



# Lab Card

Lab Number  
**ENP-S-03-B1-034**

Laboratory Type	Digital Logic Lab (1)		مختبر المنطق الرقمي (1)
Building	South Building – 3 <sup>rd</sup> Floor		
Capacity	15 PCs - 91.7 Area (m2)		
Equipment (Furniture – Appliances)	1	<u>15 Kit MicroTRAK/51-C2 Kit</u> <ul style="list-style-type: none"><li>▪ MicroTRAK Carrier Board</li><li>▪ Universal I/O Module</li><li>▪ MINI-MAX/51-C2 Microcontroller Board</li><li>▪ TB-1 Training Board</li><li>▪ PROTO-1</li><li>▪ LCD242-BK LCD Display</li><li>▪ KP1-4X4 Matrix Keypad</li><li>▪ Serial cable, 6VDC Adapter</li></ul>	
	2	The laboratory is equipped with: <ul style="list-style-type: none"><li>▪ Extron Control Touch Panel- for speaker &amp; ceiling camera</li><li>▪ Projector &amp; display curtain</li><li>▪ BENQ Projector &amp; SMART Board M600 DViT + 2 Small White Wall board</li><li>▪ Digital ceiling Camera</li><li>▪ Medium size Black Network Cabinet</li></ul>	
	3	<ul style="list-style-type: none"><li>▪ 15 PCs are equipped with: Windows10 Enterprise, OS, MS Office 365 software<ul style="list-style-type: none"><li>• Vision</li><li>• Adobe</li><li>• 7-Zip</li><li>• PyCharm Community Edition</li><li>• Python, VLC Media Player</li><li>• IMB Rational Software</li><li>• Eclipse for JAVA, Visual Studio</li><li>• Voice Recorder, Paint 3d</li><li>• Netop Vision Pro</li><li>• NetSupport, Snip &amp; Sketch</li><li>• Safe Exam Browser, NVIDIA Control Panel</li><li>• Edsim 51</li><li>• Micro-IDE</li><li>• Arduino</li><li>• Quartus II 13.1(64-bit) Web Edition)</li><li>• Keil uVision5</li><li>• 13 Altera Cyclone VE FPGA board</li></ul></li><li>▪ The laboratory is equipped with electricity sockets &amp; network points connected to the internal network of Kuwait University.</li></ul>	
	4	<ul style="list-style-type: none"><li>▪ Instructor Table &amp; Chair</li><li>▪ Wall Shelving</li><li>▪ 13 Table &amp; 15 Chairs</li></ul>	
	5	<ul style="list-style-type: none"><li>▪ Good ventilation &amp; proper lighting in the laboratory.</li><li>▪ Suitable temperature for summer and winter climates.</li><li>▪ The presence of curtains to prevent sunlight from entering the laboratory to maintain the devices.</li><li>▪ The presence of the display screen in a suitable place for the teacher and students.</li></ul>	
Computers Status	Model: Intel(R) Core (TM) 17-8700 CPU @ 3.20GHz 3.19 GHz Memory: 16.0 GB RAM Printer: KYOCERA Ecosys p3260dn		

- The Safety & Security Dept. Emergency Line (ext. 3333, direct line 24893333) operates 24hours a day, including Fridays & public holidays.
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Accommodation for people of determination	<ul style="list-style-type: none"> <li>▪ Allocating seating places for the disabled on the edges of corridors and rows, on flat places, near services and emergency doors.</li> <li>▪ The availability of the necessary spaces that allow the disabled to move and see clearly.</li> <li>▪ The laboratory has computers equipped with talking and screen enlargement programs.</li> </ul>
Safety & Security	<ul style="list-style-type: none"> <li>▪ Doors open outward with electronic card system. 3 Doors</li> <li>▪ Fire-fighting equipment inside the laboratory: Fire Extinguisher, Fire Blanket &amp; First Aid Kit.</li> <li>▪ Evacuation Plan: Presence of safety guidelines to evacuate the plant in the event of a fire.</li> <li>▪ Wiring extensions are safe and do not pose a risk to students.</li> <li>▪ Easy access to the primary electrical control switch to shut down all devices.</li> <li>▪ Smoke Alarm</li> </ul>
Laboratory Uses	▪ Teaching Digital Logic Design course, CpE-264 Course
Officials	Dana Mubarak, Hanadi Al-Rashidi & Armando Vegiga.
Awareness & Guidance	The presence of instructions for correct use & instructions to maintain laboratory equipment,

This laboratory serves mainly CpE-264 (Digital Logic Lab). It is used to conduct experiments and develop projects. Students utilize Quartus II (version 13.1web) CAD tool from Altera Corporation for schematic capture and Verilog HDL based simulation and synthesis and implement digital circuits using sophisticated logic device like FPGAs. This lab has been completely upgraded and all the experiments have been redesigned. All equipment is fault free and in excellent working condition and all PC were updated in August 2023.

يخدم هذا المختبر بشكل أساسي مقرر CpE-264 (مختبر المنطق الرقمي). يتم استخدامه لإجراء التجارب وتطوير المشاريع. يستخدم الطلاب أداة Quartus II (الإصدار 13.1web) CAD من شركة Altera Corporation للالتقاط التخطيطي والمحاكاة والتوليف القائم على Verilog HDL وتنفيذ الدوائر الرقمية باستخدام جهاز منطقي متطور مثل FPGAs. تمت ترقية هذا المختبر بالكامل وتم إعادة تصميم جميع التجارب. وتم تحديث جميع أجهزة الكمبيوتر في أغسطس 2023.

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