SEMESTER I

Title of the course **: Computer Fundamentals**

Subject Code : **CS-111**

Weekly load : 5 Hrs LTP 3-0-2

Credit : 4 (Lecture 3, Practical 1)

**Course Outcomes:** At the end of the course, the student will be able to:

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| CO1 | Understand the basic organization of the computer system. |
| CO2 | Identify various peripheral devices and memories & familiar with various computer languages. |
| CO3 | Understand the concept of number system and conversions from one number system to another. |
| CO4 | Identify computer risks and various internet applications and also familiar with the various web technology concepts. |

**Theory**

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| **Unit** | **Main Topics** | **Course outlines** | **Lecture(s)** |
| **Unit-1** | **1.** **Introduction** | Definition of electronic Computer, Generations, Characteristic and Application of Computers, Block diagram of computer. | 06 |
| **2. Input/output Devices** | Various I/O devices like keyboard, mouse etc. Plotter, Scanner, Printer and its types (Inkjet, Dot matrix, Laser printer etc). | 04 |
| **3. Memory** | Primary and secondary memory, RAM, Types of RAM,ROM & types of ROM, cache, Registers ,Memory Hierarchy. | 06 |
| **4. Basics of Computer** | Booting process, introduction to concepts-bit, nibble, byte, word, hardware, software, operating system, system software, application software. | 06 |
| **Unit-2** | **5. Computer Languages** | Generation of Language, Translators, Interpreters, Assemblers, Compilers. | 06 |
|  | **6. Number System** | Various codes, decimal, binary, octal, hexadecimal, conversion from one number system to another. | 06 |
| **7. Internet and its Applications** | Internet, Connecting to the internet, Internet services, Applications like E-commerce, entertainment, education etc  Threats:- Firewall, Virus, Worm, Trojan Horses. | 06 |
| **8. Web Technologies** | World Wide Web, URL, Search engines, Web Browsers, Hypertext , Hypertext Marks Language, Gopher, FTP. | 08 |

**Total=48**

**Recommended Books:**

1. Yadav DS, Foundations of IT, New Age, Delhi.

2. Curtin, Information Technology: Breaking News, TMH

3. Rajaraman V, Introduction to Computers, Prentice-Hall India.

Title of the course **: Computer Fundamentals Lab**

Subject Code : **CS-111**

**Course Outcomes:** At the end of the course, the student will be able to:

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| CO1 | Recognize when to use each of the Microsoft Office programs to create professional documents. |
| CO2 | Use Microsoft Office Programs to create personal or professional documents. |

**LIST OF PRACTICALS**

**Perform the following Practicals in MS-Word**

1. Create a document using functions: Save as, page number, Bullets and numbering.

2. Create a document using fonts, styles and Formatting options.

3. Create a document using Fill effects, Printed water mark under background option and also

use Header and Footer.

4. Create a document, using the function page set up, page preview, and then print that document.

5. Use the concept of Mail Merge in MS Word.

6. Use the concept of Macro in MS Word

7. Create a document using table & perform various operations like Insert, delete, select and

Table auto Format in it.

**Perform the following Practicals in MS-Excel**

8. Create Line, XY, Bar and Pie chart in excel sheet and compare the given data using these charts.

9. Implement all formula like addition, subtraction, Multiplication and division etc. in excel.

10. Use the concept of Macro in MS Excel.

11. Use the concept of Sorting, filter and hyperlink in Excel.

12. Use the concept of paste special and paste as hyperlink in Excel

13. Create a excel sheet using fonts, styles, Formatting options, Text wrap different row, column, and cell

width.

14. Create a formulae using function to compare the values of two Rows or Columns.

**Perform the following Practicals in MS-PowerPoint**

15. Create a Power point presentation using slide designing and use Design Templates, Color

schemes, and Animation schemes.

16. Create a Presentation using functions: Save as, page number, Bullets and numbering, page

setup and take print in layout form.

