

Lecture Plan

Name of the college: Government College of Arts, Science and Commerce, Sanquelim- Goa

Name of Faculty: Mr. Amar R. Naik

Subject: Computer Science

Paper code: CSC-112 Computer Software Fundamentals

Program:F.Y.B.Sc.

Division: -

Academic year: 2024 - 2025

Semester: I

Total Lectures: 60

Course Objectives:

This course will enable the student to gain an understanding of the core concepts and technologies which constitute Information Technology

Course Learning Outcome:

At the end of the course, learner will be able to:

- Explain basic concepts and terminology of information technology
- Explain basics of personal computers and their operations
- Identify various I/O devices, storage and networking devices
- Familiarize with recent trend of IT

Student Learning Outcome:

At the end of the course, learner will be able to:

- Explain basic concepts and terminology of information technology
- Explain basics of personal computers and their operations
- Identify various I/O devices, storage and networking devices
- Familiarize with recent trend of IT

Month	Lecture From	Lecture To	No. of lectures allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books
June	28/06/2024	29/06/2024	1	- Syllabus Overview, Marks Distribution, Introduction of IT		Laptop, Smartboard, PPT	P. Aksoy, L. DeNardis, Introduction to Information Technology, Cengage Learning, 2006
July	01/07/2024	06/07/24	4	- Information: Prerequisites of Information, Need for Information Technology - Advantages, definition and components - Basic Computer Organization - Application of IT (Science and Engineering, Business & Commerce)		Laptop, Smartboard, PPT	P. Aksoy, L. DeNardis, Introduction to Information Technology, Cengage Learning, 2006
July	08/07/2024	13/07/24	4	- Application of IT (Education, Governance, Medicine, Entertainment) - Data and Information: Definition, Types of data - Qualities of Information - Data Representation: Character formats- ASCII, Unicode (Definition, Adding regional languages, Phonetic keyboards)		Laptop, LCD Projector, PPT	P. Aksoy, L. DeNardis, Introduction to Information Technology, Cengage Learning, 2006 A. Goel, Computer Fundamentals, Pearson Education, 2010
July	15/07/2024	20/07/24	4	- Number system: Binary, decimal, Conversion - Directory structure - File formats - Compression (Text, Audio, Image, Video)	Practice Problems on number system	Laptop, Smartboard, PPT	P.K. Sinha, P. Sinha, Fundamentals of Computers, BPB Publishers, 2007
July	22/07/2024	27/07/24	4	- Data Backup: Techniques,		Laptop, LCD Projector,	P. Aksoy, L. DeNardis, Introduction

				<p>Scheduler</p> <ul style="list-style-type: none"> - Online backup, Advantages - Device Interfaces and Data Storage: Data device Interface access methods (USB, IDE /SATA) - Optical memory (Blue ray) 		PPT	<p>to Information Technology, Cengage Learning, 2006</p> <p>P.K. Sinha, P. Sinha, Fundamentals of Computers, BPB Publishers, 2007</p>
July/ August	29/07/2024	03/08/24	4	<ul style="list-style-type: none"> - Flash memory (USB Sticks, Memory Cards, SD, MMC, Micro SD) - Magnetic Memory (External disks), New Devices (Solid state drives) - Revision 	Interfaces demonstration	Laptop, LCD Projector, PPT	P.K. Sinha, P.Sinha, Fundamentals of Computers, BPB Publishers, 2007
August	05/08/2024	10/08/24	4	<ul style="list-style-type: none"> - Software: System and Applications - Relationship between Hardware and Software - Programming Languages: Low level, High level - Translators - System Programs: Operating systems - definition and functions 		Laptop, LCD Projector, PPT	A. Goel, Computer Fundamentals, Pearson Education, 2010
August	12/08/2024	17/08/24	4	<ul style="list-style-type: none"> - Examples of operating System: Windows, Linux - Online OS, Virtual OS – Comparison - Multi boot systems - OS revision 	Comparison of O.S.	Laptop, Smartboard, PPT	<p>A. Goel, Computer Fundamentals, Pearson Education, 2010</p> <p>P.K. Sinha, P. Sinha, Fundamentals of Computers, BPB Publishers, 2007</p>
August	19/08/2024	24/08/24	4	<ul style="list-style-type: none"> - Disk partitions and logical drives - Directory Structure: System 		Laptop, LCD Projector, PPT	P.K. Sinha, P. Sinha, Fundamentals of Computers, BPB Publishers, 2007

				<ul style="list-style-type: none"> directories - Users (administrator, limited rights user and guest) - User directories (directory permission) 			
August	26/08/2024	31/08/24	4	<ul style="list-style-type: none"> - Services, drives - Hardware interfaces - Application Programs : Definition , Examples - Introduction to Mathematical Computation Packages - Human computer interaction (HCI) 	Demonstration on Mathematical computation package	Laptop, LCD Projector, PPT	<p>P.K. Sinha, P. Sinha, Fundamentals of Computers, BPB Publishers, 2007</p> <p>A. Goel, Computer Fundamentals, Pearson Education, 2010</p>
September	02/09/2024	07/09/24	3	<ul style="list-style-type: none"> - Basics of Computer Networking and data communication: Networking basics, why networking of computers is needed - Types of networks: LAN - MAN, WAN 		Laptop, LCD Projector, PPT	A. Goel, Computer Fundamentals, Pearson Education, 2010
September	09/09/2024	14/09/24	1	<ul style="list-style-type: none"> - Network Components – H/W, Software 		Laptop, Smartboard, PPT	A. Goel, Computer Fundamentals, Pearson Education, 2010
September	16/09/2024	21/09/24	4	<ul style="list-style-type: none"> - Communication channels - Network Devices - Network topologies Network topologies - Communication Process 	Assignment on computer networkin	Laptop, LCD Projector, PPT	A. Goel, Computer Fundamentals, Pearson Education, 2010
September	23/09/2024	28/09/24	4	<ul style="list-style-type: none"> - Data Transmission speed - Communication Types (modes) - Internet – role and importance - IP Addressing – public Vs Private 	Demonstration on IP addressing	Laptop, LCD Projector, PPT	A. Goel, Computer Fundamentals, Pearson Education, 2010

September/October	30/09/2024	05/10/24	3	<ul style="list-style-type: none"> - Static Vs Dynamic - WWW & related protocols - Future IT trends: Artificial Intelligence (AI) and Automation (Definition, Applications) 		Laptop, LCD Projector, PPT	A. Goel, Computer Fundamentals, Pearson Education, 2010
October	07/10/2024	12/10/24	4	<ul style="list-style-type: none"> - IoT - Edge Computing - Cloud Infrastructure - Virtual reality & Augmented Reality 	Assignment on any one current trend.	Laptop, Smartboard, PPT	https://www.oracle.com/in/internet-of-things/ P. Aksoy, L. DeNardis, Introduction to Information Technology, Cengage Learning, 2006 https://www.vmware.com/topics/edge-cloud
October	14/10/2024	19/10/24	4	<ul style="list-style-type: none"> - Business Intelligence - Revision 		Laptop, Smartboard, PPT	P. Aksoy, L. DeNardis, Introduction to Information Technology, Cengage Learning, 2006
October	21/10/2024	22/10/2024	2	- Question paper solving		Laptop, Smartboard	

***Assessment Rubrics**

Component	Max Marks
ISA 1	10
ISA 2	10
ISA 3	10
ISA Best 2	
Practical	-
Project	-
SEA	80