

## Module (Course Syllabus) Catalogue

### 2024-2025

College/ Institute	Koya Technical Institute	
Department	IT	
Module Name	Statistics	
Module Code	STA202	
Degree	Technical Diploma <input checked="" type="checkbox"/>	Bachelor <input type="checkbox"/>
	Diploma <input type="checkbox"/> Master <input type="checkbox"/>	PhD <input type="checkbox"/>
Semester	2 <sup>nd</sup> Semester	
Qualification	BSC ( Statistics ) MSC ( Computer & Mathematics) PhD ( Applied Statistics)	
Scientific Title	Lecture	
ECTS (Credits)	6	
Module type	Prerequisite <input type="checkbox"/>	Core <input type="checkbox"/> / Assist. <input type="checkbox"/>
Weekly hours	6	
Weekly hours (Theory)	( 2 )hr Class	( )Total hrs Workload
Weekly hours (Practical)	( 2 )hr Class	( )Total hrs Workload
Number of Weeks		
Lecturer (Theory)	Dr. Syamnd Mirza Abdullah	
E-Mail & Mobile NO.	<a href="mailto:Syamnd.abdullah@epu.edu.iq">Syamnd.abdullah@epu.edu.iq</a> +964 7711550154	
Lecturer (Practical)		
E-Mail & Mobile NO.		
Websites		

# Course Book

<p><b>Course Description</b></p>	<p>Statistics are important in many fields of IT such as how to collect dataset which affects on the target. However, How to understand the measurement of level the data and the type of data such as quality and quantity. On another hand, how to explain the data by graph and which graph is suitable for data collection. In addition, how arrange the dataset by frequency and how to tendency measurement unit in group and ungroup data such as mean, median, mode and rang. Plus, how to know the relation between independent variable with dependent variable and find the significant data to project. Finally, all martial Statistics can apply in SPSS or in MS-Excel.</p>				
<p><b>Course objectives</b></p>	<p><b>Objective on statistics are:</b></p> <ul style="list-style-type: none"> <li>• To define and principal statistics</li> <li>• To collect dataset for any project</li> <li>• To test our data in Tendency measurement of level</li> <li>• To estimate our data by Regression model</li> <li>• To find the correlation coefficient between the variables</li> <li>• To determine the significant data.</li> <li>• To apply SPSS program</li> </ul>				
<p><b>Student's obligation</b></p>	<p>Students must attend all lectures .they also do quick daily exams .furthermore, they are required to do their homework and duties that will be assigned to them .they must do seminars and projects .finally they must pass the final and midterm exam.</p>				
<p><b>Required Learning Materials</b></p>					
<p><b>Evaluation</b></p>	<p><b>Task</b></p>		<p><b>Weight (Marks)</b></p>	<p><b>Due Week</b></p>	<p><b>Relevant Learning Outcome</b></p>
	<p>Paper Review</p>				
	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Assignments</p>	<p>Homework</p>	<p>14%</p>		
		<p>Class Activity</p>	<p>2%</p>		
		<p>Report</p>	<p>8%</p>		
		<p>Seminar</p>	<p>8%</p>		
		<p>Essay</p>			
		<p>Project</p>	<p>8%</p>		
	<p>Quiz</p>		<p>4%</p>		
	<p>Lab.</p>				
	<p>Midterm Exam</p>		<p>16%</p>		
	<p>Final Exam</p>		<p>40%</p>		
	<p>Total</p>				

<b>Specific learning outcome:</b>	In the end of statistics course, students have to able to 1- Collect dataset in both kinds such as quality and quantity. 2- Identify of the level measurement 3- Explain the data in graph 4- Arrange the data from ungroup to group data 5- Understand Tendency measurement level 6- Find correlation between the dataset 7- Determine the significant the dataset	
<b>Course References:</b>	<ol style="list-style-type: none"> <li>1. <a href="https://www.anlyzemath.com/statistics/introduction_statistics.html">https://www.anlyzemath.com/statistics/introduction_statistics.html</a></li> <li>2. Peck, R., C. Olsen, and J.L. Devore, <i>Introduction to statistics and data analysis</i>. 2015: Cengage Learning.</li> <li>3. Lane, D.M., et al., <i>Introduction to statistics</i>. 2017: Citeseer.</li> <li>4. Crowder, S., et al., <i>Introduction to Statistics and Probability</i>, in <i>Introduction to Statistics in Metrology</i>. 2020, Springer. p. 59-80.</li> </ol>	
<b>Course topics (Theory)</b>	<b>Week</b>	<b>Learning Outcome</b>
Introduction of description and inferential statistics Pictorial description of data& data classification.	1.	1
Frequency distribution & cumulative frequency Distribution	2.	1
Histogram and frequency polygon	3.	1
Tendency measurement level	4.	2
Measures of variation.	5.	1
correlation coefficient in Person type	6.	1
analysis of linear regression	7.	1
t-distribution & F- distribution	8.	2
P-value	9.	2
Computer application.	10.	9
<b>Practical Topics</b>	<b>Week</b>	<b>Learning Outcome</b>

## Questions Example Design

Q suppose you want to identify the age of 30 students in the Statistic class (20 Marks)

18, 25, 23, 19, 21, 30, 18, 34, 29, 20, 22, 25, 19, 27, 31

26, 24, 32, 21, 30, 19, 23, 33, 19, 23, 25, 27, 29, 28 and 31

Find:-

1- Frequency table for 30 students, if the  $K=4$  with the Continuous frequency table.

2- Polygon frequency chart to distribute on the graph.

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Q/ Anna is a very good master student, but at times she doesn't enough sleep. (20Marks) She

hypothesizes that when she gets more sleep she does better on tests. Find the Person Correlation coefficient with explain between hours of sleep and test score for following data.

Hours of Sleep	8	8	6	5	7	6
Test score	81	80	75	65	91	80

**Extra notes:**

**External Evaluator**