TEACHING AND LEARNING FACILITIES

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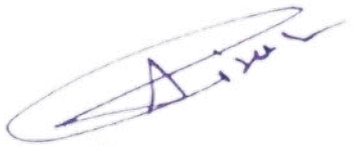
ABOUT

We hold the conviction that our students and scholars, entering our campus with myriad dreams, adorned with curiosity and ambition, should depart upon completing their tenure as responsible citizens, exceptional graduates, thriving entrepreneurs, or emerging professionals.

Whether for academic pursuits, research endeavors, or extracurricular engagements, steadfast endeavors have consistently been undertaken to offer top-notch facilities to our stakeholders. Unwavering commitment is dedicated to ensuring that the infrastructure developed is not only well-established but also meticulously maintained, fostering a clean and environmentally friendly environment. Nestled within an expansive 18 acres of land encompassing a total built-up area of 56727.98 sq.m, our campus proudly features six academic blocks, denoted as A, B, C, D, E, and F.

The campus encompasses three thoughtfully designated playgrounds and a captivating atrium, each subdivided into specific zones. Stringent guidelines and Standard Operating Procedures (SOPs) have seamlessly integrated into the system, meticulously followed by dedicated and trained teams. This commitment ensures optimal outcomes and a harmonious environment for all. The atrium, serving as a central focal point, adds an inviting and dynamic element to the campus landscape. Together, these carefully planned spaces contribute to a well-rounded and engaging experience, fostering a sense of community and enhancing the overall quality of campus life.



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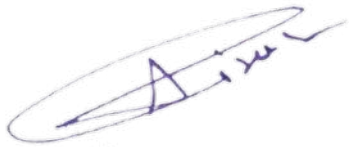
Recognizing that education extends beyond the confines of traditional classrooms, Quantum University embraces a holistic approach. Our facilities include not only classrooms but also laboratories, libraries, and The Gensis-(QUIC) Incubation Centre for innovation, and entrepreneurship– all essential components of the learning experience. To ensure students and researchers reap the maximum benefits, Quantum University invests significantly in cutting-edge infrastructure.

The details of the infrastructure facilities for teaching and learning are presented in the table below

Facility	Numbers
Classrooms and Tutorials	87
Academic Laboratories	56
Work Shop	01
Libraries / Reading Room	2
Herbal Garden	1
Museum	1
Seminar Halls and Conference Rooms	6
Auditorium	2
Incubation Centre	1



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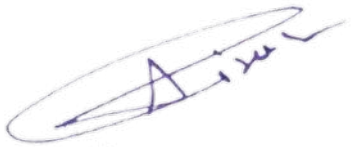
Central Instrumentational Lab	1
Moot Court	1
Faculty Room	22

This report endeavors to offer a brief overview of the teaching and learning facilities within our campus throughout the period 2018-2022



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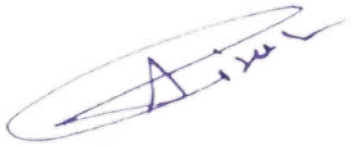
CLASSROOMS AND TUTORIALS

A total of Eighty-Seven classrooms/tutorials are available on our campus, allocated to specific colleges/schools according to pre-scheduled timetables for different batches. These spacious and well-ventilated facilities are equipped with modern amenities. The majority of classrooms are smart class and ICT-enabled, enhancing the overall learning experience.

Centralized administration, along with dedicated maintenance teams (general/electrical), oversees the cleanliness and upkeep of these venues. The maintenance process is streamlined through a system, where complaints are raised and monitored until resolution, ensuring prompt and efficient management of any issues related to furniture, fittings, or general upkeep.



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Presenting Images of some classrooms

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ACADEMIC LABORATORIES

Laboratories play a crucial role in providing practical experience to complement theoretical knowledge. It is essential that these labs align with the practical challenges students will encounter in their professional journeys. Therefore, continuous efforts are invested in keeping the laboratories updated and upgraded to meet evolving educational standards. Different schools within our campus house various labs and workshops, each managed by their respective schools/colleges. The diverse laboratories cater to the specific academic requirements of each school/college.

The laboratories available within the Department of Mechanical Engineering are outlined in the table below.

S. No	Name of the lab	Description about the lab
1	Manufacturing Science Lab	A Manufacturing Science Lab is a facility dedicated to learn working on heavy duty machines and develop skills to fabricate metal components on machines like milling, shaping, drilling, injection moulding etc.
2	Fluid Mechanics and Machines Lab	A Fluid Mechanics and Machines Lab is a facility dedicated to conducting experiments and practical demonstrations to understand fluid flow behavior and fluid forces and analysis. Students also learn about the performance testing of pumps and turbines.
3	Engg. Drawing Lab	An Engineering Drawing Lab is a dedicated space equipped with tools and resources for students to practice and enhance their skills in technical drawing and drafting.

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4	Material Science Lab	A materials science laboratory is a facility equipped to learn about conducting experiments in the field of materials to understand about the microstructure and property changes due to heat treatment.
5	Computer Aided Machine Drawing	A Machine Drawing lab is a facility where students learn, develop skill and apply principles related to technical drawing and drafting for machines and mechanical components in both conventional and computer software methods.
6	Measurement & Metrology Lab	A Measurement and Metrology Lab is designed for the students to learn about the measurement techniques and skills for calibration and testing of different gauges and instruments. Students learn about the standard procedures to collect data, analyze and give results using basic metrology instruments.
7	Thermal Engineering Lab	A Thermal Engineering Lab is a facility where students can conduct experiments and gain practical knowledge on boilers, steam turbines, and engines.
8	Theory Of Machine Lab	A Theory of Machines (TOM) lab is designed for students to study the principles and applications of mechanisms and machines. The lab provides hands-on experience with various machines and mechanisms, allowing students to understand the theoretical concepts.

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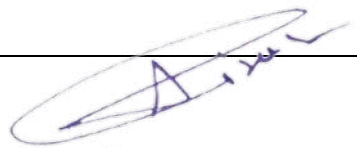
9	Heat Transfer Lab	A Heat Transfer Lab is a facility where students can conduct experiments to study the principles and applications of heat transfer. The lab is crucial for gaining practical insights into different modes of heat transfer namely heat conduction, convection, and radiation.
10	Strength Of Material Lab	A Strength of Materials (SOM) lab is a facility where students can perform experiments to understand the mechanical behavior of materials under different loading conditions. The lab is instrumental in studying concepts related to stress, strain, deformation, and material properties.
11	Refrigeration and Airconditioning Lab	A Refrigeration and Air Conditioning (RAC) Lab is a specialized facility where students can conduct experiments related to the principles, components, and applications of refrigeration and air conditioning systems. This lab is essential for gaining practical insights into the operation and performance of these systems.
12	Vehicle Technology Lab	A Vehicle Technology Lab is a specialized facility where students and researchers can study and experiment with various aspects of automotive engineering and technology. This lab provides hands-on experience with automotive systems and components.
13	Cad Cam Lab	A CAD (Computer-Aided Design) CAM (Computer-Aided Manufacturing) lab is a facility equipped for computer-aided design and manufacturing activities. This lab is essential for students to learn and apply digital tools for designing and producing physical components.



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14	Industrial Automation Lab	An Industrial Automation Lab is a facility for learning about the systems used in the field of industrial automation and control systems. This lab provides students with the opportunity to work with various components and technologies used in automated manufacturing and industrial processes.
15	Mechatronics Lab	A Mechatronics Lab is a facility designed for hands-on learning and experimentation in the interdisciplinary field of mechatronics. This lab provides students with the opportunity to know about the various components and technologies used in mechatronic systems.

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Presenting Images of laboratories of Department of Mechanical Engineering

Quantum University, Roorkee- Teaching and Learning Facilities

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The laboratories available within the Department of Civil Engineering are outlined in the table below.

S. No	Name of the lab	Description about the lab
1	Building Technology lab	A Building Technology Lab specializes in advancing construction methods and materials, adhering to Indian Standard Codes. Equipped with standard tools, including CTM, Vicat Apparatus, sieve analysis equipment, Le Chatelier Apparatus, etc., the lab conducts rigorous testing. It ensures innovation and quality, contributing to the adherence of national construction standards and the enhancement of the built environment.
2	Engineering Survey Lab	An Engineering Survey Lab is dedicated to studying and applying surveying techniques in engineering. It trains students and professionals in accurate measurement, data collection, and spatial analysis crucial for civil engineering, infrastructure development, and land planning. Equipped with instruments like Total Station, Digital Theodolite, measuring tape, and plan table equipment, the lab provides hands-on experience in essential engineering surveying tools, fostering skills for precise and effective data acquisition in various engineering projects.
3	Engineering Geology Lab	An Engineering Geology Lab is a specialized facility within the field of geotechnical engineering. It focuses on the study of geological factors that affect construction projects. In this lab, professionals and students analyze soil and rock samples to

