LABORATORIES IN CSE DEPARTMENT

Laboratory	Details of Laboratory
Computer Architecture Lab **Officer In charge:** 1. Prof. Vinod Kumar 2. Dr. Anurag Goel **Location:** AB-4, 718	This lab focuses on the study and design of computer systems, exploring the principles of computer architecture, processor design, memory hierarchy, and performance optimization. Students engage in hands-on experiments to understand how computer hardware and software interact to execute programs efficiently.
IPM Lab **Officer In charge:** 1. Prof. Manoj Kumar 2. Ms. Garima Chikara **Location:** AB-3, 708	The Information Processing and Management (IPM) Lab is dedicated to research and development in the field of information processing, including data storage, retrieval, and management. The lab also focuses on optimizing information systems to handle large volumes of data effectively.
Data Mining Lab **Officer In charge:** 1. Prof. Shailender Kumar **Location:** AB-4, 017	This lab specializes in extracting valuable insights and patterns from large datasets using various data mining techniques. Students and researchers work on projects involving machine learning, pattern recognition, and predictive modeling to address real-world problems.
DBMS Lab **Officer In charge:** 1. Prof. Rajni Jindal 2. Ms. Anukriti Kaushal **Location:** AB-4, 004	The Database Management Systems (DBMS) Lab is designed to provide students with practical experience in designing, implementing, and managing databases. It covers topics such as SQL programming, relational database design, normalization, and transaction management.
Big Data Analytics and Web Intelligence Lab **Officer In charge:** 1. Prof. Rahul Kataraya 2. Dr. Sanjay Kumar **Location:** AB-4, B18	This lab is focused on the analysis of large-scale datasets and the development of intelligent web applications. Students learn to use tools and techniques for big data processing, including Hadoop, Spark, and various machine learning algorithms.
LANS Lab **Officer In charge:** 1. Dr. Rohit Beniwal 2. Dr. Minni Jain **Location:** AB-4, B16	The Local Area Network Simulation (LANS) Lab provides students with hands-on experience in designing, configuring, and managing local area networks. The lab emphasizes network protocols, security measures, and performance optimization in LAN environments.
Computational Lab **Officer In charge:** 1. Dr. R. K. Yadav 2. Dr. Pawan Singh Mehra **Location:** AB-3, 706	The Computational Lab is dedicated to solving complex scientific and engineering problems using computational methods. It supports research in areas such as numerical analysis, simulations, and high-performance computing.
IOT Lab **Officer In charge:** 1. Dr. R. K. Yadav **Location:** AB-4, 716	The Internet of Things (IoT) Lab focuses on the development and testing of IoT devices and applications. Students work on projects related to smart homes, healthcare, industrial automation, and other IoT-based solutions, exploring the integration of sensors, communication protocols, and cloud computing.
Programming Lab **Officer In charge:** 1. Dr. Manoj Sethi 2. Dr. Prashant G. S. **Location:** AB-4, B06	The Programming Lab provides an environment for students to learn and practice various programming languages and paradigms. The lab covers a wide range of programming topics, from basic coding skills to advanced software development techniques.

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Machine Learning Lab **Officer In charge:** 1. Prof. Anil Kumar Parihar 2. Dr. Kavinder Singh **Location:** AB-4, 006	This lab is dedicated to the study and application of machine learning algorithms. Students and researchers work on projects involving supervised, unsupervised, and reinforcement learning to develop intelligent systems that can learn and adapt from data.
Artificial Intelligence Lab **Officer In charge:** 1. Dr. Aruna Bhatt 2. Dr. Rajeev Kumar **Location:** AB-4, B04	The Artificial Intelligence (AI) Lab focuses on the development of intelligent agents and systems. Research areas include natural language processing, computer vision, robotics, and knowledge representation, with an emphasis on creating AI-driven solutions for complex problems.
Information Security and CI Lab **Officer In charge:** 1. Dr. Nipun Bansal 2. Ms. Gull Kaur **Location:** AB-3, 716	The Information Security and Cyber Intelligence (CI) Lab is centered on the study of cybersecurity measures, threat detection, and information assurance. Students learn to design secure systems, protect data integrity, and respond to cyber threats.
Samsung Research Lab **Officer In charge:** 1. Prof. Rajni Jindal **Location:** LW3, TF3, 3rd Floor, Civil Department	This lab, in collaboration with Samsung, focuses on cutting-edge research in areas such as mobile technology, smart devices, and advanced software development. Students and researchers work on innovative projects that align with Samsung's technological vision.
Blockchain Technology Research Lab **Officer In charge:** 1. Dr. Rajeev Kumar **Location:** AB-4, 605	The Blockchain Technology Research Lab explores the potential of blockchain technology in various domains, including finance, supply chain, and healthcare. The lab focuses on the development of secure, decentralized applications and smart contracts.
Quantum Information and Computing Research Lab **Officer In charge:** 1. Dr. Pawan Singh Mehra **Location:** AB-4, 506	This Research lab is dedicated to the study of quantum computing and its applications. Research areas include quantum algorithms, quantum cryptography, and the development of quantum processors, with the goal of advancing the field of quantum information science.
Network Science Research Lab **Officer In charge:** 1. Dr. Sanjay Kumar **Location:** AB-4, 606	This Lab specializes in the analysis of social and complex networks using advanced machine learning and deep learning techniques. By integrating graph neural networks, representation learning, and AI-driven analytics, we develop innovative methods to solve various real-life and research problems in the domain of social networks, financial networks, and other complex networks.
Augmented and Virtual Reality Research Lab **Officer In charge:** 1. Prof. Shailender Kumar **Location:** AB-4, 505	This lab explores the development of augmented reality (AR) and virtual reality (VR) technologies. Students and researchers work on creating immersive experiences for various applications, including gaming, education, and medical training. The lab emphasizes both the hardware and software aspects of AR/VR systems.