

Atal Bihari Vajpayee Govt Institute of Engineering & Technology
Pragatinagar, Shimla (H.P.) – 171202

DEPARTMENT OF COMPUTER ENGINEERING

Branch: Mechanical Engineering

LESSON PLAN

Academic Year	2026-2027
Semester	1st
Subject Code	ES101
Subject Title	Basics of Information Technology & AI
Name of Faculty	Sweety Rangta
Semester Start & End Dates	10.08.2026 to 28.11.2026

Study and Evaluation Scheme

Sr. No.	Name of the Subject	Hours/Week	Total Hrs/Week	Credits	Internal	External
1	Basics of Information Technology & AI	3	03	3	50	100

Course Outcomes:

CO 1: Understand the fundamentals of computers, information technology and digital transformation.

CO 2: Identify major computer hardware components, memory, storage devices and connectivity options.

CO 3: Understand computer software, operating systems and office productivity tools.

CO 4: Understand basic cyber security practices, cyber ethics and responsible digital behaviour.

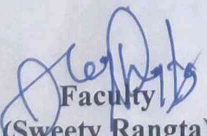
CO 5: Understand the basic concepts, applications and responsible use of Artificial Intelligence and Generative AI.

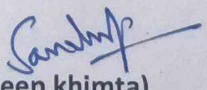
Detailed Lesson Plan

Day	Date	Topic of Discussion	Topic Details	Delivery Method	Remarks
Day 1	11.08.2026	Unit 1: Introduction to Computers and Information Technology Computer Fundamentals	Evolution of computers; characteristics and applications of computers; data and information.	Chalk & Talk	
Day 2	13.08.2026	Unit 1: Introduction to Computers and Information Technology Hardware and Software	Hardware and software; basic distinction and examples.	Chalk & Talk	
Day 3	18.08.2026	Unit 1: Introduction to Computers and Information Technology Block Diagram and Functional Units	Block diagram and functional units of a computer system.	Chalk & Talk	
Day 4	20.08.2026	Unit 1: Introduction to Computers and Information Technology Information Technology	Concept and applications of Information Technology (IT).	Chalk & Talk	
Day 5	22.08.2026	Unit 1: Introduction to Computers and Information Technology Digital Transformation	Concept of digital transformation and its role in modern services.	Chalk & Talk	
Day 6	25.08.2026	Unit 1: Introduction to Computers and	Concept, applications	Chalk & Talk	