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		understand their properties, composition, and behavior under various conditions. The lab utilizes tools such as microscopes, sieves, and equipment for soil and rock testing.
5	Structural Analysis Lab	A Structural Analysis Lab is a facility focused on studying and testing the behavior of structures under different loads and conditions. It typically employs various instruments and equipment to analyze the response of materials and components, ensuring structural integrity and safety. Common tools include load frames, strain gauges etc
6	Soil Mechanics Lab	A Soil Mechanics Lab is a specialized facility within the field of geotechnical engineering. It is dedicated to the study of soil properties and behavior to assess its suitability for construction projects. The lab typically conducts tests on soil samples to analyze parameters such as density, moisture content, shear strength, and permeability. Instruments such as triaxial testing machines, consolidation apparatus, and direct shear testers are commonly used. The findings from a Soil Mechanics Lab are crucial for designing foundations, retaining walls, and other structures, ensuring they are built on a solid and stable foundation.
7.	Applied Hydraulics Lab	An Applied Hydraulics Lab is a facility dedicated to the study and practical application of principles related to fluid mechanics and hydraulics in engineering. The lab typically includes equipment for experiments and testing related to open channel flow, pipe flow, pumps, turbines, and hydraulic structures. It serves as a hands-on learning environment where students and professionals can conduct experiments to understand fluid behavior, analyze hydraulic systems, and explore the practical aspects

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		of hydraulic engineering. Instruments like flow meters, pressure sensors, and hydraulic models are commonly found in an Applied Hydraulics Lab.
8.	Water Recourse Engineering	A Water Resource Engineering Lab focuses on the study and application of engineering principles in the management and utilization of water resources. This lab typically involves hands-on experiments and tests related to water quality analysis, hydraulic modeling, and the design of water-related infrastructure. Instruments such as water quality meters, flow measuring devices, and hydraulic models may be used.
9	Concrete Technology Lab	A Concrete Technology Lab is a specialized facility dedicated to the study and testing of concrete and related materials used in construction. This lab focuses on understanding the properties and behavior of concrete mixtures, assessing their strength, durability, and other performance characteristics. It typically employs various testing equipment such as compression testing machines, slump cones, and devices for measuring workability. The lab plays a vital role in quality control, research, and the development of innovative concrete formulations. It is essential for ensuring the reliability and longevity of concrete structures in construction projects.
10	Transportation Engineering Lab	A Transportation Engineering Lab is a facility focused on studying and testing various aspects of transportation infrastructure and systems. This lab typically involves hands-on experiments and analyses related to the design, construction, and maintenance of transportation facilities such as roads, highways, and bridges. Instruments for measuring pavement properties, traffic flow, and structural integrity may be used. The lab plays a crucial role in training students and professionals in the field of

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		transportation engineering, addressing challenges related to traffic management, safety, and the overall efficiency of transportation networks.

Presenting Images of Laboratories in the department of civil engineering

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The laboratories available within the Department of Computer Science & Engineering are outlined in the table below.

S. No	Name of the lab	Description about the lab
1	Oracle Certification Training	Oracle Labs is the research and innovation division of Oracle Corporation. It focuses on advancing cutting-edge technologies such as artificial intelligence, machine learning, blockchain, and more. Through collaborations with academia and industry experts, Oracle Labs strives to drive technological advancements that have a meaningful impact on both Oracle's products and the broader technological landscape
2	Artificial Intelligence Lab	The AI lab is a research facility dedicated to the exploration and development of artificial intelligence technologies. Researchers in the lab work on advancing machine learning algorithms, natural language processing, computer vision, and robotics. Through experimentation and innovation, the AI lab contributes to shaping the future of AI applications across various industries
3	Cloud Computing Lab	The cloud computing lab is a specialized facility focused on researching and refining cloud-based technologies and services. It involves the study of virtualization, distributed computing, and scalability to optimize resource utilization and enhance the efficiency of cloud platforms. Researchers in this lab contribute to shaping the evolution of cloud computing, enabling businesses to achieve flexible and cost-effective IT solutions

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4	Cyber Security Lab	The cyber security lab is a dedicated space for researching and developing strategies to safeguard digital systems and networks. It involves analyzing and countering threats like hacking, data breaches, and malware through advanced encryption, intrusion detection, and vulnerability assessment techniques. The lab's efforts play a critical role in fortifying online environments and ensuring the privacy and integrity of sensitive information
5	Data Science Lab	The data science lab is a hub of innovation where experts explore complex datasets using statistical analysis, machine learning, and visualization techniques to extract valuable insights and patterns. Researchers in this lab develop algorithms and models that drive informed decision-making and predictive analytics across various domains. Through experimentation and data-driven methodologies, the data science lab drives advancements that optimize processes and uncover hidden knowledge from vast data reservoirs
6	Data Structure Lab	The data structure lab is a specialized workspace where researchers study, design, and analyze the organization and manipulation of data for efficient storage and retrieval. It focuses on creating optimized algorithms and structures like linked lists, trees, and graphs to solve complex computational problems. Through experimentation and optimization, the lab contributes to enhancing software performance and resource utilization in various applications.
7	Java Programming Lab	The Java lab serves as a dedicated environment for exploring, developing, and refining applications using the Java programming language. It involves hands-on

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		coding, debugging, and testing of software across diverse domains, leveraging Java's versatility and platform independence. Researchers and programmers in this lab contribute to fostering innovation in software development and expanding the capabilities of Java-based solutions
8	Python Programming lab	The Python lab is a dynamic space where researchers and developers work on projects centered around the Python programming language. It serves as a hub for writing, testing, and optimizing code, harnessing Python's simplicity and versatility for tasks ranging from data analysis and machine learning to web development. The lab's activities contribute to advancing Python's ecosystem and driving innovation across various domains of software engineering and scientific research.
9	Basics of Computer and C Programming Lab	The major objective of C Programming lab is to provide students with understanding of code organization and functional hierarchical decomposition with using complex data types. After course completion the students will have understanding of functional hierarchical code organization.
10	Computer Network Lab	The Objective of this lab is to make the students understand the working principle of various communication protocols, to analyze the various routing algorithms and to know the concept of data transfer between nodes.
11	PHP & MYSQL Lab	PHP and MySQL are open-source server-side programming languages used to create dynamic websites. This lab gets students familiarized with accessing MySQL databases over the web using PHP.

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12	HTML & CSS Lab	The objective is to describe how web pages are delivered over the Internet., Build structured HTML pages with text, links, images, tables, and forms, Use of style sheets (CSS) for colors, background, formatting text, page layout and simple transition, transformation, and animation effects.
13	Design and Analysis of Algorithms Lab	This lab objective is to learn the importance of designing an algorithm in an effective way by considering space and time complexity, to learn divide and conquer strategy-based algorithms, to learn greedy method-based algorithms, to learn the dynamic programming design techniques, to develop Recursive backtracking algorithms, to learn graph search and network flow algorithms
14	R Programming for Data Science and Data Analysis	The students are expected to learn-Open-Source platform, Machine Learning Operations and Exemplary support for data wrangling and Quality plotting and graphing & Statistics
15	Probabilistic Modelling and Reasoning with Python	The students are expected to learn- Basics of Statistics and Probability distributions, the students are expected to learn-Sampling theory and Theory of Estimation, the students are expected to learn-Various tests of Hypothesis and Significance, Correlation and Regression and fitting of different types of curves.
16	Machine Learning Practical with Python, Scikit-learn, Matplotlib, TensorFlow	The student should be able to Experiment with basic Algorithms of Machine Learning, ,Experiment with Supervised and Unsupervised Learning, ,Experiment with Linear

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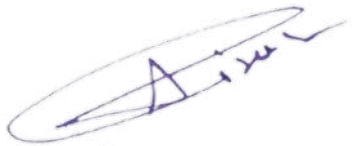
		Regression, Classification, Tree, PCA, SVD, SVM, Resampling Methods and Optimization Techniques.
17	Linux and Virtualization	The goal of this laboratory is to give the students a platform through which they can learn the essentials of Linux. The student interacts with a virtual instance of a Linux machine through the browser on his machine to learn basic tasks of Linux system administration.
18	Malware Analysis and Reverse Engineering	The purpose of malware analysis is usually to provide the information you need to respond to a network intrusion. Your goals will typically be to determine exactly what happened, and to ensure that you've located all infected machines and files.



Presenting Images of Laboratories in the department of Computer Science & Engineering and Computer Applications

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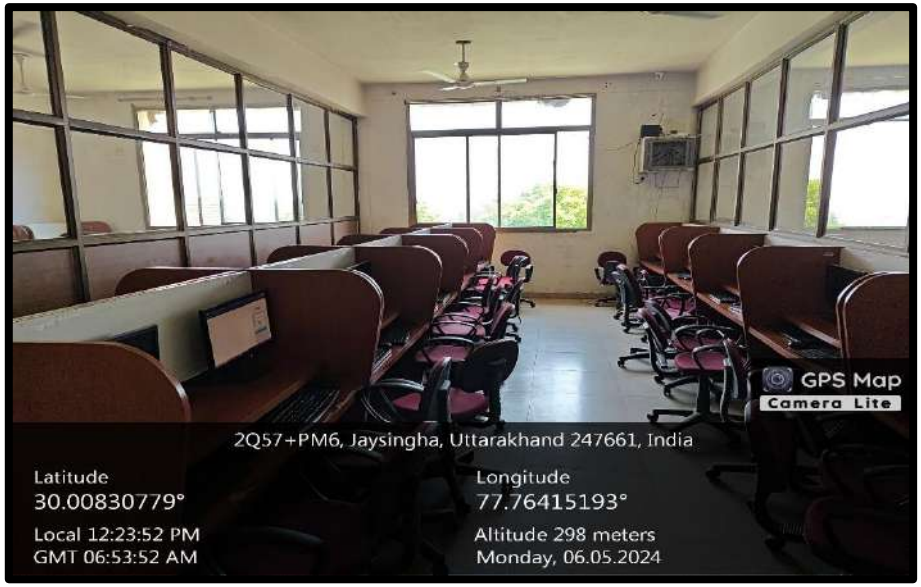

