

ZARQA UNIVERSITY Faculty of Engineering Department of Mechanical Engineering Robotics Spring Semester 2014-2015

	0905542 Robotics		
	3 Credit Hours	Compulsory	Spring 2014
Course Information	Prerequisites by Course: 0905463 Automatic Control Systems		
	Co-requisites by Course: -		
	Prerequisites for:		
	Schedule:		
Instructor	Dr.		
Contact			
Information			
Office hours			
Textbook	Authors: Title : Publisher: Edit Year: ISB	ion: Place: N:	
References and			
Resources			

Evaluation Criteria	Activity	Percent (%)	
	Classwork and Homework	10	
	First Exam	20	
	Second Exam	20	
	Final Exam	50	
Course	Introduction to robots, classif	ication of robots, dyna	mics of
Description	robotics, power and forces of joints calculations, hydraulic,		draulic,
	pneumatic and electric drive systems, control of robotics,		obotics,
	kinematics of robots, artificial intelligence, applications in		
			1
Intended Learning	Course Outc	ome	[%]
Outcomes	1. Work in teams to design, build systems for a variety of tasks.	I, program, and test robot	30%
	strategies needed to solve proble3. Understand open problems in	ms in robotics.	30%
	 such problems could be solved. 4. Demonstrate and describe their 5. Identify and discuss ethical issues 	r work in a public setting.	10%
	and society.		30%
Polationshins to	The objectives of this course is to h	elp the students to:	
Program	1.Explain the outside influences on the field of robotics and the		
Outcomos	effect developing robots has had on related disciplines.		
Outcomes	voltage, current, and gear ratio.	i motor torque and motor v	clocity,
	3. Given the parameters and starting	ng position for a mobile rol	bot,
	compute the new position using the	e kinematic equations.	ta tha
	implementation of the kinematics by	controlling	
	the robot in a specified trajectory	pattern.	
Contribution to	Engineering Science		60%
the Professional	Engineering Design		30%
Components			5070
	General Education		10%
Course Outline	Subject Hours		

		6
		6
		6
		4
		3
		3
		6
		4
		-
		_
		_
	Final Exam	-
Policies:	Attendance	
	University regulations apply to this course regarding	g class
	attendance, punctuality, exams, late submissions,	
	absence with permission, penalties for cheating, an	d
	policies for assignments and projects, if any. Studen	its
	should be aware of all those in addition to other rul	es and
	regulations stated and descried in the student hand	book.
	Homework	
	 Assignments are due at the beginning of class the they are due. 	ne day

- No late homework will be accepted unless prior	
arrangement have been made with the instructor	

I

Week	Date	Торіс
1-2	12/10/2014	
3	26/10/2014	
4	26/10/2014	
5	2/11/2014	
5		
6	9/11/2014	
7-8	16/11/2014	
9-10	30/11/2014	
11	7/12/2014	
12-13	14/12/2014	
14	28/12/2014	
15	4/01/2014	

|--|