17. Create a power point presentation using clipart, Word art gallery & then add transition &

Animation effects**.**

18. Use the concept of Macro in Power Point.

19. Use chart, diagram and table in Power Point.

20. Create a Power point presentation and use View show, Setup show, rehearse timing in presentation.

**Perform the following Practicals in MS-Access**

21. Create forms in MS-ACCESS**.**

22.Create reports in MS-ACCESS.

23. Create table and queries in MS-ACCESS using design view.

24. Create Data Access page in design view and by using wizard in MS-ACCESS.

**Apply different modification schemes using picture manager.**

**Organize different types of Data available using clip organizer.**

**Create Resume using various features of Microsoft Word**

Title of the course **: Troubleshooting & Maintenance Lab**

Subject Code : **CS-112**

Weekly load : 4 Hrs LTP 0-0-4

Credit : 2 (Practical 2)

**Course Outcomes:** At the end of the course, the student will be able to:

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| CO1 | Identify the purpose and operation of the internal components of a computer. |
| CO2 | Diagnose and correct the common failures in a computer. |
| CO3 | Install and troubleshoot the computers hardware and software. |
| CO4 | Assemble and disassemble the components of a computer. |

**LIST OF PRACTICALS**

1. Installation of operating system.
2. Linux
3. Window
4. Study about Booting process.
5. Cold booting
6. Warm booting.
7. Study of different antivirus programs.
8. Installation of different antivirus programs.
9. Norton antivirus
10. Avira antivirus
11. AVG antivirus
12. McAfee antivirus
13. Purpose and Installation of Microsoft essentials.
14. Troubleshooting of computer components:-
15. Mouse
16. Keyboard
17. Motherboard
18. Monitor
19. HDD
20. FDD
21. Installation and troubleshooting various printing problems of following printers:-
22. Inkjet printer
23. Dot-matrix printer
24. Daisy-wheel printer
25. Laser printer
26. Study of diagnostic tools used for PCs.
27. Multimeter
28. Oscilloscope
29. Cable tester
30. POST Card
31. Study about various troubleshooting techniques and methods:-
32. Functional Area method
33. Split-half method
34. Installation and troubleshoot with problems of following modems:-
35. Internal modem
36. Dial up
37. Wi-fi
38. External modem
39. Cable modem
40. DSL modem
41. Installation of following Bar-code Readers:-
42. Pen-type
43. Laser scanners
44. CCD Readers
45. Camera-based readers
46. Study of various interactive boards.

Title of the course **: Internet Applications Lab**

Subject Code : **CS-113**

Weekly load : 4 Hrs LTP 0-0-4

Credit : 2 (Practical 2)

**Course Outcomes:** At the end of the course, the student will be able to:

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| CO1 | Learn about various internet connectivity methods along with remote login through TELNET command. |
| CO2 | Analyze different search engines, and web browsers used for surfing on web. |
| CO3 | Create Email-ID's, download/upload pictures and videos using internet. |
| CO4 | Know online submission of forms and online shopping on Internet along with use of video conferencing and news groups. |
| CO5 | Learn how to use internet in today's world effectively to gain and share more knowledge with others. |

**LIST OF PRACTICALS**

1. Study the different types of search engines.
2. Explore the different methods of internet connectivity.
3. Exercise the different types of TELNET commands.
4. Study the different types of ways to connect Remote Login through Telnet.
5. Describe the stages to create email-id on website and how to send and receive email.
6. Submitting forms online.
7. Explore the features of different types of browsers.
8. Describing the chatting components on the internet.
9. Online shopping on internet.
10. Reading and posting to newsgroups.
11. Study the different types of downloading techniques.
12. Downloading and installing Plug in to view multimedia.
13. Downloading videos on internet.
14. Uploading videos on internet.
15. Downloading pictures from internet.
16. Uploading pictures on internet.
17. Introduction to components of video conferencing.