

16CS101 BASICS OF COMPUTERS AND INTERNET

Hours Per Week :

L	T	P	C
3	-	2	4



Course Description and Objectives:

This course provides students with a working knowledge of the terminology, processes and components associated with computers and internet. Students will get exposure to building blocks of computers, operating systems, application software, networking, internet, world wide web, security, maintenance, information systems and the application development processes.

Course Outcomes:

Upon completion of the course, the student will be able to

- CO1: Demonstrate the disassembling and assembling of a personal computer system.
- CO2: Install the operating system and other software required in a personal computer system.
- CO3: Analyze and visualize the data using various operations in Excel.
- CO4: Identify the various threats to users and data.
- CO5: Understand the concept of cyber security

SKILLS:

- ✓ *Assemble and disassemble the personal computer system.*
- ✓ *Install different desktop operating systems.*
- ✓ *Use the basic text processing, simple data analysis and data presentation tools.*
- ✓ *Configure network parameters.*
- ✓ *Secure the personal computer and information from various external threats.*

ACTIVITIES:

- *Prepare a report on various generations of computers and their peripherals.*
- *Disassemble and assemble of a personal computer system.*
- *Install the Linux operating system and other software required in a personal computer system.*
- *Connect the system to an ethernet and configure the same.*
- *Prepare an MS word document.*
- *Prepare a spread sheet with various mathematical operations, charts, sorting etc.*
- *Make a report on power point presentation for the given topic.*

UNIT - 1

L- 10

COMPUTING SYSTEMS : Introduction to computer, computers for individuals, importance of computers, parts of computer system, memory devices, input and out devices, types of monitors, types of printers, number systems, bits and bytes, text codes and types of processors.

UNIT - 2

L- 10

OPERATING SYSTEMS : Types of operating systems, user interfaces, PC operating systems, network operating systems, types of software, programming languages, compiler and interpreter, program control flow and algorithm.

UNIT - 3

L- 08

NETWORKS AND DATABASES : Networking basics, uses of network, types of networks, network hardware, introduction to data bases and database management systems.

UNIT - 4

L- 8

INTERNET AND WWW : Internet's services, world wide web, browser setups, using search engine, email and other internet applications.

UNIT - 5

L- 9

CYBER SECURITY : The need of computer security, basic security concepts, threats of users, online spying tools, threats to data, cybercrime and protective measures.

LABORATORY EXPERIMENTS

Course Outcomes:

The student will be able to:

- know the usage of the computer systems.
- setup the IDEs for the computer programming languages.
- get exposure on office automation tools like Microsoft Word, Excel, and power point.
- identify the different computer system and data threats and also protect them by installing antivirus software.

LIST OF EXPERIMENTS

Total hours: 30

1. Demonstrate the personal computer peripherals and get a report on each peripheral.
2. Demonstrate the personal computer assembling procedure and do the same.
3. Install wide varieties of free and open source operating systems.
4. Demonstrate network interface card (NIC) configuration and any internet browsers options setup.
5. Demonstrate the Java development kit (JDK) installation and environmental variable (PATH) setup.
6. Demonstrate the following experiments using Office automation tools
 - a. Text formatting and table.
 - b. Mathematical equations.
 - c. Watermarking using analysis tool.
 - d. Calculate student mark details.
 - e. Create four types of charts.
 - f. Import external data, sort and filter using powerpoint tool.
 - g. Create text and images with effects.
 - h. Create animation and sound effects.
7. Demonstrate the installation of anti-virus software to detect different types of virus programs.

TEXT BOOK :

1. P. Norton, "Introduction to Computers", 7th edition, Tata-McGraw Hill, 2010.

REFERENCE BOOKS:

1. ITL Education Solution Limited, "Introduction to Computer Science", 2nd edition, Pearson Education, 2011.
2. E. Maiwald, "Fundamentals of Network Security", 3rd edition, Tata-McGraw Hill, 2004.