

Subject Code: 1ET2010402	Subject Title: Data Communications in CAD/CAM
Pre-requisite Subject	Zeal to learn the subject

Course Objectives:

This course provides:

1. Understanding the basic concepts of computer and microprocessors.
2. Identify the function of operating system.
3. Applying the data communication and networking in transmission of data.

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture	Tutorial	Practical	Credit	Theory		Practical		Total (T+P)
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
3	-	2	5	60	40	30	20	150

Subject Contents			
Sr. No	Topic	Total Hours	Weight (%)
01	Computers & Micro Processors : Block diagram, register transfer language, logic and shift micro operations, instruction code, training and control instruction cycle, input and output, interrupt design of basic computer, machine language, assembly language, assembler, registers arithmetic logic unit and bus Systems, timing and control signals, machine cycle and timing diagram, functional block diagrams of 8086 and modes of operation, features of Pentium processors.	15	30
02	Operating System & Environments : Types, Functions, UNIX & WINDOWS NT, Architecture, Graphical User Interfaces, Compilers, Analysis of the Source program , The phases of a compiler, Cousins of the compiler, The grouping of phases, Compiler construction tools.	8	20
03	Communication Model : Data communication and networking, Protocols and architecture, Data transmission concepts and terminology, Guided transmission media, Wireless transmission, Data encoding, Asynchronous and synchronous communication, Base band interface standards RS232C, RS449 interface.	8	20
04	Computer Networks: Network structure, Network architecture, The OSI reference model services, Network standardization, Example, Managing remote systems in network, Network file systems, Net working in manufacturing.	7	15
05	Internet: Internet services, Protocols, Intranet information services, Mail based service system and network requirements, Internet tools, Usenet, E-mail , IRC, WWW, FTP, Telnet.	7	15

List of References:

1. Morris Mano. M., "Computer System Architecture", Prentice Hall of India, 1996.
2. Peterson J.L., Galvin P. and Silberschaz, A., "Operating System s Concepts", Addison Wesley, 1997.
3. William Stallings, "Data of Computer Communications" Prentice Hall of India, 1997.
4. Andrew S. Tanenbanum "Computer Networks", Prentice Hall of India 3rd Edition, 1996.
5. Christian Crumlish, "The ABC's of the Internet", BPB Publication, 1996.
6. Gaonkar R.S., "Microprocessor Architecture, Programming and Applications of 8085", Penram International, 1997

Practical Work:

- Students shall exercise some case studies and perform hands-on practice based on the topics of syllabus and submit report of the same.