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The laboratories available within the Department of Applied Sciences are outlined in the table below

S. No	Name of the lab	Description about the lab
01	Physics Laboratory for Bachelor of Science (Hons) Specialization in Physics/Chemistry/ Mathematics	Physics Laboratory is set up for mainly Bachelor of Science (Hons) specialization in Physics/Chemistry/ Mathematics students etc. The laboratory is mainly dedicated to Mechanics & Properties of Matter lab, Electricity & Magnetism lab, Elements of Modern Physics lab, Solid-State Physics lab, Waves & Matters lab, Statistical Mechanics lab, and Thermal lab based experimental setups . We have a wide range of experiments like pendulums (bar, Kater's etc.), fly wheel, Sextant, bridges like Carey foster, Anderson, De'Sauty etc., Solid State experiments comprise of Hall Effect, BH Curve, e/m, Four Probe, Stefan's constant, Energy Band Gap, etc. Thermal experiments include Lee method, Searle's, Calendar and Barns, Platinum resistant thermometer (PRT) etc. For the quality and intellectual development of student's laboratory lab is equipped with instruments like High precision CROs, multimeters, function generators, audio oscillators, Spectrometer, traveling microscope. Dark room experiments like Optical table for Fresnel Biprism, single and double slit experiment, Nodule slide etc., Newton's ring experimental set-up, Acousto-optic effect set-up, Polarimeter experiment are also available in the laboratory. Computers are also available with software of Sci lab and expEYES-17 device-based experiments.

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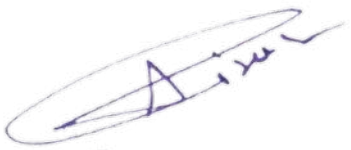
02	Engineering Physics Laboratory	Engineering Physics Laboratory is set up for B.Tech. 1st year students. In this laboratory, we have a wide range of experiments like Stefan's constant, Energy Band Gap, Nodule slide, Carey Foster Bridge, Diffraction Grating, Newton's ring, Earths, magnetic field, Polarimeter, Carry foster bridge etc.
03	Applied Physics Laboratory	Laboratory facilities are available for the 1st year Diploma students also. This lab is equipped with Screw gauge, vernier calipers, speedometer, pendulum, resonance tube, Stokes's method, friction measurement etc.
04	Chemistry Laboratory	Chemistry learning becomes more interesting when students are able to understand the subject well and to apply the acquired knowledge practically. Our lab is well equipped and has proper ventilation. Our laboratory has all essential facilities and weekly lab classes for undergraduate and diploma classes are conducted as per batch. Students are trained for the practical. The lab assistant is responsible for maintenance and smooth functioning of the laboratory. For Safety purpose, the Laboratory has entrance and outlet; are provided with fire extinguisher, exhaust fan, and first aid box. The details of instruments kept for analysis are given below. Chemistry lab is equipped with modern essential instruments like Electronic Balance, Conductivity meter, pH meter, Hot Plate, distillation setup etc



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Presenting Images of Laboratories in the Department of Applied Sciences

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The laboratories available within the Department of Pharmacy

LABORATORIES PROVIDED FOR THE DEPARTMENT OF PHARMACY		
S. No	**Name of the lab**	**Description about the lab**
1	Pharmaceutics Lab-I	Pharmaceutics Laboratory-I is fully furnished with both basic and cutting-edge equipment to produce a wide range of dosage forms, such as tablets, capsules, and elixirs, among others. Pharmacy novices get the ability to assess various formulations in accordance with Pharmacopoeia criteria in this lab. Weight fluctuation, mechanical strength, disintegration, dissolving, friability testing for tablets, parenteral clarity testing, etc. are all included in the examination. This laboratory provides a simulated environment to students so they can grill themselves and be able to work in industry in the future too.
2	Pharmaceutics Lab-II	Pharmaceutics labs are essential for the development and production of safe, effective, and high-quality medications. The knowledge and specialized tools found in these labs greatly enhance patient outcomes and progress in the area of pharmaceutical science. The cutting-edge facilities and tools needed to prepare biphasic dosage forms, such as emulsions and suspensions, are available in this lab. Students will be taught how to make emulsions such as O/W & W/O and O/W/O & W/O/W kinds utilizing both wet and dry gum methods in this laboratory. In pharmaceutics lab-II beginners were also trained to prepare labels for suspensions and emulsions so that they keep in mind some precautions while administering like “Shake Well Before Use” and Store in Cool and Dark Place. As they can take care of these precautions in daily practice.

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3	Pharmaceutical Biotechnology lab	A Pharmacy Practice/Microbiology/Biotechnology lab is a place where students and researchers can learn about and practice the principles of pharmacy, microbiology, and biotechnology. These labs are typically equipped with a variety of equipment and supplies, including microscopes, incubators, autoclaves, and centrifuges.
4	Pharmaceutical Chemistry Lab I	The Pharmaceutical Chemistry Laboratory I is equipped with all the facilities and tools needed to conduct various experiments, including refluxing, distillation, melting point, and boiling point measurements. The students in this lab also received hands-on practice utilizing Thin-Layer Chromatography to monitor the reaction's development. Students who receive this kind of training will find it very beneficial to work in the quality control and R&D departments of industry.
5	Pharmaceutical Chemistry Lab II	Pharmaceutical Chemistry Lab-II is also equipped with the necessary equipment and apparatus required for the synthesis of the synthetic molecules. Students of the pharmacy were trained on various synthetic routes to prepare diverse therapeutic candidates like chalcones and flavones etc.
6	Pharmaceutical Analysis Lab	A pharmaceutical analysis lab is a highly specialized facility where scientists test and analyze drugs and drug products to ensure their safety, quality, and efficacy. These labs play a vital role in the drug development process, from ensuring the purity of raw materials to verifying the final product meets all regulatory standards.
7	Pharmaceutical Biochemistry Lab	Biochemistry lab scrutinize food composition, uncovering nutrients' roles in health. They meticulously analyze food components—carbs, proteins, fats, vitamins—to unravel their impact on metabolism and well-being. These labs fuel research, decoding how diverse diets influence health outcomes, aiding in formulating dietary guidelines. In clinical settings, they diagnose nutrition-linked conditions by studying biomarkers,

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		guiding treatments for issues like diabetes and metabolic disorders. Examining functional foods elucidates their beneficial compounds, from antioxidants to probiotics. These labs serve as educational hubs, imparting practical skills to students, shaping their understanding of food's biochemistry and its profound effects on human health and nutrition.
8	Human Anatomy and Physiology Lab	This lab is well equipped with numerous specimens, models, slides and charts which help in developing knowledge & understanding of Anatomy and Physiology. Students were well-trained on different aspects of how to check hemoglobin, blood clotting and bleeding time, etc. With these types of skills pharmacy students have a bright future in Government Hospitals as Registered Pharmacist and Community Pharmacist.
9	Clinical Pathology Lab	A clinical pathology lab is a medical facility that analyzes bodily fluids and tissues to aid in the diagnosis of disease and the monitoring of treatment.
10	Pharmacology Lab	Pharmacology Laboratory is well-found with equipment like organ baths, animal cages, sterling heart leaver, and respirators. In this lab, students were well trained in practical hands-on animal handling using simulation experiments like to study the effect of atropine on the eye of a rabbit and the analgesic effect using tail immersion and tail flick method.
11	Pharmacognosy Lab	Pharmacognosy laboratory has numerous types of natural products obtained from plants, animals and minerals, etc. This laboratory is equipped with diverse types of equipment for the extraction and isolation of phytomolecules from crude drugs using hot percolation and maceration techniques. Students of pharmacy have training on the standardization of plants using biomarkers

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12	Hospital and Clinical Pharmacy Lab	A hospital and clinical pharmacy lab are a specialized facility where pharmacists and other healthcare professionals work together to ensure that patients receive the right medications at the right time and in the right dose.
13	Central Instrumentation Room (CIR)	A Central Instrumentation Room (CIR) is a central laboratory that provides access to a wide range of sophisticated instruments for pharmaceutical research and development. These instruments can be used for a variety of purposes, including the identification and characterization of drugs and other pharmaceutical compounds, Analysis of drug purity and potency, Development of new drug formulations, Study of drug interactions and Monitoring of drug manufacturing processes
14	Machine Room	The machine room is equipped with instruments and machinery used in the manufacturing of tablets, liquid orals, capsules, parenteral, and ointment sections. The machine room is spacious with the available single punch tablet machine, coating pan, dissolution rate test apparatus, disintegration rate test apparatus, ampoule filling and sealing machine, bottle filling machine, sieve shaker, capsule filling machine, mechanical stirrer, double cone blender, tray dryer and ointment filling machine. This laboratory provides a platform for young and aspiring pharmacists to be well-versed with the industrial manufacturing aspect of different formulations in real-time.
15	Computer Lab	The computer lab is equipped with an adequate number of computer systems in the ratio of 1:1 and supported with high bandwidth internet speed. The students learn the use of computer applications in patient care and nursing practice. This laboratory also has various software like Ex-Pharma as per the Pharmacy Council of India

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16:	Model Pharmacy	In Model pharmacy students can explore the checking and dispensing of prescription drugs, providing advice on drug selection and usage to doctors and other health professionals, and counseling patients in health promotion, disease prevention, and the proper use of medicines.

