

Lab Number **ENP-S-03-B1-023**

Laboratory Type	Robotics and Artificial Intelligence Lab	مذ		
Building	South Building – 3 rd Floor			
Capacity	2 PC's - 218.2 Area (m2)			
Equipment (Furniture – Appliances)	The laboratory is equipped with: Extron Control Touch Panel- for speaker & ceiling camera Projector & display curtain Digital ceiling Camera			
	 The laboratory is equipped with: electricity sockets & network points connected to the internal network of Kuwait University One Fujitsu PC equipped with: Windows10 Enterprise, MS Office, Raspberry pi imager v1.8, Arduino IDE 2.3, Fischer Technik RoboPro Terminal, PyCharm Community Edition, Eclipse for JAVA, StarUML. One All-in-one DELL PC equipped with: Windows11 			
	 Instructor Table & Chair. Wall Shelving. 21 Wooden Tables, 24 black tables & 20 Chairs. 9 Cabinets. White board. 			
	Sensors Description Quantit	ty		
	Camera Digital color for soccer game			
	CMUCAM (C3088 1/4" color camera module with digital output) 9			
	• Compass Magnetic (CMPS03)			
	• Flame detector package - UVTron sensor 5			
	HB-sensor (6 bumper sensor - 4 photocells - 2 IR sensors- 2 sensor connectors)			
	• Image frame grabber (My Vision)			
	• IR ranging module analog - GP2D12 20			
	• IR Sensors analog (GPD2D12)			
	• IR Sensors digital (GPD2D02) 50			
	LDR (light sensitive resistors) MOTION DETECTOR SENSOR (KC7783)			
	 MOTION DETECTOR SENSOR (KC7783) Optical Interrupter switch (H21A1); Break beam opt sensor 75; 20 	1		
	PROXIMITY IR DETECTOR (SHARP IS471F)			
	• motion detector (Pyroelectric sensor package) 5			
	• Reflexive Sensor 30			
	• Thermal array sensor - TPA81 5			
	• Tilt sensor - mercury switch 5			
	• Touch sensor (Micro Switch)			
	Ultrasonic Range Sensor (Sensor SRF08) 48			
	• Fingerprint scanner 3			
	Sensor/motor kit for cricket			

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	4		
	+	Processors Description	Quantity
		BIOLOID robot kit	9
		• LEGO MINDSTORM EV3	5
		VEX mechatronics kit	11
		FISCHERTECHNIK robot set	15
		FS-I6 Radio control system	5
		Lynx motion Drone	2
		ALPHA UBTECH robot	_ 1
		OPTIC 5 Radio control system	1
		·	30
		• OZOBOT	
		Fischer Technik 3D printer	2
		Raspberry pi 3	6
		Arduino Uno	30
		• Ebot	6
		App-enabled Droid	10
		Dual POB robotic controller	5
		Mindset and accessories and 2 caps	1
		POB-8001 robot	10
		Radio-control servo controller (Microrobot) - RS servo8 and accessories	5
		· · · · · · · · · · · · · · · · · · ·	11
		Robot Lego mindstrom NXT Robot Second players a players and	2
		Robot Soccer player + playground	S
		• robot Sumo bot	5
		Soccer game board and microrobots	1
		SuperCX super cricket microcontroller + USB cricket beamer	2
	5	N. D. C.	0 "
		Motors Description	Quantity
		Futaba cog and link kit with 40 treads and pins	5
		Futaba cog black link kit with 20 treads and pins	10
		H-bridge Amp (Red)	16
		H-bridge motor driver I.C. L293D	50
		motor FAUL gearhead	10
		motor AIWA 26FL-060"	10
		motor DC (Mabuchi)	30
		motor Mini vibrating length 17.6mm; length 23mm; length 27mm	10
		Motors DC 3-V	50
		Motors DC 9-V	8
		motors Two gearhead with 130mm pin spike tire set	4
		motors Two gearhead with 64mm sponge tire set	4
		regulator 12V-voltage I.C. 78T12CT	50
		regulator 5V-voltage I.C. 78T05CT	50
		relay module Scientifc-12c-serial	5
		Servo controller module - SD21	5
		servo Futaba with wheels (output torque= 3kg)	4
		SERVO MOTOR. GENERAL PURPOSE. R-29-MX-400 BRAIN STEM.	15
		Servo MOTORs (MPI)	44
		servos Extra high torque	5
		stepper motor driver Unipolar	4
Drinter	Drive		•
Printer		ter: Lexmark W850	an flat places were
Accommodation for people		cating seating places for the disabled on the edges of corridors and rows,	on flat places, near
of determination	services and emergency doors.		
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	- 111	e availability of the necessary spaces that allow the disabled to move and	occ cicarry.

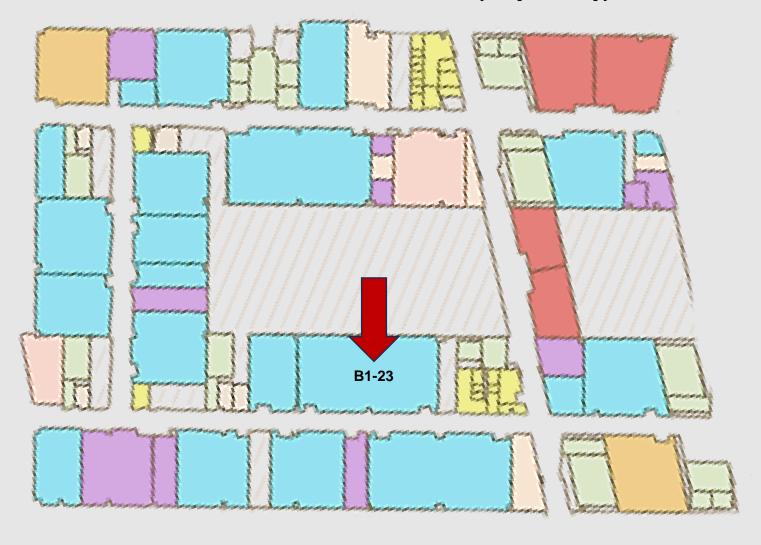
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Safety & Security	 Doors open outward with electronic card system (Key Card Access). Fire-fighting equipment inside the laboratory: Fire Extinguisher, Fire Blanket & First Aid Kit. Evacuation Plan: Presence of safety guidelines to evacuate the plant in the event of a fire. Wiring extensions are safe and do not pose a risk to students. Smoke Alarm
Laboratory Uses	AI , Robotics Course, CpE-434 Course
Officials	Eng. Tarik Abdul Aziz Al Melhem
Awareness & Guidance	The presence of instructions for correct use & instructions to maintain laboratory equipment,

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Artificial Intelligence Lab is a special computer laboratory that serves CpE-434 (Robotics) and all the students of the CpE department. They can use it to learn assembling and programming different kinds of robots that perform different functionalities. Moreover, this lab contains the equipment related to sensors, processors, and motors.

مختبر الذكاء الصناعي مختبر خاص يخدم طلبة مقرر 434-CpE (الروبوتات) وكذلك يستخدم من قبل طلبة هندسة الكمبيوتر, لتعلم تركيب وبرمجة أنواع مختلفة من الروبوتات التي تؤدي وظائف مختلفة. علاوة على ذلك, يحتوي هذا المختبر على المعدات المتعلقة بأجهزة الاستشعار والمعالجات والمحركات.



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