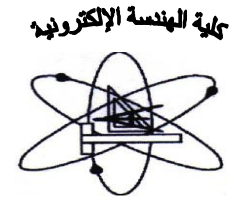# Course Syllabus

Department offering the program: Industrial electronics and Control Engineering
Department offering the course: Industrial electronics and Control Engineering

Course basic information :		
Course Code: AC441	**Course Title** Programmable Logic Controllers	**Level : 4** **Semester : 1**
Department requirement	**Teaching hours: Lecture [2] Tutorial [0] - Lab [3]**	
Course objectives	1. To explain the several ways of utilizing and programming an PLC with high efficiency and reliability. 2. Having acquired a good knowledge of improving PLC applications. 3. To analyze PLC units. 4. Having acquired a good knowledge of programming the PLC. 5. Having acquired a good knowledge of connecting PLC with computer and others PLC in LAN and industrial network. 6. To analyze Embedded devices	
Course Contents	Advantages of the utilization of PLC and Introduction to DCS, logic and sequential control circuits, Local Area Network, Input/Output Bus Network, Special Function Input/Output, PLC Programming languages (Ladder diagram-instruction list-function diagrams- Grafcet), PLC analog I/O interfacing , wiring and Applications Using TSX Micro and LG Glova PLCs.	
Assessment		
Weighting of Assessment	Lab. tutorial and quizzes : 4 % - Mid-term examination: 12 % - Case study and/or practical exam: 20 % - Final – term examination: 60 % - Other types of assessment: 4 % _____ Total 100 %	

List of text books and references:	
Text books	• W. Bolton ",Programmable Controller," McGraw-Hill Fourth Edition, 2009
Recommended books	• Frank D. Petruzella ,"PROGRAMMABLE LOGIC CONTROLLERS," Third Edition , McGraw-Hill , 2005 • Neal Babcock , "Beginner's guide to PLC Programming, " Modern Media, 2008.