

Faculty of Engineering & Technology

Sensors and Instrumentations

Information :

Course Code : MEC330 **Level :** Undergraduate **Course Hours :** 3.00- Hours

Department : Mechatronics Engineering

Instructor Information :

Title	Name	Office hours
Professor	Osama Esmail Mahmoud Esmail	2
Teaching Assistant	Salma Haytham Talaat Abdelalim Gouda	

Description :

Instrumentation techniques incorporating computer control, sampling, and data collection. Data analysis, Transducers and sensors, measurement principles, resistive, inductive, capacitive impedances. Measurements of pressure and flow rates manometers, pressure gauges, pitot tube, venturi orifice, nozzle flow meters. Measurements of temperature thermometers, thermocouples, Measurements of force, torque, strain, displacement, length, and area, Viscosity measurements. Actual hands-on experience with electronic and measurement equipment, such as oscilloscopes, breadboards, function generators, digital data acquisition systems.

Recommended books :

J P Holman, *Engineering Measurements* McGraw Hill, Latest edition.
W. Bolton, *Mechatronics: electronic control systems in mechanical engineering* Pearson- Prentice Hall