Presenting Images of Laboratories in the Department of Pharmacy

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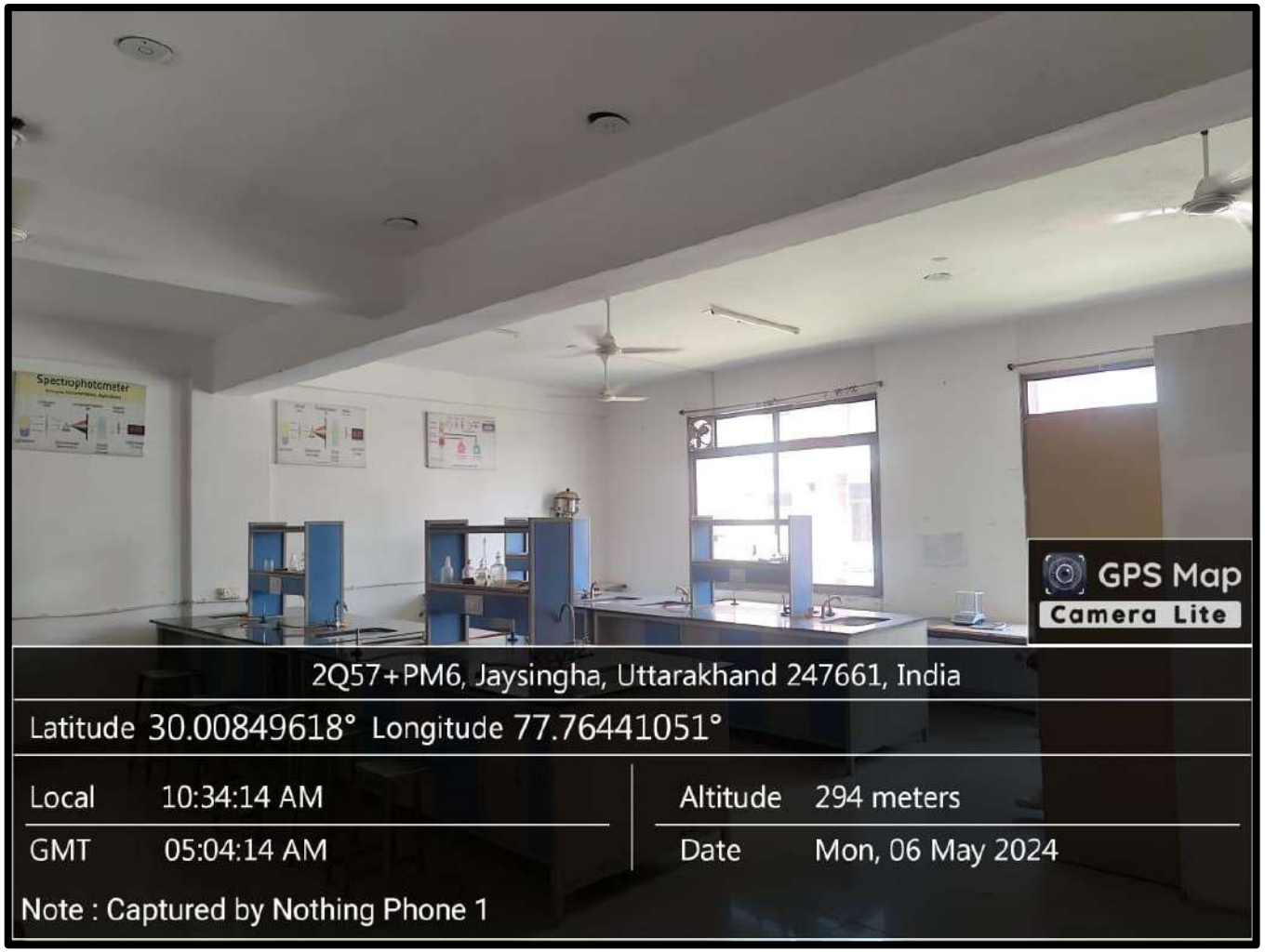

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The laboratories available within the Department of Applied Medical sciences

S. No	Name of the Lab	Description about the Lab
1	Microbiology Lab	Microbiology labs within Applied Medical sciences (Nutrition and Dietetics) departments are pivotal for ensuring food safety and quality. They analyze samples to detect harmful pathogens, assess nutrient content, and monitor microbial growth in food. These labs aid in research, exploring the interplay between food, gut microbiota, and health. They contribute to clinical diagnosis of food-related illnesses and support the development of food preservation methods. In educational realms, they provide hands-on training, imparting essential skills to future professionals. Ultimately, these labs play a multifaceted role, safeguarding food safety, enhancing nutritional understanding, and shaping practices in the realm of dietetics and nutrition.
2	Biochemistry Lab	Biochemistry labs in within Applied Medical sciences (Nutrition and Dietetics) department scrutinize food composition, uncovering nutrients' roles in health. They meticulously analyze food components—carbs, proteins, fats, vitamins—to unravel their impact on metabolism and well-being. These labs fuel research, decoding how diverse diets influence health outcomes, aiding in formulating dietary guidelines. In clinical settings, they diagnose nutrition-linked conditions by studying biomarkers, guiding treatments for issues like diabetes and metabolic disorders. Examining functional foods elucidates their beneficial compounds, from antioxidants to probiotics. These labs serve as educational hubs, imparting practical skills to students,

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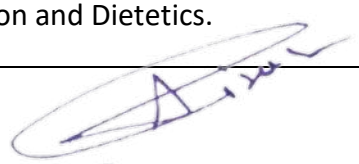
		shaping their understanding of food's biochemistry and its profound effects on human health and nutrition.
3	Human Physiology Lab	Human physiology labs in Applied Medical sciences (Nutrition and Dietetics) department explore how diets influence bodily functions. They delve into metabolic intricacies, deciphering nutrient impacts on digestion, absorption, and energy use. By assessing physiological responses to diets, these labs aid in diagnosing and managing conditions like obesity and diabetes. They also examine how nutrition interacts with exercise, impacting performance and muscle health. Through practical experiments, students learn how nutrients affect the body, honing their skills in dietary planning. Ultimately, these labs are pivotal in unraveling the connections between diet, bodily processes, and health, shaping strategies for optimal nutrition and well-being.
4	Food and Nutrition lab	Within Applied Medical sciences (Nutrition and Dietetics) department, Food and Nutrition labs play multifaceted roles. They craft balanced menus, analyzing recipes for nutritional value while honing cooking skills. Assessing food composition, these labs measure nutrients, guiding dietary advice. Some labs innovate by developing and testing new, healthier food options. Engaging with communities, they offer educational workshops and counseling. In research, they explore how food processing affects nutrition. In clinical contexts, these labs design specialized diets for specific health needs. Ultimately, they serve as dynamic spaces, nurturing practical skills, conducting analyses, fostering innovation, educating communities, and contributing significantly to research in the field of Nutrition and Dietetics.



