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SYLLABUS

Computer Information System (IT -211)

Bachelor of Information Management

1st Semester/1st Year



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ITC – 211: Computers Information System (CIS)

Module Objectives

This module aims to introduce students to the basics of computer and its use and application in real world situations. Students are expected to learn to use the MS Office for word processing, spreadsheet, graphic presentation, and Internet. Laboratory work is essential in this module.

Contents

Introduction to computer system, Programming Language, Computer System development, Multimedia, Network and Communication, Introduction to the Internet, Data Processing and Database, Artificial Intelligence, Computer crime and safety measures.

Detailed Course

Unit 1: Introduction to computer System

LH 13

1. Introduction to computer
2. Characteristics of computer
 - a. Word Length
 - b. Speed
 - c. Storage
 - d. Accuracy
 - e. Diligence
3. Types Of computer
 - a. Laptop
 - b. Desktop
 - c. Palmtop
4. Use of Computer
5. Input output device
 - a. Input device
 - i. Keyboard and its use
 - ii. Mouse and its use
 - iii. Micro phone
 - b. Output Device
 - i. VDU
 1. CRT and its use
 2. LCD and its use
 3. Plasma and its use
 - ii. Printer
 1. Impact
 - a. Dot Matrix
 2. Non-Impact
 - a. Ink-jet printer
 - b. Laser Printer

- iii. Speakers
- 6. CPU(CU, ALU and Registers)
- 7. Bus and its type
- 8. Storage
 - a. Primary
 - i. Cache Memory
 - ii. RAM and its type
 - iii. ROM and its type
 - b. Auxiliary
 - i. Magnetic Tape
 - ii. Hard Disk
 - iii. Pen Drive
 - iv. Memory Card
 - v. Optical Disk
 - 1. CD
 - 2. DVD
 - 3. Magneto-optical (MO) drives
- 9. Software
 - a. Introduction
 - b. System Software
 - i. OS
 - 1. Introduction
 - 2. Features
 - ii. Utility Software
 - 1. Device Driver
 - 2. Anti virus
 - c. Application Software
 - i. Word Processer
 - ii. Spread Sheet
 - iii. Presentation Tool

Unit 2: Programming Language

LH 6

- 1. Machine language and assembly language
- 2. High-level and low-level language
- 3. Assemblers, Compilers and Interpreter
- 4. Problem – Solving and programming
 - a. Algorithms
 - b. Flow Charts
 - c. Three Basic Operations (sequence, selection, iteration)
 - d. Procedures and programs
- 5. Structured Programming
 - a. Features
 - b. Advantages

6. OOPS
 - a. Features
 - b. Advantages
7. Scripting Language
 - a. Introduction
 - b. Client side scripting
 - c. Server side scripting

Unit 3: Computer system Development

LH 4

1. Investigation
2. Analysis
3. Design
4. Implementation
5. Documentation

Unit 4: Multimedia

LH 2

1. What is multimedia?
2. Uses of multimedia
3. Image Quality
4. Image File Format (TIF, JPEG, GIF)
5. Animation
6. Audio

Unit 5: Network and Communication

LH 4

1. Overview of Network
2. Types of Transmission (Data communication and voice communication)
3. Network topologies (Ring, Bus, Star)
4. Communication media
 - a) Guided
 - i) Twisted pair cable
 - ii) Coaxial cable
 - iii) Optical Fiber
 - b) Unguided
 - i) Microwave System
 - ii) Communication Satellites
5. Types of Network
 - a) LAN
 - b) WAN
6. Network Protocol
 - a) TCP/IP

Unit 6: Introduction to the Internet

LH 4

1. IP Address and Domain Name System (DNS)

2. Client-Server Architecture
3. Hyper Text Transfer Protocol (HTTP)
4. Electronic Mail (Email)
5. File Transfer Protocol (FTP)
6. World Wide Web (WWW)
7. Remote Login (TELNET)
8. Static and Dynamic web pages
9. Search Engines

Unit 7: Data Processing and Database

LH 5

1. Data Processing
 - a) Introduction to Data processing
 - b) File Processing
 - c) Sequential File processing
 - d) Direct-access file processing
2. Database
 - a) Introduction to database
 - b) E-R diagram (Symbols)
 - c) Relation Database
 - i) Primary Key
 - ii) Foreign Key
3. Data Mining
 - a) Introduction To data mining
 - b) Uses of Data Mining
4. Data warehouse
 - a) Introduction to data warehouse
 - b) Use of data warehouse

Unit 8: Artificial Intelligence

LH 3

1. Introduction
2. Application
3. Neural Networks
4. Genetic Algorithms
5. Expert System

Unit 9: Computer Crime and Safety Measure

LH 4

1. Computer Crime
2. Software Piracy
3. Anti Piracy
4. Computer Virus, Worm, Spyware
5. Ethical Issues in Computer
6. Cyber Law.
7. Network Security
 - a. Firewall

8. Data and message security
 - a. Encryption and Decryption

References

Introduction to Computers, Peter Norton's, Tata McGraw-Hill
Data Mining, Pieter Adriaans, Dolft Zantinge, Pearson Education
Foundations of IT----- Atul Kahate-----Tata mcGrawhill

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