

Essentials of ICT

Course #:	0206151 & 0601151
Course Description:	Information Technology components, computer hardware: memory, CPU, machine cycle. Numbering system: decimal, binary, octal, hexadecimal, operations, data representation, coding. Communications and networks multimedia, E-Commerce, Information Systems and System Development, Program Development and Programming Languages and DBMS.
Textbook:	Understanding Computer: Today and Tomorrow, 15th Ed. <i>Deborah Morley & Charles S Parker,</i> © Cengage Learning, 2015
Software:	-
Evaluation	Midterm Exam (30 Marks) Assignments & Quizzes (20 Marks) Final Exam (50 Marks)



Tafila Technical University
Faculty of IT & Comms.
IT Department
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Lecturer:
Dr. Abdullah O. Zagameem

Nr.	Main Topic	Sub-Topic	Lectures
1	Introduction to the World of Computers	Computers in Your Life, What Is a Computer and What Does It Do?, Data vs. Information, Computers Then and Now, Hardware, Software, Computer Users and Professionals, Embedded Computers, Mobile Devices, Portable PCs, Midrange Servers, Mainframe Computers, and Computer Networks and the Internet.	5
2	The System Unit: Processing and Memory	Data and Program Representation, The Binary Numbering System, Coding Systems for Text-Based Data, Inside the System Unit, CPU, Word Size and Cache Memory, Memory, How the CPU Works, The System Clock and the Machine Cycle, Pipelining, and Parallel Processing.	6
3	Storage	Storage System Characteristics, Magnetic Disks vs. Optical Discs, Hard Disk Drives, Internal, External, and Portable Hard Drive Systems, Partitioning and File Systems, Optical Disc Systems, Recordable Discs, Flash Memory Systems, Remote Storage System, and Magnetic Tape Systems.	4
4	Input and Output	Keyboards, Pointing Devices, The Mouse, The Electronic Pen and Stylus, Handwriting Recognition, Touch Screens, Scanners, Readers, and Digital Cameras, Audio Input, Display Devices, Data and Multimedia Projectors, and Printers.	3
5	System Software: Operating Systems and Utility Programs	System Software and Application Software, The Operating System, Functions of an Operating System, Operating Systems for Handheld PCs and Mobile Devices, and Utility Programs.	5
6	Application Software	The Basics of Application Software, Software Ownership Rights, Software Suites, editing a Document, Word Processing Concepts, Spreadsheet Concepts, Database Concepts, Creating a Database, and Graphics and	4

		Multimedia Concepts.	
7	Computer Networks	Network Topologies, Types of Networks, Data Transmission Characteristics, Wireless Network Transmission Media, Ethernet, TCP/IP, and Wireless Application Protocol (WAP), Wi-Fi (802.11), WiMAX, Mobile WiMAX, and Mobile-Fi, and Networking Hardware.	6
8	The Internet and the World Wide Web	Evolution of the Internet, Type of Connection and Internet Access, Searching the Internet, Social Networking, and Cookies.	3
9	Network and Internet Security	Computer Sabotage, Passwords, Access Control Systems, Firewalls, Antivirus Software, Protecting Against Online Theft, Fraud, and Other Dot Cons.	3
10	Multimedia and the Web	Web-Based Multimedia Applications, Multimedia Elements, and HTML Tags.	3
11	E-Commerce	What Is E-Commerce? Advantages of E-Commerce, and Types of E-Commerce Web Sites.	3
12	Information Systems and System Development	What Is an Information System? and Types of Information Systems.	7