Syllabus for Certificate course in Computer Awareness (Add-On Course) for Undergraduate Level in Himachal Pradesh University

The purpose of this add-on course is to spread computer literacy among the undergraduate students by making them aware of the basics of the computer and their operations. The scheme of papers for this certificate course is to be adopted from the first year of graduation starting from session 2010-11 onwards.

Total number of courses to be taught: 3 papers during 3 years of undergraduate courses.

Duration: One paper to be taught per year (at least 90-100 hours in year)

Eligibility: Any bonafide student of undergraduate level.

Examination: The examination shall be held in the manner similar to that of other undergraduate courses of the university. It is mandatory to secure pass marks in all the three papers in each component separately i.e. theory examination, internal assessment as well as in practical examinations. The marks obtained are to be listed in the DMC issued to the student every year.

UG-Addon-101: Computer Fundamental & PC-software

UNIT-1

Introduction: What is a Computer, characteristics of Computer, Evolution of computer, Capability and limitation of computers, various generations of computers.

Basic computer organization: Types of computer, basic components computer system, Input unit, output unit, arithmetic logic unit, control unit, general processing unit, instruction set, registers, processor speed, type of processor, various input and output devices and their working.

Memory: Main memory organization, main memory capacity, RAM, ROM, EPROM, PROM, cache memory, hard disk drive, floppy disk drive, CDROM, DVD, PC's Specifications.

UNIT-2

Introduction to windows XP: Definition, Benefits, Features & users of window XP, control panel, Accessories, Task bar, uses of my computer recycle bin.

MS office: common office 2003 elements, introduction to office 2003, managing files in office. MS word definitions, benefits features & use of word 2003. Menus, toolbars, cursor control keys, shortcut keys, hot keys. Editing text, document formatting, reusable formatting with styles and templates, File handling (opening, creating, saving, printing, editing), Formatting text, find & replace, tables and columns, spell check, thesaurus, file protection, mail merge, labels & envelops.

UNIT-3

Ms Excel: Spreadsheets, definition, benefits, features & uses of MS Excel, toolbars, worksheets, formatting work sheets, working with formulas, calculating formulas & function. Ranges, auto fill, data (sort, subtotal), manipulating data with charts, print.

UNIT-4

PowerPoint: Presentation, Definition, benefits, features & uses of PowerPoint, menus, toolbars. Creating Presentation: Creating & Editing slides, Adding graphics, multimedia, special effects to slides, insert (pictures, slides, text, audio, video), master slides, views.

Text Books:

1. V.Rajaraman & Radhakrishan: introduction to digital computer design. PHI
2. E.Balagurusamy: Fundamentals of computers, Tata Mcgraw-Hill
3. K.L.Bansal & S. Sood: Fundamentals of Computer & information Technology. Sharma Publisher, jalandha.
4. K.L. Bansal & S.Sood: PC Packages, Sharma Publisher, jalandhar
5. Jennifer Kettell,Guy Hart-davis, curt Simmons: Microsoft Office 2003. A complete reference.

Note:

1. Each theory paper shall be of 3 hours and shall carry 60 marks. 20 marks for practical examination and 20 for internal assessment.
2. In all 9 questions will be set; two from each UNIT and one from the entire syllabus. Question no. 9 shall contain at least 5 parts and will be compulsory.
3. Examinee will attempt five questions in all one each from all four UNITS. Question no. 9 will be compulsory.

UG-AddON-201: Internet & web Technologies

UNIT-1

What is Internet, How Information Travels across, How TCP/IP works, understanding internet address and Domains, How the Domain name system works? How the routers works, Connecting to the internet: connecting your computer to internet, how the network computer work, how DSL works.

Security awareness (introductory only): what is virus, worm, Trojan etc, what are anti-virus softwares, what is cyber crime, what is hacking, various types of attacks: virus, Trojan horses, phishing, denial of services, Automatic execution of codes etc.

UNIT-2

Communicating on the internet: working of E-mails, sending & receiving emails with attachments, Email spam and blocking, internet chat and instant messaging, making phone calls on the internet, common internet tools: Gophers, telnet, FTP and downloading files, web browser, markup language, web host server, website work with database, audio/video on the internet, working of the internet, firewalls, cookies, cryptography and privacy, digital certification.

UNIT-3

HTML: Requirements for using HTML, Building the foundation, providing structures, adding context, using basic styles, creating lists, adding links, adding images to a web page, creating the image map, animation graphics.

UNIT-4

Creating tables for data-using tables for page layout, creating frames, using frames for page layout, creating a navigation bar, creating HTML forms, basics of scripting language, adding layers. Dynamically changing page content, using CGI, using meta information to describe the document, creating widely accessible web pages, validating the HTML, publishing the web pages.

Text Books:

1. Preston Gralia: how the internet works, tech media, fourth edition
2. Lee Anne Philips: practical HTML, Prentice Hall of India

Reference Books:

1. Valerie Quercia: The Internet in a nutshell, shroff publishers & distributors

Note:

1. Each theory paper shall be of 3 hours duration and shall carry 60 marks. 20 marks for practical examination and 20 for internal assessment.
2. In all 9 question will be set; two from each UNIT and one from the entire syllabus. Question no. 9 shall contain at least 5 parts and will be compulsory.
3. Examinee will attempt 5 questions in all. One each from all 4 UNITS. Question no. 9 will be compulsory.

UG-AddOn-301: Data base Management System Using MS-Acces

UNIT-1

Basic Concept, Data modeling for database, Records and files, Abstraction and data integration, The three level architecture Proposal for DBMS, Advantages and disadvantages of a DBMS.

Data models: data models classification, Entity relationship models, Relational data model, network data model, hierarchical model.

UNIT-2

Relational database manipulation, SQL, Data manipulation, basic data Retrieval, Condition specification, Arithmetic and aggregate operators, SQL join: Multiple tables queries, set manipulation, categorization, updates, views: SQL, QUEL, Data definition, data manipulation; QUEL, Condition specification, Renaming, Arithmetic operators, multiple variable queries.

UNIT-3

Relational database design, Relational scheme relational design, Anomalies in a database: A consequence of bad design, universal relation, functional dependency,Relational database design.

UNIT-4

Deadlock and its Resolution.

Database Security, Integrity, and Control, Security and Integrity, Threats, Defence Mechanism, Integrity.

Text Book:

1. B.Desai: An Introduction to database concept, Galgotia Publication, New Delhi.

Reference Books:

1. C.J. Date: An Introduction To Database System, Narosa Publishing House, New Delhi.
2. Elimsari and Navathe: Fundamental of database System, Addison Wesley, New York.
3. J.D. Ullman:"Principals of database System", Galgotia publication, New Delhi.

Note:

1. Each theory paper shall be of 3 hours duration and shall carry 60 marks. 20 marks for practical examination and 20 for internal assessment.
2. In all 9 questions will be set; two from each unit and one from entire syllabus. Question no. 9 shall contain at least 5 parts and will be compulsory.
3. Examinee will attempt five questions in all. One each from all four UNITS. Question no. 9 will be compulsory.