

## Module (Course Syllabus) Catalogue 2022-2023

College/ Institute	Erbil Technical Engineering College		
Department	Mechanical and Energy Engineering		
Module Name	Engineering measurements		
Module Code	ENM203		
Degree	Technical Diploma <input type="checkbox"/>	Bachelor <input checked="" type="checkbox"/>	High Diploma <input type="checkbox"/> Master <input type="checkbox"/> PhD <input type="checkbox"/>
Semester	Third Semester		
Qualification	Master Degree		
Scientific Title	Lecturer		
ECTS (Credits)	6		
Module type	Prerequisite <input type="checkbox"/>	Core <input type="checkbox"/>	Assist. <input type="checkbox"/>
Weekly hours	4		
Weekly hours (Theory)	( 2 )hr Class	( 67 )Total hrs Workload	
Weekly hours (Practical)	( 2 )hr Class	( 97 )Total hrs Workload	
Number of Weeks	20		
Lecturer (Theory)	Hindren Ali Saber		
E-Mail & Mobile NO.	<a href="mailto:Hindren.saber@epu.edu.iq">Hindren.saber@epu.edu.iq</a> & 07507430728		
Lecturer (Practical)	Mrs. Didar& Mr. Darawan		
E-Mail & Mobile NO.	07507969989		
Websites			

# Course Book

<b>Course Description</b>	This course will help the student to understand the basic principles of Measurements in air-conditioning systems design, types of Measurement systems. This course will also explain the principles of energy conservation and heat recovery systems in the range of measurements operations.				
<b>Course objectives</b>	Understanding the main principle of Measurements for air conditioning system and Thermal and Applied Mechanics Measurements.				
<b>Student's obligation</b>	The most important obligation in this subject is that student have to attend a class and should be in the class before the lecturer came to class otherwise that student is absent in this lesson. It will effect on their marks.				
<b>Required Learning Materials</b>					
<b>Evaluation</b>	<b>Task</b>	<b>Weight (Marks)</b>	<b>Due Week</b>	<b>Relevant Learning Outcome</b>	
	Paper Review	0			
	Assignments	Homework	0		
		Class Activity	2		
		Report	5		
		Seminar	3		
		Essay	0		
		Project	5		
	Quiz	5			
	Lab.	10			
	Midterm Exam	30			

	Final Exam	40		
	Total	100		
<b>Specific learning outcome:</b>	This course will help the student to understand the basic principles of the working principles of mechanical measurements. Measurements process of working in air-conditioning systems design, types of Mechanical Measurements which can be used in air conditioning systems. This course will also explain the principles of Temperature, pressure and fluid flow properties.			
<b>Course References:</b>	- Mechanical Measurements - <a href="http://www.Google.com">www.Google.com</a> Mechanical Measurements.			
<b>Course topics (Theory)</b>		<b>Week</b>	<b>Learning Outcome</b>	
1) Principles of Measurements 2) Measurements in Control engineering 3) Position Sensor 4) Temperature Measurements 5) Pressure Measurements 6) Pressure Measurements 7) Flow Measurements 8) Force Measurements 9) Humidity Measurements 10) Velocity Measurements 11) Velocity Measurements 12) Liquid level Measurements 13) Displacement Measurements 14) Displacement Measurements 15) Quantity Measurements 16) Weight Measurements, Acceleration Measurements				
<b>Practical Topics</b>		<b>Week</b>	<b>Learning Outcome</b>	
Bourdon Gauge disassembly		1-4		
Production Measurements		4-10		
Temperature measurements		10-16		

## Questions Example Design

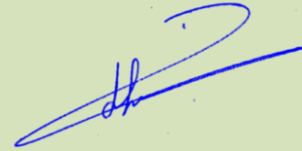
Q1/What are the Potentiometer on Measurements?

Q2/ Define the following Measurements: 1) Thermistor 2) bourdon gauge 3) Strain Gauge

### Extra notes:

### External Evaluator

I would like to emphasize that this coursebook is covered all the important subjects that are necessary for the second-year mechanical engineering students. The syllabus is well organised and up to date.



**Dr. Dlair O. Ramadan**