University of Al-Anbar
College of Pharmacy
Department of Clinical Laboratory Sciences
Title of the course: *Computer Sciences*   Course number: **114**
Level: 1st Class, 1st Semester
Credit hours: **Theory 2 hours   Laboratory   1 hour**
Tutors:
Reference text: *Pat Coleman and Peter Dyson, Mastering Internet Windows, 29th ed., Sybex, (Latest edition)*; and *Romanoff M (Ed), Microsoft 2000 complete, Sybex, 2000*.

Objectives: Gives students the ability to deal with the concept of computer science, emphasizes the knowledge and skill required to efficiently discharge the duties and responsibilities of the pharmacist. The course deals with the concept of basic computer and application of it in human life and medical field. Upon completion of the course students will be able to understand the computer terminology and abbreviations used to describe the lecture, and the application programming languages.

No	Lecture title	hours
1.	General concept: Information technology (IT); Computer systems (hardware, software, user); types of computers; major parts of the computer	3
2.	Hardware: Hardware; input and output devices; central processing unit (CPU).	4
3.	Memory, storage media and performance: Memory; kind of memory (RAM, ROM, cache memory, flash memory); data representation in memory; storage devices (secondary storage); kind of storage devices; computer performance.	6
4.	Computer software: Software (system software, application software); programming languages; generation of programming languages (machine language, assembly language, high level language, application generators, objective oriented language); compiler and interpreters; operating systems (O.S); function and type of O.S; type of software according to source; (commercial, shareware, freeware and public domain); interface, multimedia; system development.	6
5.	Data Communication and network: Data communication; work group computing; type of networks; local area network (LAN); wide area network (WAN); WAN Devices (HUB, router, get way, bridge, repeater); networks topologies; data communication hardware; protocols.	5
6.	The internet: Internet development; using the internet; internet services; search engines; electronic mail; general concept of internet; viruses and type of virus; protection from virus; security system and information security; data protection act; computer crimes.	6