

Course Content & Grade

Branch	Subject Title	Subject Code	Grade for End Sem		CGPA at the end of every even semester
B.TECH. Common	Basic Computer Engineering	BT- 2005	Theory	Practical	5.0
			Min.“D”	Min.“D”	

UNIT I

Computer: Definition, Classification, Organization i.e. CPU, register, Bus architecture, Instruction set, Memory & Storage Systems, I/O Devices, and System & Application Software. Computer Application in e-Business, Bio-Informatics, health Care, Remote Sensing & GIS, Meteorology and Climatology, Computer Gaming, Multimedia and Animation etc.

Operating System: Definition, Function, Types, Management of File, Process & Memory. Introduction to MS word, MS powerpoint, MS Excel

UNIT II

Introduction to Algorithms, Complexities and Flowchart, Introduction to Programming, Categories of Programming Languages, Program Design, Programming Paradigms, Characteristics or Concepts of OOP, Procedure Oriented Programming VS object oriented Programming.

Introduction to C++: Character Set, Tokens, Precedence and Associativity, Program Structure, Data Types, Variables, Operators, Expressions, Statements and control structures, I/O operations, Array, Functions,

UNIT III

Object & Classes, Scope Resolution Operator, Constructors & Destructors, Friend Functions, Inheritance, Polymorphism, Overloading Functions & Operators, Types of Inheritance, Virtual functions. Introduction to Data Structures.

UNIT IV

Computer Networking: Introduction, Goals, ISO-OSI Model, Functions of Different Layers. Internetworking Concepts, Devices, TCP/IP Model. Introduction to Internet, World Wide Web, E-commerce

Computer Security Basics: Introduction to viruses, worms, malware, Trojans, Spyware and Anti-Spyware Software, Different types of attacks like Money Laundering, Information Theft, CyBTr Pornography, Email spoofing, Denial of Service (DoS), CyBTr Stalking, Logic bombs, Hacking Spamming, CyBTr Defamation, pharming Security measures Firewall, Computer Ethics & Good Practices, Introduction of CyBTr Laws about Internet Fraud, Good Computer Security Habits,

UNIT V

Data base Management System: Introduction, File oriented approach and Database approach, Data Models, Architecture of Database System, Data independence, Data dictionary, DBA, Primary Key, Data definition language and Manipulation Languages.

Cloud computing: definition, cloud infrastructure, cloud segments or service delivery models (IaaS, PaaS and SaaS), cloud deployment models/ types of cloud (public, private, community and hybrid clouds), Pros and Cons of cloud computing.

Recommended Text Books:

1. Fundamentals of Computers : E Balagurusamy, TMH
2. Basic Computer Engineering: Silakari and Shukla, Wiley India
3. Fundamentals of Computers : V Rajaraman, PHI
4. Information Technology Principles and Application: Ajoy Kumar Ray & Tinku Acharya PHI.

Recommended Reference Books:

1. Introduction of Computers : Peter Norton, TMH
2. Object Oriented Programming with C++ :E.Balagurusamy, TMH
3. Object Oriented Programming in C++: Rajesh K.Shukla, Wiley India
4. Concepts in Computing: Kenneth Hoganson, Jones & Bartlett.
5. Operating Systems – SilBTrschatz and Galvin - Wiley India
6. Computer Networks:Andrew Tananbaum, PHI
7. Data Base Management Systems, Korth, TMH
8. Cloud Computing, Kumar, Wiley India.

List of Experiment

1. Study and practice of Internal & External DOS commands.
2. Study and practice of Basic linux Commands – ls, cp, mv, rm, chmod, kill, ps etc.
3. Study and Practice of MS windows – Folder related operations, My-Computer, window explorer, Control Panel,
4. Creation and editing of Text files using MS- word.
5. Creation and operating of spreadsheet using MS-Excel.
6. Creation and editing power-point slides using MS- power point
7. Creation and manipulation of database table using SQL in MS-Access. 08.WAP to illustrate

Arithmetic expressions

9. WAP to illustrate Arrays.
10. WAP to illustrate functions.
11. WAP to illustrate constructor & Destructor
12. WAP to illustrate Object and classes.
13. WAP to illustrate Operator overloading
14. WAP to illustrate Function overloading
15. WAP to illustrate Derived classes & Inheritance
16. WAP to insert and delete and element from the Stack
17. WAP to insert and delete and element from the Queue
18. WAP to insert and delete and element from the Linked List