



Yarmouk University

Hijawi Faculty for
Engineering Technology

Designing Electronic Systems and Sensors Lab

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Lab Overview

The Designing Electronic Systems and Sensors Lab is an applied Lab where experiments are conducted that are related to measuring samples that are application-dependent for the project's objectives. Various sensors are utilized and developed, calibrated, and integrated into an electronic circuit system to create a cost-effective device with user-friendly functionality.

Applications

encompass medical, biological, and environmental problem-solving domains.

Research Collaboration

Collaborations extend across the Chemistry and Biology departments, the Medical and Pharmacy colleges, and Electrical Engineering in all its specializations.

People

Dr. Yusra Obeidat oversees the project, fostering research relationships and hiring research assistants as needed.

Current Active Project

A smart ball for water quality monitoring, developed in collaboration with Dr. Abdel-Munim Rawashdeh from the Chemistry Department at Yarmouk University.

Devices Available in the Lab

Device	Usage
Electronic Balance YX10002	Weighing of solid samples
Hotplate Stirrer Witeg Labortechnik GmbH 1001314193H013	Heating of samples
Pressure Vacuum	Controlling air pressure within electrochemical systems

Device	Usage
ECG Patient Simulator BIOBASE JR2000D	Displaying heart rate signals and blood pressure details
Optika Microscope SN 593517	Enlarging samples for clear visibility
HaKO 936 soldering station	Mounting electronic components on circuit boards
soldering station LF-389D	Mounting electronic components on circuit boards
3D printer Creality	3D printing
Desiccator SP-Scienceware 1-800-4BELART	Evacuating gas from samples
Electrochemical Interface Potentiostat/ galvanostat PalmSens PS42102090117	Conducting all electrochemical experiments such as Amperometry, Cyclic voltammetry, Impedance spectroscopy, etc
Two channel digital storage oscilloscope Tektronix	Displaying electrical signals
Waveform Generator Keysight 33500B	Generating electrical signals
True-rms Multimeter Fluke 55410496	Measuring current, voltage, and resistance
Triple output power supply Keysight E3630A	Power supply for various experiments
Spin coater	Even distribution of samples on the surface





