BSU305 Computer Applications Credit Hours 03

Objectives:

The objective is to educate the students about the tremendous potential of Computers as an instrument for research work in a variety of disciplines as follows

I. Demonstrate understanding of the basic operations of a computer system.
II. Explain the principles of operations for computer systems used in a particular application, specifically in terms of the systems' hardware and software components.
III. Use computer terminology correctly in the context of a particular application.
IV. Use computer applications software to solve problems.
V. Discuss and comment on the social impact of the widespread use of computer technology.
VI. Automate simple tasks in specific applications.

Learning Outcomes

After completing this course, students should be able to:

I. Operate a variety of advanced spreadsheet, operating system and word processing functions.

II. Work effectively with a range of current, standard, Office Productivity software applications.

III. Evaluate, select and use office productivity software appropriate to a given situation.

IV. Apply basic adult learning and assessment principles in the design, development, and presentation of material produced by office productivity applications.

V. Demonstrate employability skills and a commitment to professionalism.

VI. Solve a range of problems using office productivity applications, and adapt quickly to new software releases.

VII. Maintain quality assurance through critically evaluating procedures and results.

Details of Course

- Introduction & Basic Computer Organization
- Computer Software
- Input-Output Devices
- Secondary Storage Devices
- Process and Memory
- Data Communication and Computer Networks

- Operating System
- Word Processing
- Multimedia Presentation
- Spread Sheet
- Microsoft Office
- Inpage

	Week 1. Introduction & basic computer organization: Computer, Characteristics of Computers, Input Unit, Output Unit. Word processing topics: Introduction and File handling Reading: Computer Fundamentals 6th edition by Pradeep K. Sinha Microsoft Word 2010 (http://www.tutorialspoint.com/word_2010)
	Week 2. Introduction & basic computer organization: Storage unit, Central Processing unit, System concepts Word processing topics: Document formatting, Tables and Columns Reading: Computer Fundamentals 6th edition by Pradeep K. Sinha Microsoft Word 2010 (http://www.tutorialspoint.com/word_2010)
	Week 3. Computer Software: Software, Relationship between Hardware & Software, Types of Software (System, Application, Public domain, Shareware, Freeware, Middleware, Firmware) Word processing topics: Graph, Bullets & Numbering. Reading: Computer Fundamentals 6th edition by Pradeep K. Sinha Microsoft Word 2010 (http://www.tutorialspoint.com/word_2010)
	Week 4. Computer Software: System development steps (SDLC) Input-Output Devices: Input Types (Keywords, Command, Program, User Response) Word processing topics: Printing & Mailing, References (Endnote, Footnote). Reading: Computer Fundamentals 6th edition by Pradeep K. Sinha Microsoft Word 2010 (http://www.tutorialspoint.com/word_2010)
	Week 5. Input-Output Devices: Input Devices (Keyboard, Pointing devices, Data Scanning devices, Electronic card reader, Digitizer, Speech recognition devices, Vision-input system) Word processing topics: Citation & Bibliography, Hyper Link Reading: Computer Fundamentals 6th edition by Pradeep K. Sinha Microsoft Word 2010 (http://www.tutorialspoint.com/word_2010)
	Week 6. Input-Output Devices: Output Types (Text, Graphics, Audio, Video) Output Devices (CRT Monitors, Flat panel display screens LCD/LED/Gas Plasma) Word processing topics: Header & Footer, Images/Symbols Assignment: *An assignment will be given to students* Reading: Computer Fundamentals 6th edition by Pradeep K. Sinha Microsoft Word 2010 (http://www.tutorialspoint.com/word_2010)

	Week 7. Input-Output Devices: Printers (Impact & Non-Impact), Projectors, Voice Response Systems Word processing topics: Cover Page, water marks and Theme colours Reading: Computer Fundamentals 6th edition by Pradeep K. Sinha Microsoft Word 2010 (http://www.tutorialspoint.com/word_2010)
	Week 8 Mid-Term Exams Students have to submit a Term Paper, "a long essay subject to meeting similarity index limit in Turnitin". A list of topics will be provided to students in the first week of July. (Give references, focus on methodological, theoretical and comparative aspects of the course)
	Week 9. Secondary Storage Devices: Data Access techniques (Random Access, Direct/Semi-Random, Sequential Access) Multimedia Presentations (Power Point): Introduction, Colour scheme, Design Templates, Data Formatting Reading: Computer Fundamentals 6th edition by Pradeep K. Sinha Microsoft Power Point (https://edu.gcfglobal.org/en/powerpoint/)
	Week 10. Secondary Storage Devices: Sequential & Direct Access Devices (Magnetic Tape, Magnetic Disk, Optical Disk, Memory storage devices (USB/SD/MMC), Storage Hierarchy. Multimedia Presentations (Power Point): Animation schemes, Adding Images/Sound/Video, Custom show, Slide show & Printing. Reading: Computer Fundamentals 6th edition by Pradeep K. Sinha Microsoft Power Point (https://edu.gcfglobal.org/en/powerpoint/) Assignment: *The students will be given Term paper in 10th week (student's own choice) and they have to submit within 2 weeks.*
	Week 11. Processor & Memory: Central Processing Unit (CU/ALU), Instruction set, Registers, Types of Processors (CISC, RISC, EPIC, Multicore, Pipelining, Super scalar) Spread Sheet (MS Excel): Introduction, Manipulating data in Rows/Columns and Cell entries Reading: Computer Fundamentals 6th edition by Pradeep K. Sinha Microsoft Excel (https://www.homeandlearn.co.uk/excel2007/Excel2007.html)
	Week 12. Processor & Memory: Primary Storage/Main Memory (RAM, DRAM, SDRAM, RDRAM, ROM, PROM, EPROM, EEPROM), Cache Memory/SRAM (L1, L2, L3), Evolution of SRAM Spread Sheet (MS Excel): Applying formulae (wizard/code), Conditional formatting Reading: Computer Fundamentals 6th edition by Pradeep K. Sinha Microsoft Excel (https://www.homeandlearn.co.uk/excel2007/Excel2007.ht

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	Week 13. Data Communication & Computer Networks: Basic elements of Communication system, Data Transmission Modes, Data Transmission Media (Wired & Wireless) Spread Sheet (MS Excel): Decision structure (if/nested if for 2, 3 and m-way decision making) Reading: Computer Fundamentals 6th edition by Pradeep K. Sinha Microsoft Excel (https://www.homeandlearn.co.uk/excel2007/Excel2007.html)
	Week 14. Data Communication & Computer Networks Network topologies (Bus, Star, Ring, Mesh, Tree and Hybrid), Network Types (LAN, WAN, MAN), Network Models (Peer-to-Peer, Client-Server), Internet (brief History, ARPANET, Internet Architecture etc.) Spread Sheet (MS Excel): Creating Charts/Graph, Auto Filters etc. Assignment: *An assignment will be given to students* Reading: Computer Fundamentals 6th edition by Pradeep K. Sinha Microsoft Excel (https://www.homeandlearn.co.uk/excel2007/Excel2007.html)
	Week 15. Operating System: Main functions of an Operating System (Process Management, Memory management, File management, Security), MS Windows vs Linux Spread Sheet (MS Excel): Revision MS Office (Word Processing, MS excel and Power Point) Reading: Computer Fundamentals 6th edition by Pradeep K. Sinha Microsoft Excel (https://www.homeandlearn.co.uk/excel2007/Excel2007.html)
	Week 16. Final Term Exams