

11. RESOURCE REQUIREMENT FOR COMPUTER ENGINEERING AND INFORMATION TECHNOLOGY DEPARTMENT

11.1 Physical Resources

11.1.1 Space Requirement:

Norms and standards laid down by All India Council for Technical Education (AICTE) may be followed to work out space requirement in respect of class rooms, tutorial rooms, drawing halls, laboratories, space required for faculty, student amenities and residential area for staff and students.

11.1.2 Equipment Requirement:

1. BASIC COMPUTER LAB.			
S. No.	Name of Equipment/Brief Specification	Quantity	Remarks
1.	Computer System (with latest specifications)	20	PC Specifications to be followed: Processor: Core 2 Due, 2.0 GHz OR Dual Core RAM: 3 GB or better HDD: 320 GB SATA Monitor: Color TFT OS: Genuine Windows 7 Professional or Home Premium or Windows 7 Ultimate Antivirus: User License for one year
SOFTWARES			
1	Page Maker Professional (Latest Version)	1	
2.	Corel Draw (Latest Version)	1	
3	Adobe Photoshop	1	
3.	Ms Office 2007 Professional or latest version(20 user license)	1	
4.	Online UPS(5KVA)	1	
5.	Antivirus Software (20 user License)	1	

2. PROGRAMMING LAB.			
S. No.	Name of equipment/Brief Specification	Quantity	Remarks
1.	Computer System (with latest specifications)	20	
2.	Turbo C and C++ Compiler(Latest Version)	1	
3.	VB Dot Net (Latest Version)	1	
4.	5KVA On Line Centralized UPS OR 625 VA UPS for each System	1 OR 10	

5.	Antivirus(20 user License)	1	
6	DMP	1	

3. ADVANCE COMPUTER LAB.

S. No.	Name of equipment/Brief Specification	Quantity	Remarks
1.	Multimedia Computer Systems with latest specifications	20	
2.	Online UPS (5 KVA)	1	
3.	Multimedia projector with accessories	1	
4.	24 Port Switch	1	
5.	Digital camera	1	
6.	Scanner	1	
7.	Laser Printer	1	
8.	Touch Screen	1	
9.	Laptop with latest specification	1	
10.	Adobe Creative Suit (Latest Version)	1	
11.	Visual Studio 6.0 or (Latest Version)	1	
12.	Adobe Flash Professional	1	
13	Adobe Flex (Latest Version)		
14	Adobe Dreamweaver	1	
15	Web Camera	10	
16	Antivirus(20 user License)		

At least 2Mbps internet facility should be there in Labs.

4. Data Comm. & Networking Lab.

S. No.	Name of equipment/Brief Specification	Quantity	Remarks
1.	Computer System with latest specifications	10	
2.	19" Rack	1	
3.	24 port Switch	2	
4.	Windows 2003 Server or Latest version (10 user License)	1	
5.	Red hat Linux (20 user License)	1	
6.	Data Backup utility Software	1	
7.	Data Communication Trainer Board	2	
8.	LAN Trainer System	1	
9.	Amplitude Modulation/Demodulation Trainer Board	5	
10.	Frequency Modulation/Demodulation Trainer Board	5	
11	Pulse Code	5	

	Modulation/Demodulation Trainer Board		
12.	CRO 25 MHz.(At least)	2	
13.	Trainer Board to study Frequency Division Multiplexing/ Demultiplexing	5	
14.	Trainer Board to study Time Division Multiplexing/ Demultiplexing	5	
15.	Digital Multimeter	2	
16.	Wireless access points	2	
17.	Wi-Fi LAN Cards	10	
18.	Network/Bandwidth management Software (Cybernetra or Equivalent)	1	User License as required should be purchased
19.	Trainer Board to study Working of MODEM	1	
20.	LAN Cable tester	2	
21.	Crimping tool	5	
22.	Display Boards of various types of cables & connectors used in Computer networks	2	
23.	Tool kits	2	
24.	Online UPS (5 KVA)	1	
25.	Network Printer	1	
26.	Antivirus(10 user License)	1	

5. HARDWARE LAB.

S. No.	Name of equipment/Brief Specification	Quantity	Remarks
1.	Trainer Board to demonstrate Assembling and Working of Multimedia Computer System	2	
2.	Trainer Boards to Study Mother Boards with different chipsets and processors.	2 each	
3.	Hard disk Trainer board (SATA and IDE)	2 each	
4.	CDROM Trainer Board	2	
5.	Mouse Trainer Board	2	
6.	Keyboard Trainer Board	2	
7.	Trainer Board to study construction and working of color CRT Monitor	2	
8.	Trainer Board to study construction and working of color LCD Monitor	2	
9.	Trainer Board to study working of Dot matrix printer, Inkjet printer &	1 each	