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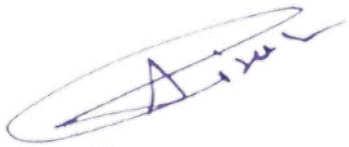
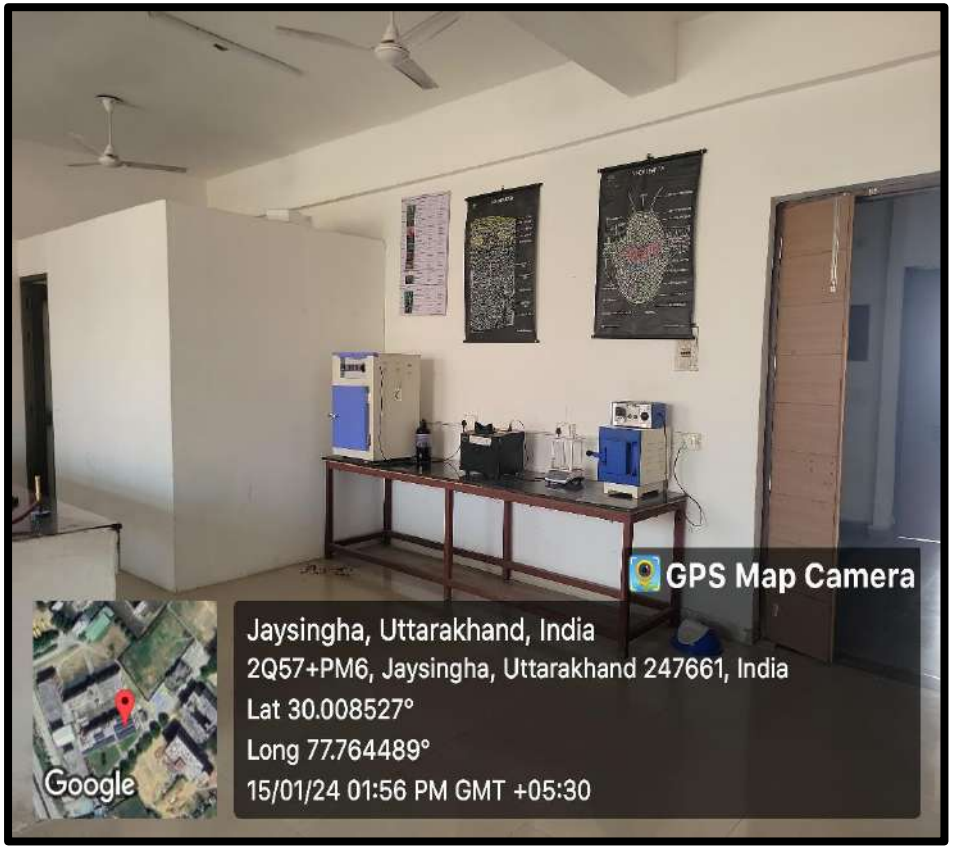
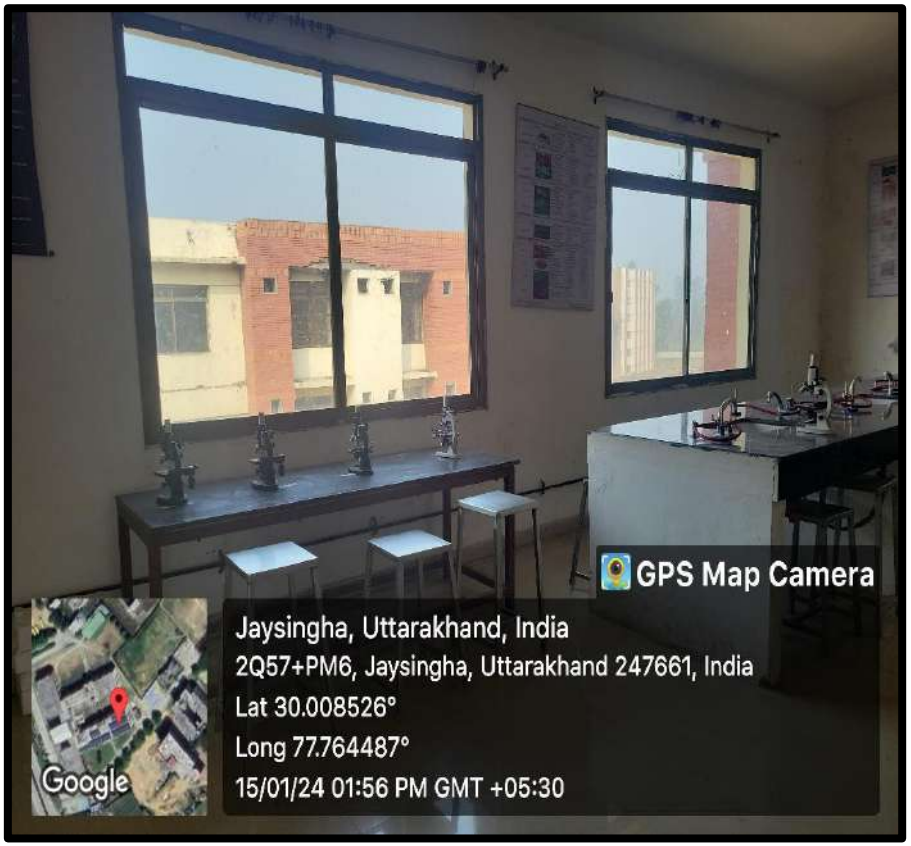
5	Food Science lab	Food Science labs in Applied Medical sciences (Nutrition and Dietetics) department fulfill vital functions. They analyze food, ensuring safety and quality while detecting contaminants and assessing nutritional value. These labs innovate by developing and refining food products, exploring preservation methods and flavors. Investigating processing techniques, they study how these methods impact nutrition. Sensory evaluations help shape product attributes based on taste, texture, and appearance. Additionally, they delve into packaging's role in preserving food and determining shelf life. Contributing to research, they explore the interplay between food components and health. Through practical training, these labs equip students with essential skills, fostering advancements in nutrition, food safety, and product development.



Presenting Images of Laboratories in the Department of Applied Medical sciences





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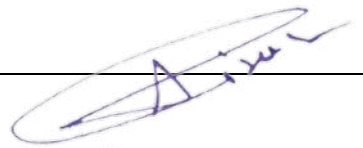
The laboratories available within the Department of Paramedical Sciences

S. No	Name of the Lab	Description about the Lab
1	Immunology and Serology Lab	The Immunology and Serology Lab is a vital part of medical laboratory, responsible for investigating the body's intricate immune system and its interactions with various diseases. It's like a detective agency for the immune system, meticulously analyzing blood samples to unveil the body's defense mechanisms and potential malfunctions.
2	Bio-Chemistry Lab	Biochemistry labs in within Applied Medical sciences. Department scrutinize food composition, uncovering nutrients' roles in health. They meticulously analyze food components—carbs, proteins, fats, vitamins—to unravel their impact on metabolism and well-being. These labs fuel research, decoding how diverse diets influence health outcomes, aiding in formulating dietary guidelines. In clinical settings, they diagnose nutrition-linked conditions by studying biomarkers, guiding treatments for issues like diabetes and metabolic disorders. Examining functional foods elucidates their beneficial compounds, from antioxidants to probiotics. These labs serve as educational hubs, imparting practical skills to students, shaping their understanding of food's biochemistry and its profound effects on human health and nutrition.
3	Radiology Lab	A radiology lab is a medical facility that uses imaging technology to diagnose and treat diseases. The most common types of imaging equipment used in radiology labs includes X-rays, CT scans, MRIs, Ultrasounds etc



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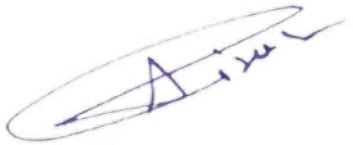
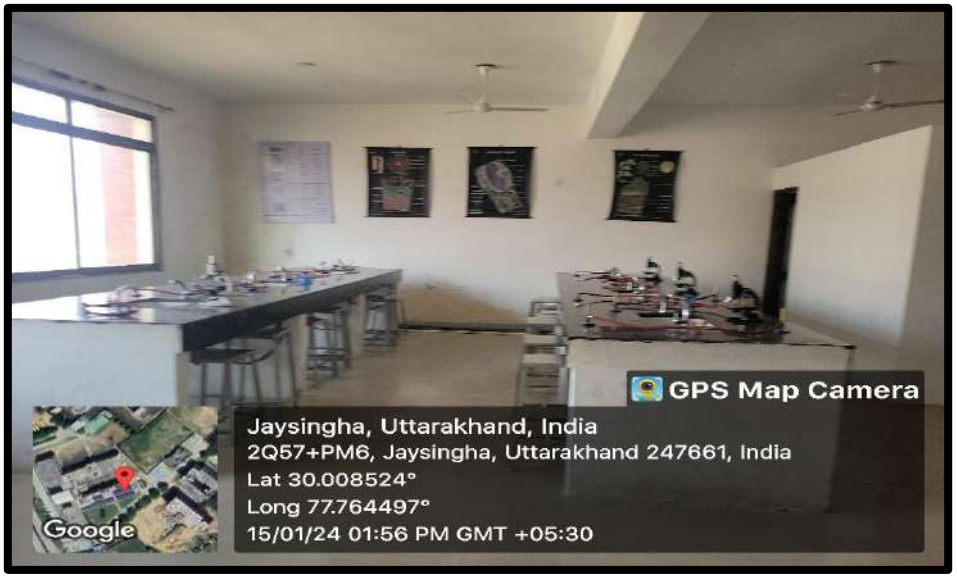
4	Hematology & Pathology Lab	Pathology lab is a medical facility that analyzes bodily fluids and tissues to aid in the diagnosis of disease and the monitoring of treatment.
5	Human Physiology Lab	Human physiology labs in Applied Medical sciences department explore how diets influence bodily functions. They delve into metabolic intricacies, deciphering nutrient impacts on digestion, absorption, and energy use. By assessing physiological responses to diets, these labs aid in diagnosing and managing conditions like obesity and diabetes. They also examine how nutrition interacts with exercise, impacting performance and muscle health. Through practical experiments, students learn how nutrients affect the body, honing their skills in dietary planning. Ultimately, these labs are pivotal in unraveling the connections between diet, bodily processes, and health, shaping strategies for optimal nutrition and well-being.
6	Human Anatomy Lab	This lab is well equipped with numerous specimens, models, slides and charts which help in developing knowledge & understanding of Human Anatomy.



Presenting Images of Laboratories in the Department of Paramedical Sciences



Quantum University, Roorkee- Teaching and Learning Facilities

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The laboratories available within the Department of Agricultural Studies

S. No	Name of the lab	Description about the lab
	Microbiology and Biochemistry Laboratory	Microbiology and Biochemistry Laboratory is well equipped with Laminar Air Flow, Incubator, Autoclave, pH meter, Spectrophotometer etc., numerous specimens, models, slides and charts which help in developing concrete knowledge & understanding of Microbiology and Biochemistry by performing the various experiments using chemicals which further facilitates in understanding of structure of molecules and microorganisms causing diseases.
2	Agronomy Lab	The Laboratory of Agronomy are teaching and research on field crops, namely: the study of all factors affecting crop production and the development of the appropriate techniques for achieving high yields and better quality of the products under the guidance of Faculty and Lab assistant. Agronomy lab was fully equipped with ALL THE ESSENTIAL INSTRUMENTS. FIELD TOOLS, CHEMICALS & GLASS WARES NEEDED FOR STUDY OF UG STUDENTS.

