<u>Course Intended Outcomes</u>:** The aim of this course is to teach the student the concepts: Probability, Conditional Probability, Bayes Theorem, Random Variables and how to find Probability Mass Function, Probability Density Function, Cumulative Distribution Function, Mathematical Expectation, Variance, Moments, and Moment Generating Function.

#### **Course Outline:**

Week	Description depends on the Timing table (Theoretical & Practical)
1	A review of Permutation and Combination.
2	Some Basic Concepts of Probability.
3	Properties of Probability.
4	Independent events, Independent of three event.
5	Conditional Probability.
6	Total Probability Theorem and Bayes Theorem.
7	The First Exam
8	Random Variables,
9	Probability density function.
10	Commutative Distribution Function.
11	Mathematical Expectation.
12	The Variance.
13	Moments
14	Moment Generating Function.
15	The second exam

#### **Textbooks:**

[1]: Probability and Statistics: A course for physicists and Engineers, By Arak M. Mathai, Hans J. Haubold, 2017.
[2]: Introduction to Probability, Charles M. Grinstead, James L. Snell, 2012.

## **Suggested references:**

[1]: Probability and Statistics: A course for physicists and Engineers, By Arak M. Mathai, Hans J. Haubold, 2017.

[2]: Introduction to Probability, Charles M. Grinstead, James L. Snell, 2012.

## Marking:

	<b>Final Exam</b>			
1st exam	2nd exam	Practical	Activity	
10	10	5	5	70

<b>Assignment/ Project</b>	Description	<b>Due Date</b>	Marking
test	written exam	1/12/2018	3

# [معلومات الأستاذ] Instructor(s) information

Section: (Mathematics) ; Lecture Room: [A204], ; Office No.: (6)

Instructor's Name: Dr. Niran Abbas Ali E-Mail:

Office Hours : Tue.: [8:30 - 10:10] Thu.: [11:50 - 1:30]

**NOTES:** 

-Office Hour: Other office hours are available by appointment.

-The content of this syllabus not be changed during the current semester.

Lecturer Signature

**Chairman Signature**