



Ministry Of Higher Education and Scientific Research  
Mustansiriyah University / College of Science / Department of Mathematic  
(الخطة الدراسية للمساق)  
Course Plan



**Course No.:** 54452133

**Time Division:** 4hr Theoretical

**Course Name:** Probability (1)

**Semester & Year:** First, 2022 / 2023

**Course Description:**

This subject presents the Permutation , Combination , Events , Independent events , Conditional Probability , Bayes theorem , Random Variables , Probability mass function , Probability density function , Cumulative Distribution function , Mathematical Expectation , Variance , Moments , Moment Generating function.

**Course Intended Outcomes:**

At the end of the Course , students are expected to learn the concept of 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.

Week	Topics Covered
1	A review of Permutation and Combination.
2	Some Basic Concepts of Probability
3	Properties of the Probability
4	Independent events , Independent of three events
5	Conditional Probability
6	Total Probability theorem and Bayes theorem
7	The first exam
8	Random Variables , Probability mass function
9	Probability density function
10	Cumulative Distribution function
11	Mathematical Expectation
12	The Variance
13	Moments
14	Moment Generating function.
15	The second exam

### Textbooks:

- [1]: Introduction to Probability, Charles M. Grinstead , James L. Snell , 2012  
[2]: Probability and Statistics, A course for physicists and Engineers, by Arak M. Math, Hans J. Haubold, 2017  
[3]: Walrand.J., Lecture Note on Probability theory and Random processes, 2004

### Suggested references:

- [1]: 1987 الفرابي: علي اسماعيل واخرون "الاحتمالات" جامعة بغداد  
[2]: 1991 نون: باسل يونس "الاحتمالات والمتغيرات العشوائية" جامعة الموصل  
[3]: 2000 محمد ابراهيم عقيل . عبد الرحمن محمد ابو عمة "نظرية الاحتمال وتطبيقاتها" جامعة الملك سعود\_السعودية

### Marking:

First Semester				Final Exam
1 st exam	2 nd exam	Practical	Activity	
20	20	5	5	70%

Assignment/ Project	Description	Due Date	Marking
Quizzes	Oral		5

### Instructor(s) information [معلومات الأستاذ]

Section: Mathematic ; Lecture Room: (A 402 - A403) ; Office No.: (11)

Instructor's Name: Dr. Shurooq Ahmed Kareem;

E-Mail: shuroq80@uomustansiriyah.edu.iq


Office Hours: Mon.: [10: 10 – 11: 50]

Wed.: [10: 10 – 11: 50]

### 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