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: AC448	**Course Title:** Industrial Automation systems	**Level : (4)** **Semester : 2**
Department requirement	**Teaching hours: Lecture[2] Tutorial [2] - Lab [0]**	
Course objectives	1. To explain the principles of industrial automation systems 2. To study methods of integrating different technologies and machines in industrial automation systems . 3. To define the methods of programming of industrial automation systems 4. To prepare the application of industrial automation systems	
Course Contents	Introduction to Automated systems -Supervisory control Data acquisition in automated system SCADA Configuration, Communication - Distributed Control System - Applications of Distributed Control System - Automation system - Robotics and CNC machines - Types of CNC machines - CNC components, programming	
Assessment		
Weighting of Assessment	- Class tutorial and quizzes : 16 % - Mid-term examination: 16 % - Case study and/or practical exam: …… - Final – term examination: 68% - Other types of assessment: …… Total 100 %	
List of text books and references:		
Text books	• Guide to Industrial Control Systems (ICS) Security - Supervisory Control and Data Acquisition (SCADA) systems, Dec 19, 2013 • A.S Boyer ," SCADA : Supervisory Control and Data Acquisition ",John Wiley , 2004	

	• H. Kopetz, M.G. Rodd ” Distributed Computer Control Systems”, Prentice Hall Int , 1992
Recommended books	• Vehappen and A .Perrira ,” Foundation Fieldbus” ISA 2005 • A. S. Tannenbaum “Computer Networks “ Prentice Hall Int. 1996 • Antti.j Koivo " Fundamentas for control of Robotic manipulators" John Wiley,1989. •