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3	Horticultural	The Feed the Future Innovation Lab for Horticulture's global research network advances fruit and vegetable innovations, empowering smallholder farmers to earn more income while better nourishing their communities. Also known as the Horticulture Innovation Lab, the program's research projects span the value chain of fruit and vegetable production, from seed systems to postharvest practices and marketing. Improving livelihoods through higher profits and diversified, nutrient-rich diets is a primary goal of the program's research efforts around the world. The program's work is guided by ensuring gender equity, improving information access, targeting innovative technologies and increasing research capacity.
4	Entomology Lab	This lab has the capacity and expertise to identifying all types of insects (and other arthropod) pests using morphological identification. The lab is equipped with the insect incubation chambers and several high-powered microscopes. The lab maintains a reference collection of insect samples identified. The lab has been involved in the identification, rapid response and sustained management of important pests such as the Fall Armyworm, False Codling Moth, Desert Locust, Papaya Mealybug and several Fruit fly species adversely affecting agriculture in the country and region.
5	Soil Science Lab	Soil Science Laboratory is well equipped with pH meter, conductivity meter, flame photometer, spectrophotometer, digestion, titration, wet sieving, soil moisture probe etc. Soil science laboratory offers soil testing and manuring/amelioration recommendations to on-line departments. Apart from the general routine soil

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		nutrient analysis the laboratory also runs specific analytical procedures on demand. This laboratory offers few opportunities for internships.
6	Agro-meteorology & Climate Change	Agro-meteorology observatories are those stations at which physical elements of climate and biological, agricultural elements, generally of phenological nature or both related to agriculture are observed to explore crop - environment relationship.
7	Genetics & Plant Breeding	The Laboratory provides DNA fingerprinting services for crop mutants with promising agronomic traits. These data can provide diagnostic molecular markers for use in marker-assisted breeding. In addition, genetic fingerprints protect intellectual property rights of the NARS breeders.
8	Agricultural Economics	Estimating the value of non-market benefits from natural resources and environmental amenities. To enhance the per capita income to minimize the difference between rural and urban.
9	Agricultural Engineering	It mainly includes the machinery for soil preparations, seed plantation, inter-cultural operations, plant protection, harvesting and threshing. The laboratory having tractor operated, power tiller operated, self-propelled, stationary engine operated, animal operated and manually operated equipment.

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10	Plant Pathology	The laboratory is equipped to test for all manner of plant pathogens including viruses, fungi, and bacteria. We also provide various specialty testing services for certain plant pathogens.
11	Food Science & Technology	It also supports research projects and industrial collaboration. Students and researchers can use both developmental kitchen facilities and pilot plant processing equipment to support new product development work, from concept to finished product.
12	Agricultural Extension and Communication	To change farmers' outlook toward their difficulties. Extension is concerned not just with physical and economic achievements but also with the development of the rural people themselves.
13	Animal Science (Dairy Science and Poultry Science)	Animal husbandry focuses on the breeding, feeding, health, and welfare of animals, as well as the production of meat, eggs, and other animal products. Dairy science, on the other hand, is a more specialized field that focuses specifically on the production and processing of milk and dairy products.
14	Agricultural Field	In agriculture, a field is an area of land, enclosed or otherwise, used for agricultural purposes such as cultivating crops or as a paddock or other enclosure for livestock. A field may also be an area left to lie fallow or as arable land.

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Presenting Images of Laboratories in the Department of Agricultural Studies

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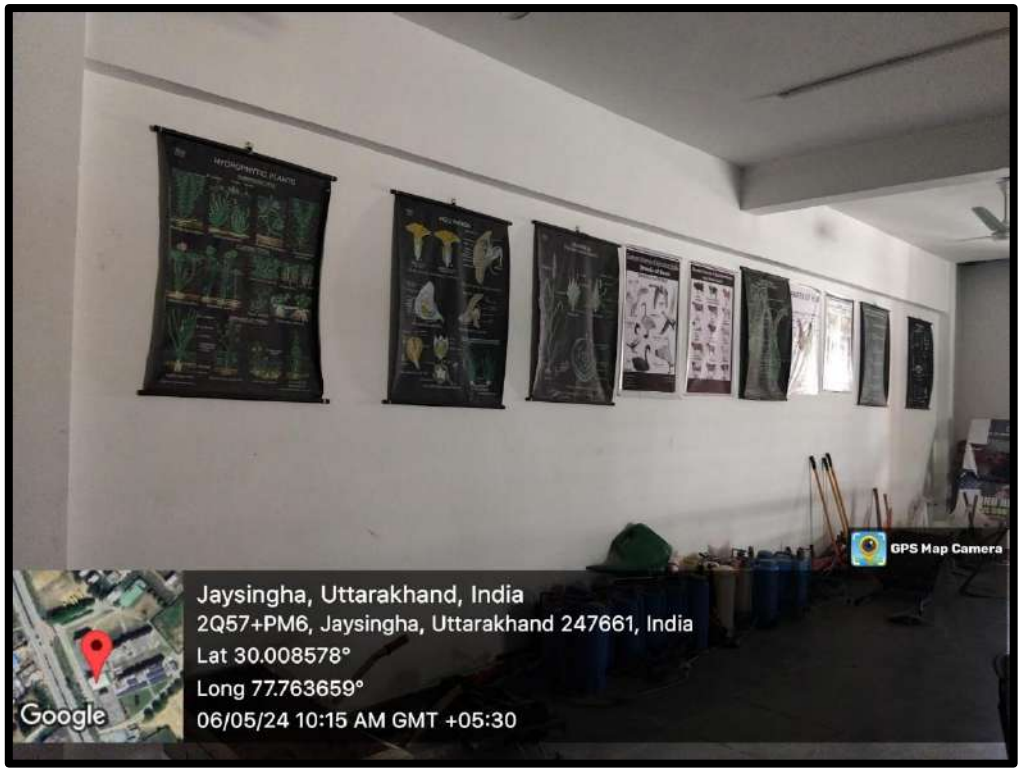

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The laboratories available within the Department of Business Administration

S. No	Name of the lab	Description about the lab
1.	Business Intelligence & Analytics LAB	The BBA-Business Intelligence and analytics lab is an interdisciplinary laboratory focused on the scientific process of transforming data into insights for the purpose of improving decision-making within business organizations. The students in the lab use a variety of advanced computational and statistical methods to investigate problems in diverse business fields including marketing, operations management, and technology management.

Presenting Images of Laboratories in the Department of Business Administration

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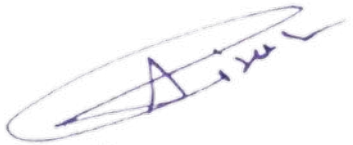
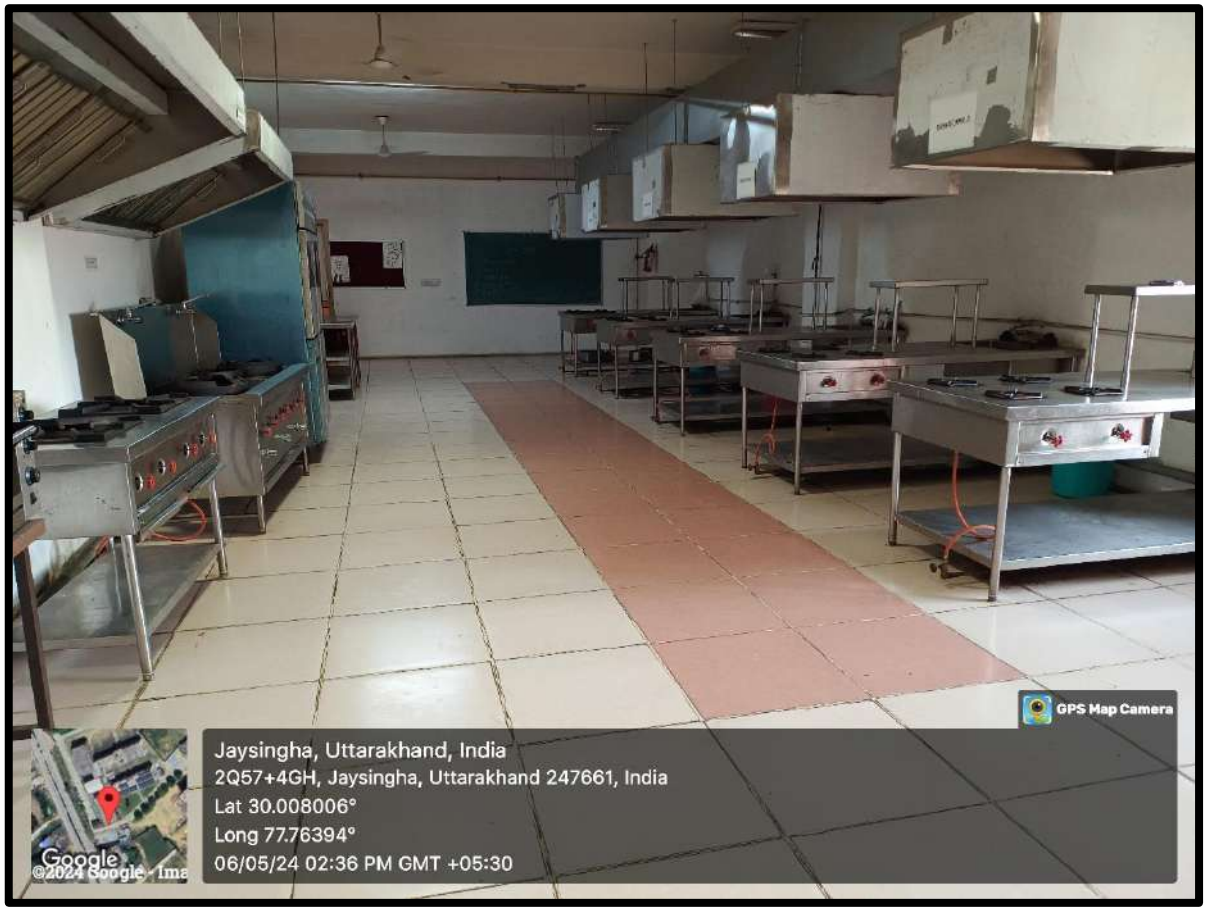
The laboratories available within Department- Hotel Management

