Kadi Sarva Vishwavidyalaya

Faculty of Engineering & Technology

First Year Bachelor of Engineering (CE / IT / EC)

(With effect from: Academic Year 2017-18)

Subject Code: CC105-N	Subject Title: WORKSHOP

Teaching scheme				Total Credit	Evaluation Scheme					
L	T	P	Total		Theory		Mid Sem Exam	CIA	Pract.	Total
Hrs	Hrs	Hrs	Hrs		Hrs	Marks	Marks	Marks	Marks	Marks
00	00	02	02	01	00	00	00	40	60	100

COURSE OBJECTIVE:

- To Focus Fundamentals of Computers and Peripherals.
- To introduce hardware and software Computers Basics.
- To Focus Concept and Methodology of different Parts of Computer and their assembling.
- To give descriptions of Keyboard, Monitors, Printers, Motherboard, etc.
- Brief the students regarding Computer Networks and Connections.
- To give clear idea of PC trouble shooting and Repairing.
- Use of Laboratory instrument such as Multimeter, Function generator, Power supply, CRO etc.
- Identification of electronics components & Testing of various components using tools.
- Study of PCB, PCB fabrication, Exercises based on fabrication & testing of small electronics circuits.

Sr. No.	Practicals
1	Introduction to Computer Hardware • Definition of computer, Computer Hardware, Software and Firmware. • History of computer, Classification of computer. • Basic parts of Digital computer, General faults of computer system.

2	INPUT/OUTPUT Device
	• Display Unit
	  • Monitor (pixel, resolution etc.), Laptop, I-pad, Notepad
	• Keyboard and Mouse
	  • Wired and Wireless
	• Printer
	  • Dot Matrix printer, Inkjet printer, Laser printer.
	• Projector

3	PC Troubleshooting • Hardware Troubleshooting and Repairing

4	Installation of Operating System • Windows XP/2007 • Linux
5	Connectivity to Local Area Network and Exposure on Internet and Usage of Internet.
6	Study and use of Laboratory instrument such as Multimeter, Function generator, Power supply, CRO etc.
7	To study and Identification of electronic components and testing of various components. To find the unknown resistance using color code.
8	Study of various electronics tools.
9	Soldering & disordering practice, Study of PCB, PCB fabrication, Exercises based on fabrication & testing of small electronics circuits.
10	Mini project.

INSTRUCTIONAL METHOD AND PEDAGOGY (Continuous Internal Assessment (CIA) Scheme)

- At the start of course, the course delivery pattern, prerequisite of the subject will be discussed
- Attendance is compulsory in Practical which carries 10 Marks. Student should be submitted all practicals during semester.
- Laboratory participation and involvement in solving the problems in Laboratory carries 10 Marks.
- Viva Voce will be conducted at the end of the semester.
- Experiments shall be performed in the laboratory related to course contents.
- The course includes a laboratory, where students have an opportunity to build an appreciation for the concept being taught of theory.

STUDENTS LEARNING OUTCOMES:

At the end of the course:

- On successful completion of the course, the student will be having the basic knowledge of Computer Architecture, Peripherals and all the Hardware and Software basics required for a Computer Engineering Student.
- Student will be able to effectively solve any hardware/software troubleshooting problem.
- Also student will be having basic knowledge of electronics components as well as knowledge of soldering and desoldering.
- Student can design small integrated PCB based on proper knowledge of electronics components.

TEXT BOOKS & REFERENCE BOOKS:

- The complete PC update and maintenance guide by Mark Minasi.
- IBM PC and clones by Govind Rajalu Computer Maintenance & Peripherals by H.B. Bhadke
- Electronic instrumentation by H.S. Kalsi, 2nd Edition ,Tata McGraw Hill Publications
- G. Kennedy, B. Davis, "Electronics Communication System", 4th Edition, Tata Mcgraw-Hill Edition
- K S PATIL " Electronics Material and Components" BPB publication.
- https://mrstogioka.files.wordpress.com/2015/12/learn-to_solder.pdf