Hashemite University
College of Engineering
Department of Computer Engineering
Computer Maintenance Lab
(1 Credit Hours/Dept. Compulsory)

Instructor		**Grading info**		**Class Info**	
Dr. Khalil Yousef		Assignments, Quizzes, In-lab Performance	40%	Days	Sec1: Monday
Email:	khalil@hu.edu.jo	Midterm Exam	20%	Time	Sec1: 2-5:00 PM
Office:	Dr. Khalil: E-3039 Eng. Sawsan: E-2060	Final	40%	Location	E-2060
Office hours:	See the Moodle Page				

Course

Course Number:	110408442
Prerequisite:	Electronics 1 (110409240) and Computer Organization (110408340)
Textbook:	**Lab Manual** given by the lab supervisor and tools uploaded on the Moodle.
Course Description:	This lab gives an overview of PCs and their peripherals like mouse, keyboard, digital pads, and other pointing devices; computer anatomy; motherboards and processors, memories, computer assembly; hardware compatibility and connectivity issues, computer faults troubleshooting, diagnosing; Windows installation, administrative tools, and Software troubleshooting and diagnosing.
Specific Outcomes of Instruction (Course Learning Outcomes)	1. **Understand** the fundamentals and the main concepts of computer hardware and operating systems. SO's (3,6,7) 2. **Assemble** and disassemble a computer SO's (3,4,6). 3. **Know** about the current computer components technology trends and the market status. SO's (4, 6,7) 4. **Troubleshoot** a computer system and fix simple problems of improper operation in both hardware and software. SO's (3,6). 5. **Learn** about administrative tools and skills. SO(6)
Important material	- Lab manual - References - Uploaded tools and resources

References:

- Uploaded tools and resources on the Moodle.
- "A guide to writing as an engineer," by David Beer and David McMurrey, 4th Edition, John Wiley & sons, 2014.

Major Topics Covered and Schedule in Weeks:

Topic	# Weeks	# Contact hours*
Introduction.	1	3
PC hardware components	1	3
Motherboards.	1	3
Computer Assembly/Disassembly	1	3
Memory Upgrading and Troubleshooting	1	3
Secondary Storage	1	3
I/O Devices Installation and Support	1	3
Midterm Exam	1	3
Operating System (Introduction)	1	3
Operating System Installation (Windows 10, attended and unattended). + Create a Partition in Win 7 + Formatting	1	3

Data Backup and Recovery in Windows 7 and 10 + Win 7	1	3
Create/Delete/Modify User Accounts in Win 7 + Monitoring system resources. + Driver installation and troubleshooting + Working with CLI commands.	1	3
Design and conduct an experiment	1	3
Final Theoretical and Practical Exams	1	3
Total	**14**	**42**

Course Policy

- The lab will follow selected subjects as listed on the course schedule. Additional lecture notes and examples might be given and discussed in class as much as time permits.
- Students are responsible for the reading assignments from the lab manual and handouts
- Students are responsible for following up the lab materials
- Students are responsible for reading additional information and examples in order to understand the materials discussed in the labs.
- If you miss a lab, there won't be a makeup test, quiz, etc. and you WILL get a zero unless you have a valid excuse.
- Cheating and plagiarism are completely prohibited.
- If you miss more than 15% of classes you will automatically fail the class.

ABET Student Outcomes (SO) Addressed by the Course:

#	*Outcome Description*	*Contribution*
General Engineering Student Outcomes		
(1)	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics. *(Previously SO's (a, e, k))*	
(2)	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors. *(Previously SO's (c, k))*	
(3)	An ability to communicate effectively with a range of audiences. *(Previously SO (g))*	***L***
(4)	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts. *(Previously SO's (f, h, j))*	***H***
(5)	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives. *(Previously SO (d))*	
(6)	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions. *(Previously SO's (b, k))*	***H***
(7)	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies. *(Previously SO (i))*	***L***

H=High, **M**= Medium, **L**=Low

Prepared By: Dr. Khalil Yousef **Date: 01/09/2019**