S. No	Name of the lab	Description about the lab
1.	Food Production Lab	A food production lab is a facility dedicated to providing students with hands-on experience and practical training in the field of food production. The lab is equipped with various tools, equipment, and ingredients necessary for students to learn about the entire process of food production, from raw materials to the final product.
2	Training Restaurant	A Food and Beverage Service Lab is a specialized facility designed to provide hands-on training and practical experience to students pursuing courses related to hospitality management, culinary arts, or food service management. The primary objective of such a lab is to simulate real-world scenarios and environments that students might encounter in the food and beverage industry



Presenting Images of Laboratories in the Department of Hospitality & Tourism



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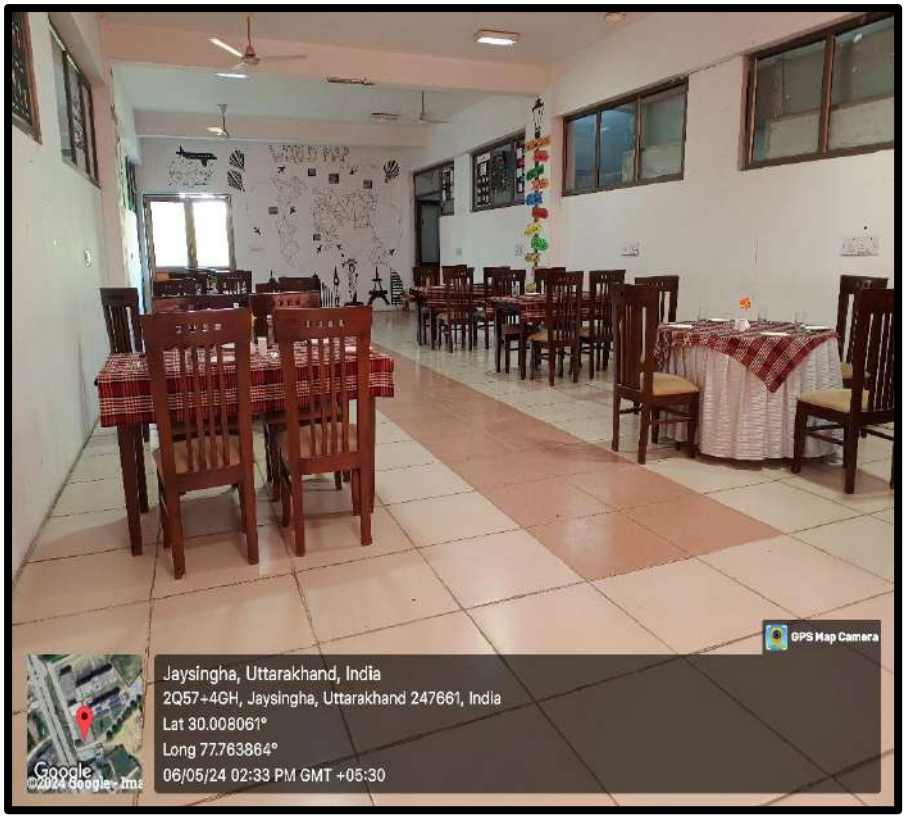

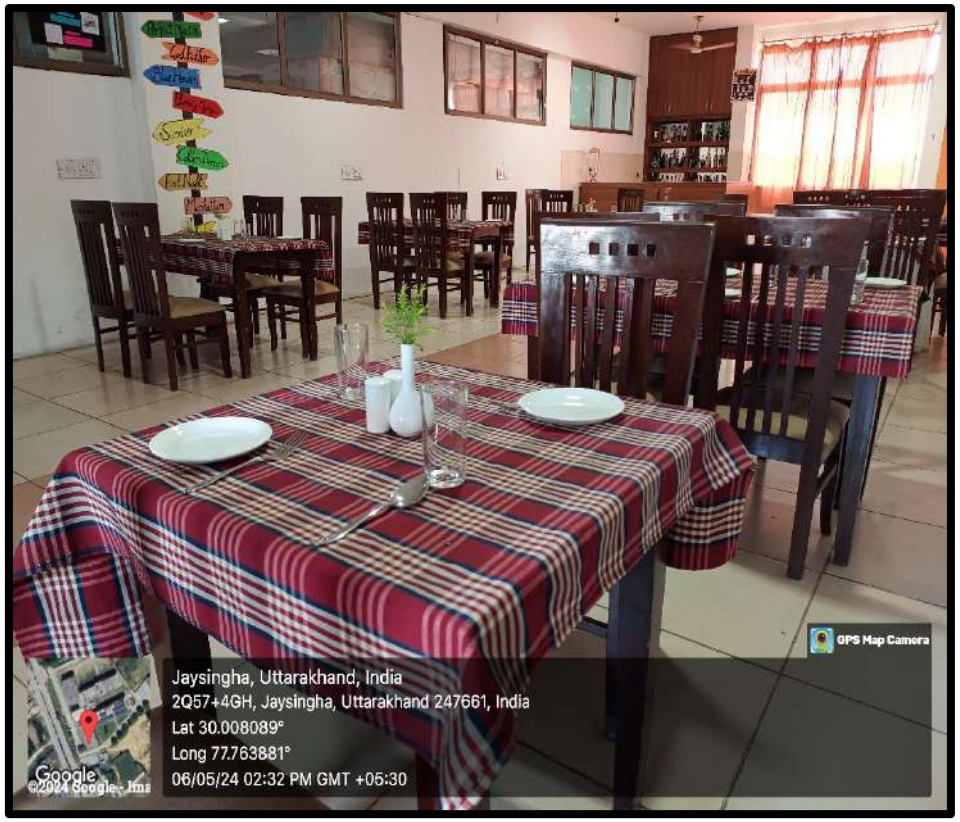

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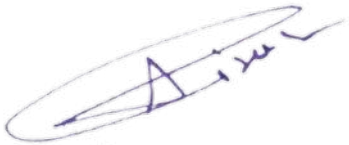
The laboratories available within the Department of Media Studies & Design

S. No	Name of the lab	Description about the lab
1	TV Studio & Editing lab	The Department of Media Studies at our university houses a cutting-edge facility for hands-on training in media production. Featuring a dedicated TV studio with professional lighting and sound equipment, students engage in practical exercises, particularly in news production. The editing lab, equipped with essential software, prepares students for post-production roles, while the Chroma Key setup allows for special effects. Strategically placed video cameras on tripods provide practical experience in shooting professional-grade footage, emphasizing camera operation and cinematography. The anchoring table serves as a realistic space for honing broadcasting and presentation skills, collectively offering students a well-rounded, practical education essential for successful careers in the dynamic field of media production.



Presenting Images of Laboratories in the Department of Media Studies & Design

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WORKSHOP

Workshops in our Mechanical Engineering department provide hands-on learning experiences. In the machine shop, students master metalworking techniques for cutting, shaping, and finishing precise metal parts. Welding workshops focus on the application of tools for joining metals through various welding processes. Precision assembly of metal components is honed in the fitting shop to create mechanical structures. Sheet metal workshops involve fabricating thin metal components using a variety of tools. The blacksmith shop introduces traditional techniques of forging metal into diverse shapes. Detailed exploration of metal casting processes occurs in dedicated workshops. Finally, the carpentry shop instills woodworking skills through assembling and joining wooden pieces. These workshops offer invaluable practical skills for aspiring engineers.

Presenting Images of Workshop

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LIBRARIES / READING ROOM

Quantum recognizes the pivotal role of a high-quality library and information center as the nerve center of any esteemed institute. The 'Q' Library serves as a dynamic hub connecting students and faculty to global knowledge resources, continuously adapting to evolving demands and fostering a professional and conducive learning environment. With a seating capacity exceeding 200 students, the Quantum Library boasts over 23,327 volumes, encompassing books, standards, reports, proceedings, and a collection of more than 150 National and International journals. Specializing in engineering, management, administration, and allied areas, the library also features industry-relevant reports, standards, journals, and an automated setup with a user-friendly portal offering seamless access to e-resources, including full-text journal databases for faculty and students

Presenting Images of Libraries / Reading Room

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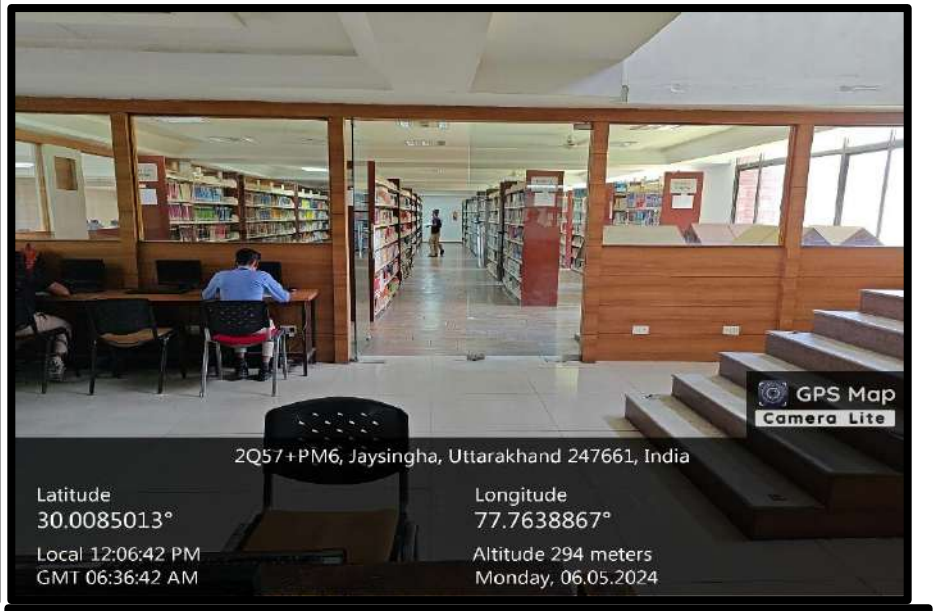

