



Course No.: 54454123
Course Name: statistical inference(1)
Course Website:

Time Division: 4th Theoretical
Semester & Year: First, 2022 / 2023

Course Description:
(4 credit hours)

the Course Description Review ,Order Statistic, Estimation, Measure of Quality of estimation
Completeness and Uniqueness, the exponential class of probability density function

Course Intended Outcomes:

At the end of the Course, students are expected to learn Estimation, methods of the point estimate,
measures of quality of estimation .

Course Outline:

Week	Description depends on the Timing table (Theoretical & Practical)
1	Review, discrete distribution, continuous distributions, transformation of discrete type of distribution ,transformation of one variable, transformation of two variables
2	transformation of continuous type of distribution ,transformation of one variable, transformation of two or more variables
3	Order Statistic(O.S)
4	Estimation ,some definition of the estimation ,general review of the function from the probability distribution
5	The point estimation ,methods of the point estimate(method of the moment)
6	(method of maximum likelihood)
7	Measures of quality of estimation,unbiasedness,consistency,sufficiency,completeness
8	Uniqueness,efficiency,MSE.
9	Sufficient statistic,asufficient statistic for parameter, the Factorization theorem(F.T.)
10	THE Rao Black well theorem
11	Completeness and uniqueness
12	LEIBIZS RULE(FORMULA)
13	Lmann-Scheffe theorem
14	The Exponential class of probability density function
15	Lower Bound of variance ,Cramer -Rao Inquality (CRLB)

Textbooks:

[1]: Introduction to mathematical statistics by Robert V. Hogg and Allen T. Craig, third edition (19978)

[2]: statistical inference (second edition) by George Casella & Roger L. Berger (2002)

Suggested references:

[1]: statistical inference by Konstantin M. Zuev (2016)

[2]:

Marking:

First Semester				Final Exam
1st exam	2nd exam	Practical	Activity	
10	10	5	5	70

Assignment/ Project	Description	Due Date	Marking
Homework	Solve exercises	28/11/2022	5
Test question	For test the understanding	18/12/2022	5
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Instructor(s) information [معلومات الأستاذ]

Section: (Mathematics) ; Lecture Room:[204,402], ; Office No.: (3)

Instructor's Name: Dr.sudad Khalil ibraheem

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Office Hours : Sun [08:30 - 10 : 10]

Thur [08:30 - 10 : 10]

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