

Date:	Examination No.:	Version:31/12/2023	Start: 7/1/2024																																
Module Name - Code	Statistics - 1119																																		
Module Language:	English																																		
Responsible:																																			
Lecture (s):	Dr. Zrar Sedeeq Othman and Bnar Noaman																																		
College:	College of Engineering – Salahaddin University-Erbil																																		
Duration:	15 week – 1 semester																																		
Course outcomes:	<p>After successfully completing the course, students should be able to do the following:</p> <ol style="list-style-type: none"> 1. Use statistical methodology and tools in the engineering problem-solving process. 2. Compute and interpret descriptive statistics using numerical and graphical techniques. 3. Understand the basic concepts of probability, random variables, probability distribution, and joint probability distribution. 4. Compute point estimation of parameters, explain sampling distributions, and understand the central limit theorem. 																																		
Course Content:	<table border="1"> <thead> <tr> <th colspan="2">Week Lecture</th> </tr> </thead> <tbody> <tr> <td>1st</td> <td>Introduction</td> </tr> <tr> <td>2nd</td> <td>Descriptive statistics</td> </tr> <tr> <td>3rd</td> <td>Summarizing Data Sets, lec.-1</td> </tr> <tr> <td>4th</td> <td>Summarizing Data Sets, lec.-1</td> </tr> <tr> <td>5th</td> <td>Probability, lec.-1</td> </tr> <tr> <td>6th</td> <td>Probability, lec.-2</td> </tr> <tr> <td>7th</td> <td>Midterm Exam</td> </tr> <tr> <td>8th</td> <td>Discrete distribution & Combinations.</td> </tr> <tr> <td>9th</td> <td>Binomial distribution</td> </tr> <tr> <td>10th</td> <td>Poisson distribution</td> </tr> <tr> <td>11th</td> <td>Normal distribution</td> </tr> <tr> <td>12th</td> <td>Standard Normal distribution</td> </tr> <tr> <td>13th</td> <td>Correlation and Regression</td> </tr> <tr> <td>14th</td> <td>Seminar presentation</td> </tr> <tr> <td>15th</td> <td>Final Exam</td> </tr> </tbody> </table>			Week Lecture		1 st	Introduction	2 nd	Descriptive statistics	3 rd	Summarizing Data Sets, lec.-1	4 th	Summarizing Data Sets, lec.-1	5 th	Probability, lec.-1	6 th	Probability, lec.-2	7 th	Midterm Exam	8 th	Discrete distribution & Combinations.	9 th	Binomial distribution	10 th	Poisson distribution	11 th	Normal distribution	12 th	Standard Normal distribution	13 th	Correlation and Regression	14 th	Seminar presentation	15 th	Final Exam
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Literature:	<p>1- Probability and Statistics for Engineering and the Sciences by Jay L. Devore, 2004. 2– Probability, Statistics and decision for Civil Engineer by Dack R. Benjamin & C. Allin Corne, 1970. 3 – Applied Statistics for Engineers by William Volk, 1960.</p>																																		
Type of Teaching:	2 hrs theory and 1 hr tutorial																																		
Pre-requisites:																																			
Frequency:	Yearly in spring semester																																		
Requirements for credit points:	<p>For the award of credit points, it is necessary to pass the module exam. The module exam is theoretical: [Written 120 min] Student's attendance is required in all classes.</p>																																		
Credit point:	4																																		
Grade Distribution:	<p>The Grade is generated from the examination result(s) with the following</p> <ul style="list-style-type: none"> 10% activity 10% quizzes 20% mid-term exam 60% final Exam 																																		
Work load:	The workload is 135 hrs. It is the result of 45 hrs. attendance and 90 hrs. self-studies.																																		