Electronic Engineering

Specialization	**Automatic control technology**
Course Number	**20310243**
Course Title	**Supervision Control And Data Acquisition (SCADA)**
Credit Hours	**2**
Theoretical Hours	**1**
Practical Hours	**3**

❖ **تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008**

Brief Course Description:

- At such, it is a purely .software package that is positioned on top of hardware to which it is interfaced, in general via programmable logic controllers(PLCs), or other commercial hardware modules.

Course Objectives:

Upon the completion of the course, the student will be able to:

1- used transducers and connect them with A/D converter
2- interface the A/D converter with PLC
3- To programmed the PID
4- To draw the object
5- To test the graphic
6- To configure alarm

Detailed Course Description:

lab Number	lab Name	lab Content	Time Needed
1.	**Digital Measuring interface and computer-Aided Data Acquisition**	▪ Analog signal ▪ Sampling concept and the sampling theorem ▪ Digital –to Analog conversion (D/A) ▪ Analog –to Digital conversion(A/D) ▪ Multiplexer and multiplexer ▪ Data acquisition components	
2	**Process control and data acquisition system**	▪ Types of processor ▪ Structure of control system ▪ Controller ▪ Data acquisition system	
2.	**Distributed control system**	▪ Distributed control system architecture ▪ Distributed control-sub-systems ▪ Local field station ▪ Library of functions ▪ Presentation and monitoring device ▪ Normal condition display ▪	
3.	**Different control system with PLC**	▪ Programming P, PI, PID, interface, tinning, operation	
4.	SCADA software practice	▪ Create a New Project folder ▪ Configure an I/O Device ▪ Configure Tags	

❖ **تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008**

		▪ Greeting graphic pages ▪ Greeting graphic pages, greeting a new page ▪ Greeting graphic pages, saving your page ▪ Greeting graphic pages, configured buttons ▪ Greeting graphic pages, configure symbol sets ▪ Testing graphics pages, computer setup wizard ▪ Testing graphics pages, Runtime ▪ Greeting graphics pages, precision drawing ▪ Creating graphics pages, analog indicators & number ▪ Creating graphics pages, configuring numbers ▪ Creating graphics pages, 3D rectangles ▪ Creating graphics pages, pumps & piping ▪ Creating graphics pages, change background color ▪ Configure an alarm display page ▪ Configure a trend page ▪ Runtime ▪ Trouble shooting	

❖ **تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008**

Evaluation Strategies:

Exams		Percentage	Date
Exams	Midterm Exam	20%	--/--/----
	Assignments	30%	--/--/----
	Final Exam	50%	--/--/----
Discussions and lecture Presentations			
Homework and Projects			

Teaching Methodology:

- Lab. Work

Textbook & References:

1. Instrumentation system
   Fundamental and application, Tasuku Sebon, Futoshi Hanabuchi
2. Citect SCADA manuals

- **تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008**