

ACADEMIC YEAR 2012 – 2013 ONWARDS
EXTRA DISCIPLINARY PAPERS

COMPUTER SCIENCE

List of **Extra Disciplinary Courses** (Non-Major Electives) offered by the Department of Computer Science/Applications for other PG programmes

PAPER – I

Principles of Information Technology

4 Credits

Unit-I

Business Environment: Business and Information technology – business in the information age – about information technology – what is an information system – Information Technology in the Modern Organization.

Unit-II:

Computer Hardware – Significance of Hardware – Central Processing Unit – Computer Memory – Computer Hierarchy – Input Technologies – Output Technologies – Strategic Hardware issues. Computer Software: Software History and Significance – System Software – Application Software – Software issues – Programming languages – Enterprise Software.

Unit-III:

Managing Organizational Data and Information: Basics of Data arrangement and Access – Traditional file environment – modern approach: database management systems – logical data models – data warehouses – Telecommunications and Networks: The telecommunication system – Networks – Telecommunications applications – Internet- Evolution of the Internet – Operation of the Internet – WWW- Intranets and Extranets.

Unit-IV

Functional, Enterprises, and Interorganizational Systems: Information system to support business functions – transaction processing information systems – accounting and finance system – marketing and sales system – production and operations management system – Integrated information system and enterprises resource planning – interorganizational / Global information system. - Electronic Commerce

Unit-V

Information Systems Development: Information system planning – Traditional systems development life cycle – alternative methods for system development –system development outside the IS department – building Internet and Intranet applications – Implementing: Ethics, Impacts and Security.

Text Book:

Turban, Rainer, Potter – Introduction to Information Technology, Second edition, Wiley India, 2007

References

1. V. Rajaraman – Introduction to Information Technology, Prentice Hall of India, 2007

PAPER – II

Fundamentals of Computers and Communications

4 Credits

Unit- I:

Introduction : What is computer – Components of Computers – Advantages and Disadvantages of using computers – Computer Software – Categories of Computers -Elements of an information Systems. The Components of the Systems Unit: Processor – Data representation – Memory – Expansion Slot and Adapter Cards – Ports and Connectors – Buses – Bays – Power Supply – Mobile Computers and Devices.

Unit – II:

Input and Output Device:: What is input - what are input devices – keyboard –pointing device – mouse – other pointing devices – controllers for gaming and media players – Voice input – Input for PDAs, Smart phones and Tablet Pcs- Digital Cameras – Video input – Scanners and Reading devices Terminals – Biometric input - Input devices for physically challenged users- Output: What is output – display devices – Flat panel displays – CRT monitors – Printers – Speakers, Headphones and Ear phones – other out put devices – output device for physically challenged users – Storage devices.

Unit-III:

Operating Systems and Utility Programs: System software – Operating system – Operating system functions – operating system utility programs – types of operating systems – stand alone operating systems – network operating systems – embedded operating system – Standalone utility programs. Application Software: Application software – Business software – Graphics and Multimedia Software – Application software for Communication

Unit-IV:

Internet and World Wide Web: Internet – History of the Internet – How the Internet works – WWW – E-commerce – Other Internet Services – Netiquette. Communications and Networks: Communications – Uses of Computer Communications – Networks – Network communication standards – Communication software – Communication over the telephone network – Communication devices – Home networks – Communications Channel – Physical transmission media and Wireless transmission media.

Unit-V:

Database Management: Databases, Data and Information, The Hierarchy of data – Maintaining data – File processing versus databases – database management systems – relational, object oriented and multidimensional databases – web databases – database administration. Computer Security : Computer security risks – Internet and network attacks – Unauthorized access and use.

Text Book:

Gary B. Shelly, Thomas j. Cashman, Misty E.Vermaat – Introduction to Computers – Cengage Learning, 2008

References

1. “Understanding Computers- Today and Tomorrow”, Deborah Morley, Charles S. Parker, 11th Edition, Thomson Course Technology
2. “Fundamentals of Computer Science and Communication Engineering”, Alexis Leon, Mathew’s Leon, Vikas Publishing House, New Delhi, 1998.

PAPER – III
E-Commerce

4 Credits

Unit-I

Electronic Commerce- Electronic Commerce Framework-The Anatomy of Electronic Commerce Applications- Electronic Commerce Consumer Applications- Electronic Commerce Organization Applications- Components of I-Way – Network Access Equipment.

Unit- II

Architecture Framework for Electronic Commerce- World Wide Web as the Architecture – Consumer Oriented Applications – Mercantile Process Models – Mercantile Models from the Consumer’s Perspective and Merchant’s Perspective.

Unit-III

Electronic Payment Systems: Types of Electronic Payment Systems – Digital Token based Electronic Payment Systems – Smart Card and Credit Card Based Electronic Payment Systems – Risk and Electronic Payment Systems – Designing Electronic Payment Systems.

Unit- IV

Electronic Data Interchange – EDI Applications in Business – EDI: Legal, Security and Privacy issues EDI and Electronic Commerce – Standardization and EDI – EDI Software Implementation.

Unit –V

Internet and World Wide Web: origin of the Internet – New uses for the Internet – Commercial use of the Internet – Growth of the Internet- Advertising on the Internet.

Text Books

1. Kalakota and Whinston, Frontiers of Electronic Commerce, Pearson Education. (Unit- I, II, III, IV and V) – 2004.

(Chapters: 1, 2: – 2.2, 2.3, 6- 6.1, 6.2, 7, 8, 9, 10 : -10.1, 10.2, 13: - 13.2)

2. Gray P. Scheider, Fourth Annual Edition Electronic Commerce , Thomson Course Technology. (Unit-V) – 2003. (Chapter-2)

Reference Books

1. Kamallesh K. Baja, Debjani Nag, “E-Commerce – The Cutting Edge of Business”- TMH Publications -2005.
2. Agarwala, K.N and Deeksha Agarwala, Business on the Net: What’s and How’s of E-Commerce; Macmillan, New Delhi.
3. Diwan, Prag and Sunil Sharma, Electronic Commerce, Micro Soft press Washington.
