

# PROBABILITY AND STATISTICS COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

## COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Baghdad/ College of Science for Women
2. University Department/Centre	Computer Science of Department
3. Course title/code	Probability and Statistics / 107CPS
4. Programme(s) to which it contributes	Mathematics , Discrete Structures
5. Modes of Attendance offered	Physical Attendance
6. Semester/Year	Semester/ Frist Year Second

7. Number of hours tuition (total)	30hours (30 hours theoretical)
8. Date of production/revision of this specification	21/4/2016
9. Aims of the Course	
This course aims to enable the student to know the basic principles of the theory of probability and statistical probability distribution and Statistical methods.	

10. Learning Outcomes, Teaching ,Learning and Assessment Methods
<p>M- Knowledge and Understanding</p> <p>A1. Identify the definition of probability in general.</p> <p>A2. To identify the meaning of the sample space in Probability.</p> <p>A3. Identify the rules for resolving questions probability.</p> <p>A4. Identify Mamni event independent and accredited event.</p> <p>A5. Identification of the random variable.</p> <p>A6. Identify the statistical methods of distribution.</p>
<p>B. Subject-specific skills</p> <p>B1. The meaning of the definition of probabilistic knowledge.</p> <p>B2. Know the meaning of the sample space.</p> <p>B3. Modern meaning and types of knowledge.</p> <p>B4. Knowledge of statistical methods and distribution.</p>
Teaching and Learning Methods
<ul style="list-style-type: none"> <li>• Education: provide printed lectures and modern, diverse and rich sources of examples.</li> <li>• Education: Harnessing the blackboard to teach students the goal of clarifying the steps the solution and extraction results.</li> </ul>

- Education: resolving some questions.
- Learning: asking questions and inquiries and make the student turn into a teaching explanation and solution on the blackboard at that point.
- Learning: direct questions and each student is experimenting to see how its interaction in order to pay attention to the rest.
- Learning: give the questions a group duty to students to encourage them to follow up article where by solving those questions to know whether he has been absorbing material or not.

#### Assessment methods

- Quizzes (quiz) semi-weekly.
- Questions sudden and overlapping put up with to explain Article.
- Monthly and Semester tests.

#### C. Thinking Skills

- C1. Introducing a range of solutions to the same problem and discussed both individually and determine the appropriate method of solution to the problem at hand with a stand on the disadvantages of the rest of the roads.
- C2. Asked questions that need to be exceptional oral answers where exceptional be specified in terms of the weight of the calendar and grades, which are a strong incentive for student participation, competition and the race to solve them.

#### Teaching and Learning Methods

Discussions that arise in the course of the lecture and try to involve the largest possible number of students, and touched on the details of things and discussed objectively and targeted discussion.

#### Assessment methods

- Oral evaluated by involving students in discussions.
- Quizzes (quiz).
- Monthly and Semester Tests.

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1. Giving duties to students and ask them to solve them to know where the strengths and weaknesses.

D2. Alert on errors in students' oral answers and discussion to see her fault.

D3. Alert on errors in the answers written by students and notation to clarify the student.

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2	An Introduction to Probability Theory	An Introduction to Probability Theory	According to point 10 above and as needed	According to point 10 above and as needed
2	2	Probability Definitions and Rules	Probability Definitions and Rules	According to point 10 above and as needed	According to point 10 above and as needed
3	2	Conditional Probability and Independence	Conditional Probability and Independence	According to point 10 above and as needed	According to point 10 above and as needed
4	2	Conditional Probability and Independence	Conditional Probability and Independence	According to point 10 above and as needed	According to point 10 above and as needed
5	2	Random Variables and Probability Distribution	Random Variables and Probability Distribution	According to point 10 above and as needed	According to point 10 above and as needed
6	2	An Introduction to Probability Theory	An Introduction to Probability Theory	According to point 10 above and as needed	According to point 10 above and as needed
7	2	Probability Definitions	Probability Definitions and	According to point 10 above	According to point 10 above and as needed

		and Rules	Rules	and as needed	
8	2	Conditional Probability and Independence	Conditional Probability and Independence	According to point 10 above and as needed	According to point 10 above and as needed
9	2	Conditional Probability and Independence	Conditional Probability and Independence	According to point 10 above and as needed	According to point 10 above and as needed
10	2	Random Variables and Probability Distribution	Random Variables and Probability Distribution	According to point 10 above and as needed	According to point 10 above and as needed
11	2	Statistical Method: Statistical Analyses	Statistical Method: Statistical Analyses	According to point 10 above and as needed	According to point 10 above and as needed
12	2	Statistical Method: Statistical Interpretation	Statistical Method: Statistical Interpretation	According to point 10 above and as needed	According to point 10 above and as needed
13	2	Statistical Analyses of Times Data (time series)	Statistical Analyses of Times Data (time series)	According to point 10 above and as needed	According to point 10 above and as needed
14	2	Analyses of Times Data (time series)	Analyses of Times Data (time series)	According to point 10 above and as needed	According to point 10 above and as needed
15	2	Second	Second	According to point 10 above	According to point 10

		examination	examination	and as needed	above and as needed
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## 12. Infrastructure

<p>Required reading:</p> <ul style="list-style-type: none"> <li>· CORE TEXTS</li> <li>· COURSE MATERIALS</li> <li>· OTHER</li> </ul>	<ul style="list-style-type: none"> <li>• G.C.Canavos, “Applied Probability and Statistical Methods”, Little Brown and Company, 1984.</li> <li>• J.G.Kalbfleisch, “Probability and Statistical Inference”, Springer-Verlag, 1979.</li> <li>• Allan G. Bluman, " Elementary Statistics" McGraw Hill, 2007</li> </ul>
<p>Special requirements (include for example workshops, periodicals, IT software, websites)</p>	<ul style="list-style-type: none"> <li>▪ Allan G. Bluman, " Elementary Statistics" McGraw Hill, 2007</li> </ul>
<p>Community-based facilities (include for example, guest Lectures , internship , field studies)</p>	

## 13. Admissions

Pre-requisites	Discrete Strictures
Minimum number of students	Depending on the size of the classroom, according to the division of the people, 25 students
Maximum number of students	Depending on the size of the classroom, according to the division of the people, 35 students