Form (H)
Short course description

Course title: **Theory of Statistic (2)**	Course number and code: **STAT 419**
Previous course requirement: STAT 340	Language of the course: E
Course level: Compulsory course in 7th level for statistic/ Year 4	Effective hours: 3(2+2+0)

Course description

Pivotal Quantity **PQ** – Confidence Interval. Testing Hypotheses - Type I and Type II errors. Simple Hypotheses - Neymann-Person Lemma and Most Powerful test- Exponential family. Monotone likelihood ratio. Bayes Test- Min Max Test-Composite hypothesis-Uniformly Most Powerful Test- Generalized Likelihood Ratio Test- Confidence interval test- Sequential Likelihood Ratio Test(**SLRT**)

Course objectives

Reviewing the methods and properties of hypothesis testing of parameters

Learning outcomes (understanding, knowledge, and intellectual and scientific skills)
After studying this course, the student is expected to be able to:

-Understand the elements of the Testing Hypotheses problem under investigation.
-Use mathematics for making Testing Hypotheses.
-Make the suitable type of Testing Hypotheses among various techniques in the field.
-Demonstrate capability of choosing the appropriate statistical inference for a particular application.
-Formulate significant research questions, use appropriate statistical inference method, and interpret the results.
-Read, evaluate, and interpret numerical, statistical and general scientific information.
-Comparing things should always be performed.
- Reaching the appropriate conclusions from the used analysis.

Textbook adopted and supporting references

Title of the book	Author's name	Publisher's name	Date of publication
Introduction to Mathematical Statistics	Hogg, McKean, and Craig	Prentice Hall	Last edition
Introduction to Theory of Statistics	A. Mood, F. Graybill & B. Boes	McGraw Hill	1974
مبادئ الإستدلال الإحصائي	جلال الصياد	دار المريخ للنشر - الرياض	1993