		Information Technology e-Governance and e-Commerce	and examples of e-Governance and e-Commerce.		
Day 7	27.08.2026	Unit 1: Introduction to Computers and Information Technology e-Learning and e-Banking	Concept and applications of e-Learning and e-Banking.	Chalk & Talk	
Day 8	29.08.2026	Unit 1: Introduction to Computers and Information Technology Digital Payments and Cloud Services	Digital payments and overview of cloud services.	Chalk & Talk	
Day 9	01.09.2026	Unit 1: Introduction to Computers and Information Technology Impact of IT on Society	Positive and negative impact of Information Technology on society.	Chalk & Talk	
Day 10	03.09.2026	Unit 2: Computer Hardware Computer Hardware Components	Motherboard, CPU, memory, storage devices, input devices and output devices.	Chalk & Talk	
Day 11	05.09.2026	Unit 2: Computer Hardware Central Processing Unit	Functions of CPU; Arithmetic Logic Unit (ALU) and Control Unit (CU).	Chalk & Talk	
Day 12	15.09.2026	Unit 2: Computer Hardware CPU Registers and Clock Speed	Overview of CPU registers and CPU clock speed.	Chalk & Talk	
Day 13	17.09.2026	Unit 2: Computer Hardware Input Devices	Keyboard, mouse, scanner, touch screen, microphone and web camera.	Chalk & Talk	
Day 14	19.09.2026	Unit 2: Computer Hardware Output Devices	Monitor, printer, plotter, speaker and multimedia projector.	Chalk & Talk	
Day 15	22.09.2026	Unit 2: Computer Hardware Memory and Storage	Units of memory and memory hierarchy.	Chalk & Talk	
Day 16	24.09.2026	Unit 2: Computer Hardware Primary Memory	Primary memory: RAM and ROM.	Chalk & Talk	
Day 17	26.09.2026	Unit 2: Computer Hardware Secondary Storage Devices	Hard Disk Drive, optical disks (CD/DVD/Blu-ray) and flash drives.	Chalk & Talk	
Day 18	29.09.2026	Unit 2: Computer Hardware Computer Ports and Connectivity	USB, HDMI, audio ports, Bluetooth (overview) and Wi-Fi (overview).	Chalk & Talk	
Day 19	01.10.2026	Unit 3: Computer Software Operating System	Functions and types of Operating Systems.	Chalk & Talk	
Day 20	03.10.2026	Unit 3: Computer Software GUI and CLI	Graphical User Interface (GUI) and Command Line Interface (CLI).	Chalk & Talk	
Day 21	13.10.2026	Unit 3: Computer Software System Software	Device drivers, language translators and utility software.	Chalk & Talk	
Day 22	15.10.2026	Unit 3: Computer Software Application Software	General-purpose software and domain-specific software.	Chalk & Talk	
Day 23	17.10.2026	Unit 3: Computer Software Examples of Application Software	Web browsers, media players, accounting software and CAD software.	Chalk & Talk	
Day 24	22.10.2026	Unit 3: Computer Software Office Productivity Tools	Word processing, spreadsheet and presentation tools.	Chalk & Talk	
Day 25	24.10.2026	Unit 3: Computer Software PDF and Collaboration Tools	PDF tools and collaboration tools.	Chalk & Talk	
Day 26	27.10.2026	Unit 4: Cyber Security & Ethics Cyber Security Fundamentals	Cyber threats and basic cybersecurity concepts.	Chalk & Talk	
Day 27	29.10.2026	Unit 4: Cyber Security & Ethics Malware	Virus, worm, Trojan, ransomware and spyware.	Chalk & Talk	
Day 28	31.10.2026	Unit 4: Cyber Security & Ethics Phishing	Phishing and common forms of phishing	Chalk & Talk	

			attacks.		
Day 29	03.11.2026	Unit 4: Cyber Security & Ethics Safe Computing Practices	Strong passwords, multi-factor authentication, safe browsing and secure email.	Chalk & Talk	
Day 30	05.11.2026	Unit 4: Cyber Security & Ethics Data Backup	Importance of data backup and basic backup practices.	Chalk & Talk	
Day 31	07.11.2026	Unit 4: Cyber Security & Ethics Cyber Ethics	Digital citizenship, copyright, plagiarism and privacy.	Chalk & Talk	
Day 32	10.11.2026	Unit 4: Cyber Security & Ethics Responsible Use of Social Media	Responsible use of social media and ethical digital behaviour.	Chalk & Talk	
Day 33	12.11.2026	Unit 5: Artificial Intelligence Introduction to AI	Concept of AI and brief history of Artificial Intelligence.	Chalk & Talk	
Day 34	14.11.2026	Unit 5: Artificial Intelligence AI vs ML vs Deep Learning	Basic distinction between AI, Machine Learning and Deep Learning.	Chalk & Talk	
Day 35	17.11.2026	Unit 5: Artificial Intelligence Applications of AI – I	Applications in education, healthcare and agriculture.	Chalk & Talk	
Day 36	19.11.2026	Unit 5: Artificial Intelligence Applications of AI – II	Applications in manufacturing, transportation, finance and smart cities.	Chalk & Talk	
Day 37	21.11.2026	Unit 5: Artificial Intelligence Generative AI	Concept of Generative AI and examples.	Chalk & Talk	
Day 38	26.11.2026	Unit 5: Artificial Intelligence Generative AI Tools	Examples: ChatGPT, Gemini and Microsoft Copilot.	Chalk & Talk	
Day 39	28.11.2026	Unit 5: Artificial Intelligence Benefits and Limitations of Generative AI	Benefits and limitations of Generative AI.	Chalk & Talk	


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