

Course Description Form

1. Course Name:					
Automation and CNC Machines					
2. Course Code:					
ACNC1456					
3. Semester / Year:					
2 nd Semester					
4. Description Preparation Date:					
25/3/2024					
5. Available Attendance Forms:					
Presence					
6. Number of Credit Hours (Total) / Number of Units (Total)					
2/45					
7. Course administrator's name (mention all, if more than one name)					
Name: Firas Abdulrazzaq Raheem Email: firas.a.raheem@uotechnology.edu.iq					
8. Course Objectives					
Course Objectives		<p>This course aims to acquire the students with the principle of automation, types of automation, building blocks of automation which includes, sensors, analyzers actuators and drives. Also, with mechanization of parts handling and with the automatic production concept, assembly machine and the calculation of production and throughput time.</p>			
9. Teaching and Learning Strategies					
Strategy		<ul style="list-style-type: none"> • Lectures. • Tutorial. • Quizzes. 			
10. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1-2	3		Introduction to Automation	Lectures	Participation
3	3		Building Blocks of Automation – Sensors	Lectures	Participation
4	3		tutorial	Lectures	Participation and solving sheet1
5	3		Building Blocks of Automation – Analyzers	Lectures	Participation
6	3		Building Blocks of Automation – Actuators	Lectures	Participation
7	3		tutorial	Lectures	Participation and solving sheet2
8	3		Building Blocks of Automation –Drivers	Lectures	Participation
9	3		Mechanization of Parts Handling	Lectures	Participation
10	3		tutorial		Participation and solving sheet3
11-12	3		Automatic Production and Assembly	Lectures	Participation
13	3		Programming of CNC Machine	Lectures	Participation
14	3		Programming of CNC Machine	Lectures	Participation
15	3		tutorial	Lectures	Participation and solving sheet4

11. Course Evaluation

20% documented exam
5% Quizzes
5% reports and homework

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	<p>Robots and Manufacturing Automation, C Ray Asfahl, John Wiley & Sons, 1992.</p> <p>Manufacturing Automation, Yusuf Altintas, Cambridge University Press, 2012.</p>
Main references (sources)	
Recommended books and references (scientific journals, reports...)	

Electronic References, Websites	
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