Lecture Plan - Fundamentals of Computing
1st Semester (Odd Semester Aug – Dec)
Academic Year 2013-14

ETCS – 111 **L T P**
Total No. Lectures : 32 **2 0 2**

Sl. No.	CONTENTS	No. of LECTURE
	First Term	
1	Brief overview of computer generation, Five component model of a computer (block diagram).	1
2	Introduction to system software (Language Translators - compilers, interpreter, assembler, linker, loader), Device Drivers.	1
3	Introduction to application software, (Brief introduction of High Level Languages (HLLs) and Low Level Languages (LLLs)), Brief idea about languages such as Fortran, Algol, Cobol, Pascal, C, C++, Java.	1
4	**Peripheral Devices:** **Input Devices** – Keyboard, Mouse, Digital Tablet, Joystick, Direct Data Entry (MICR, OMR, OCR), Scanners, Digital Camera.	1
5	**Output Devices** – Monitor, Plotter, Printer (Types of Printers : impact and non impact printer with examples) like :- Daisy Wheel, Printer, Thermal Printer, Laser Printer etc.	2
6	**Storage Devices** - Primary Memory (RAM, ROM, PROM, EPROM, EEPROM, Cache). **Secondary Memory** - Hard Disk, Magnetic Tape, Blu – Ray disk, (concept of sector, track, cylinder), Removable Memory such as CD, DVD, Flash memory (Pen Drive).	2
7	DOS Commands (Internal & External).	1
8	Basics of programming through flow charts.	1
	Second Term	
9	Introduction to Operating System (OS), Basic functions of OS, Introduction to windows 2000, Differences between Windows 2000 and Windows NT, Overview of architecture of Windows.	1
10	Window XP Administrative Tools (task scheduler, component services, event viewer, local security, policy, print management, system configuration), Window XP System Utilities (including registry),	2
11	Overview of Linux features, Overview of Linux architecture, Linux file system with commands and permission.	2
12	Concept of Linux user and groups, Installation of rpm & deb based packages.	2

13	Introduction to networks, Uses of networks, Common types of networks (LAN, MAN, WAN).	1
14	Network Topologies and Protocols (HTTP, HTTPS, FTP, SMTP, PPP, POP).	2
15	Network Media (Wired and Wireless), Network Hardware (Router, Hub, Switch, Repeaters).	2
	Third Term	
16	Overview of DBMS:- Database Schema, Role of DBA, Overview of data models, Advantages & Disadvantages of DBMS.	2
	Note: Libre and Open Office both are same and variants of Linux. Faculty can opt either Libre or Open office as a reference for teaching topic nos. 17, 18 and 19.	
17	Libre / Open Office Writer : Editing and Reviewing, Drawing, Tables, Graphs, Templates	3
18	Libre / Open Office Calc : Worksheet Management , Formulas, Functions, Charts.	2
19	Libre / Open Office Impress: Designing powerful power-point presentation	3

Books

Text:

[T1] Peter Norton, Introduction to computers, Sixth Edition Tata McGraw Hill (2007).

[T2] Andrews Jean, A+Guide to Managing & Maintaining Your PC, Cengage Publication 6/e

References:

[R1] Anita Goel, Computer Fundamentals, Pearson Education.

[R2] Joiner Associates Staff, Flowcharts: Plain & Simple: Learning & Application Guide , Oriel Inc

[R3] http://www.openoffice.org/why/

[R4] http://www.libreoffice.org/get-help/documentation/