	Colour Laser printer		
10.	Trainer board to study Switch mode power supply	5	
11.	Trainer board to study working of UPS	1	
12.	Trainer board to study construction and working of floppy disk drive	2	
13.	Computer Repair & Assembly Tool kits	5	
14.	Computer System with latest specification	5	
15.	Online UPS(3 KVA)	1	
16.	PC tools	1	
17.	Antivirus (5 users)	1	
18.	USB Hard disk	2	

6. OPERATING SYSTEM LAB.			
S. No.	Name of equipment/Brief Specification	Quantity	Remarks
1.	Computer System with latest specifications	20	
2.	Online UPS (7 KVA) OR 625 VA UPS for each PC	1 OR 20	
3.	Server with latest specifications	1	
Software			
1.	Windows 98/XP/2000/Vista/Windows 7	1 each	
2.	Windows 2008 server or latest version	1	
3.	Oracle Academic Version (latest version with at least 20 user license)	1	
4.	SQL server	1	
5.	Antivirus(with at least 20 user License)	1	

7. DIGITAL ELECTRONICS & MICROPROCESSOR LAB.			
S. No.	Name of equipment/Brief Specification	Quantity	Remarks
1.	Computer System with latest specifications	10	
2.	Online UPS (5 KVA) OR 625 VA UPS for each Computer System	1 or 10	
3.	Assembler for 8085 programming	10 users	
4.	Antivirus(10 user License)	1	
5.	8085 based Trainer Kits	10	
Add on Cards			
6.	Ad on Card to study interfacing of	2	

	LED display Control using 8255		
7..	Ad on Card to study interfacing of LCD with 8085 based microprocessor	2	
8.	Ad on Card to study speed control of stepper motor using 8085 based microprocessor including stepper motor.	2	

DIGITAL ELECTRONICS LAB

S. No.	Name of equipment/Brief Specification	Quantity	Remarks
1	Familiarization of ICs trainer (7400),(7402), (7432), (7486), (7408), (7404), (7483), (7485), (74157), (74151), (74138)	5	
2	EX-ORAND EX-NOR Gates realization kit (Using NAND OR NOR Gates)	5	
3	Realization of Truth Table for OR AND NAND Gates using NAND Gates and NOR Gate	5	
4	8 bit digital multiplexer	5	
5	1:8 line de-multiplexer	5	
6	Multiplex two BCD numbers to seven segment display	5	
7	Study of Flip Flop or RS, D,J-K & T	5	
8	3 bit asynchronous up-counter3 bit synchronous down counter	5	
9	Universal Shift Registers having SISO, SIPO, PIPO, PISO	5	
10	Study of D-latch & D flip flop trainer	5	
11	Encoder/Decoder trainer	5	
12	Digital IC Testers	2	
13	Digital Lab. With modules	5	
14	Logic Probe	5	
15	Logic Pulser	5	
16	Pulse Generator upto (3MHz)	5	
17	Digital Frequency Meter	5	
18	Digital IC Programmer	5	
19	Digital IC Power Supplies (+/- 5V/1A, +/-12V/1A/+15V, 1A)	5	

8. CENTRAL COMPUTER FACILITY

S. No.	Name of equipment/Brief Specification	Quantity	Remarks
1.	Multimedia Computer System with latest specifications	20	
2.	Online UPS (7 KVA)	1	

3.	24 port Switch	1	
4.	Network Printer	1	
5.	Scanner	1	
6.	Dot matrix Printer	1	
7.	Antivirus(20 user License)	1	
8.	LCD Projector	1	

2 Mbps Internet facility should be available in the lab.

11.1.2 Space Requirement:

Norms and standards laid down by All India Council for Technical Education (AICTE) may be followed to work out space requirement in respect of class rooms, tutorial rooms, drawing halls, laboratories, space required for faculty, student amenities and residential area for staff and students.

11.1.3 Furniture Requirement

Norms and standards laid down by AICTE be followed for working out furniture requirement for this course.

11.2 Human Resources Requirement:

Weekly work schedule, annual work schedule, student teacher ratio for various group and class size, staffing pattern, work load norms, qualifications, experience and job description of teaching staff workshop staff and other administrative and supporting staff be worked out as per norms and standards laid down by the AICTE