



Engineering Program

Specialization	Electro-mechanical program
Course Number	20307212
Course Title	Control Technology Laboratory
Credit Hours	1
Theoretical Hours	-
Practical Hours	3
Pre-requisite	20307211*



Brief Course Description:

Experimental study and investigation of open-loop and closed loop systems and their elements using mathematical and physical models. Study of first and second order systems performance

Course Objectives:

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

1. Build simple control loops and systems
2. Distinguish between real systems and their models
3. Evaluate performance of simple control systems
4. Use PC in simple control actions

Detailed Course Outline:

Unit Number	Unit Title	Unit Content	Time Needed
1.	Elements of automatic control system	▪	
2.	Feedback control and control loop diagrams	▪	
3.	Stability of automatic control systems	▪	
4.	Frequency characteristics and their applications in automatic control systems	▪	
5.	Process time lags	▪	
6.	Servo and motion control systems	▪	
7.	Two position control systems	▪	
8.	PID generic controllers	▪	
9.	Controller tuning	▪	
10.	Examples of motion control systems	▪	
11.	PC-based control systems	▪	

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



Evaluation Strategies:

Exams		Percentage	Date
Exams	Midterm practical Exam	20%	
	Reports	30%	
	Final practical Exam	50%	

Teaching Methodology:

- ❖ Practical experimental work in small groups

Text Book

1. Laboratory sheets prepared by instructor



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