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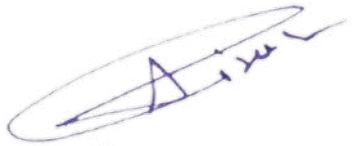
MUSEUM

The Department of Pharmacy has a museum that displays informative & wonderfully arranged drug display boards that showcase the latest allopathic and herbal formulations. Anatomical models, informative charts, specimens, photographs and news updates related to the field of pharmaceutical sciences also enrich the collection. The museum also includes drugs obtained from natural sources like plants, and different dosage forms like syrups, tablets, capsules, eye drops, ointments, suppositories, etc Apart from the drugs, various models, permanent slides, herbarium sheets, assemblies and special types of equipment are also displayed in the museum. In our pharmacognosy section, we have various specimens of crude drugs, such as Cardamom, Liquorice, Fennel, Nutmeg, Ajowan, Black Catechu, Garlic, Amla, Kurchi, Coriander, Sandalwood, Rhubarb and many moreFor the morphological studies, we have samples of Medicinal plants of Sarsaparilla, Senna, gentian, Quassia, Saffron, Shatavari, Punarnava, etc. The college has a museum that displays items from all pharmacy disciplines like pharmaceutics, pharmacology, and pharmacognosy. The exhibited pieces of the museum are also used as part of the existing education program. It includes drugs obtained from natural sources like plants, and different dosage forms like syrups, tablets, capsules, eye drops, ointments, suppositories, etc. Apart from the drugs, various models, permanent slides, herbarium sheets, and apparatus are also displayed in the museum.



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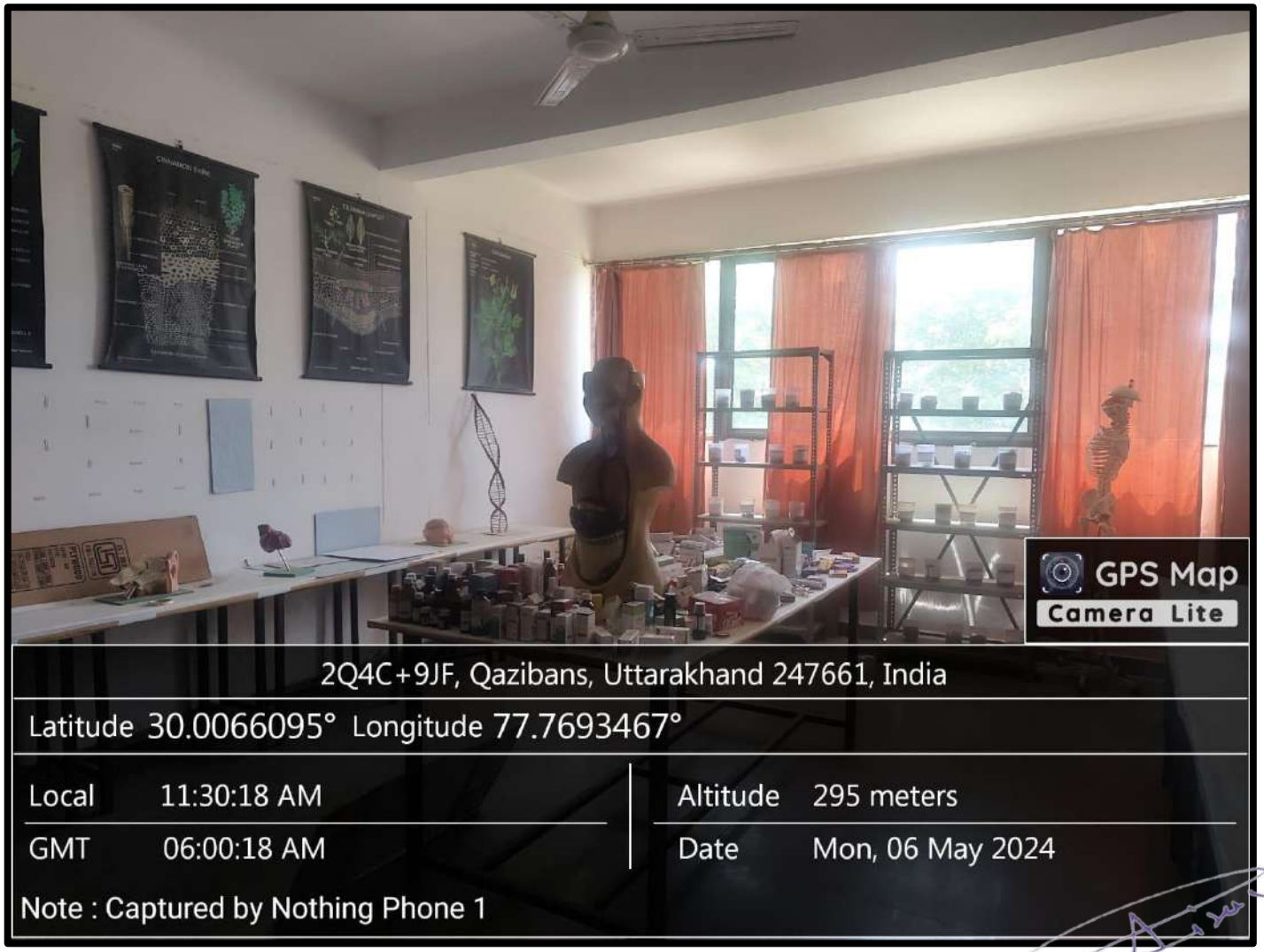
Presenting Images of Museum



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HERBAL GARDEN

Quantum University's School of Agricultural Studies in Roorkee has initiated an herbal garden for Agriculture and Pharmacy students. Objectives include raising awareness about medicinal plants, fostering students' skills in garden development, and engaging the community for shared learning. The State Medicinal Plants Board offers technical support, collaborating with relevant departments. Emphasizing organic practices, the cultivation relies on organic manure and biofertilizers, excluding chemical fertilizers. The selected plants for cultivation encompass Cinnamon, Kalanchoe pinnata, Lemon basil, Ginkgo biloba, Sarpagandha, Ashwagandha, Azadirachta indica, Lemon grass, Tulsi, Citronella grass, and Parijaat.

Presenting Images of Herbal Garden

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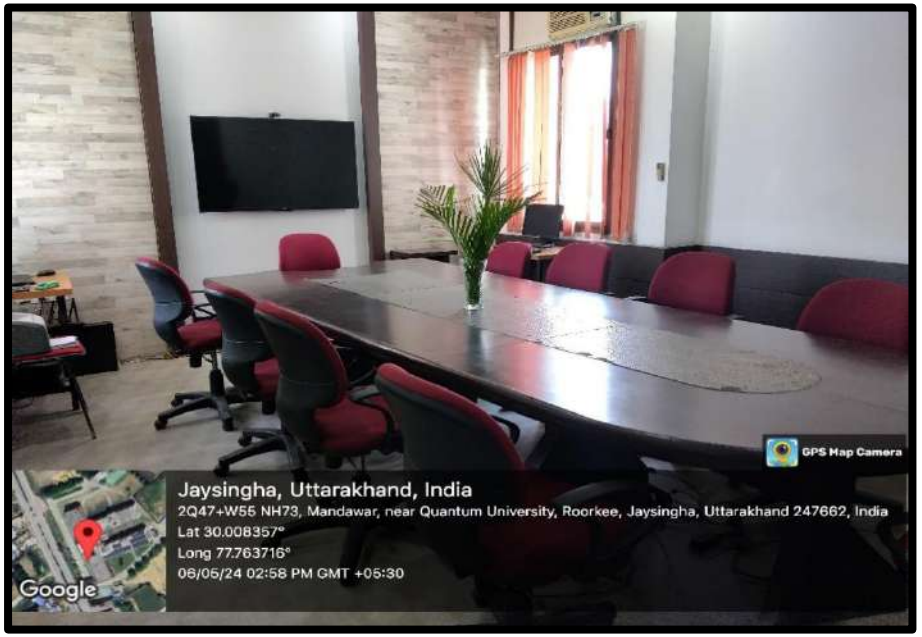
SEMINAR HALLS AND CONFERENCE ROOMS

Quantum proudly features air-conditioned Seminar Halls accommodating 150 to 170 students, alongside conference halls with a seating capacity of 20-25 individuals. These adaptable spaces play a crucial role as venues for seminars, meetings, and diverse academic events. Regular Guest Lectures and Industry Interactions find a platform in the seminar halls, fostering a rich learning experience. Beyond formal occasions, these halls serve as interactive spaces for students, creating an environment conducive to academic discussions, workshops, and collaborative activities. The flexibility and amenities provided in these halls underscore their integral role in cultivating a dynamic and engaging learning environment throughout the Quantum campus

Presenting Images of Seminar Halls and Conference Rooms



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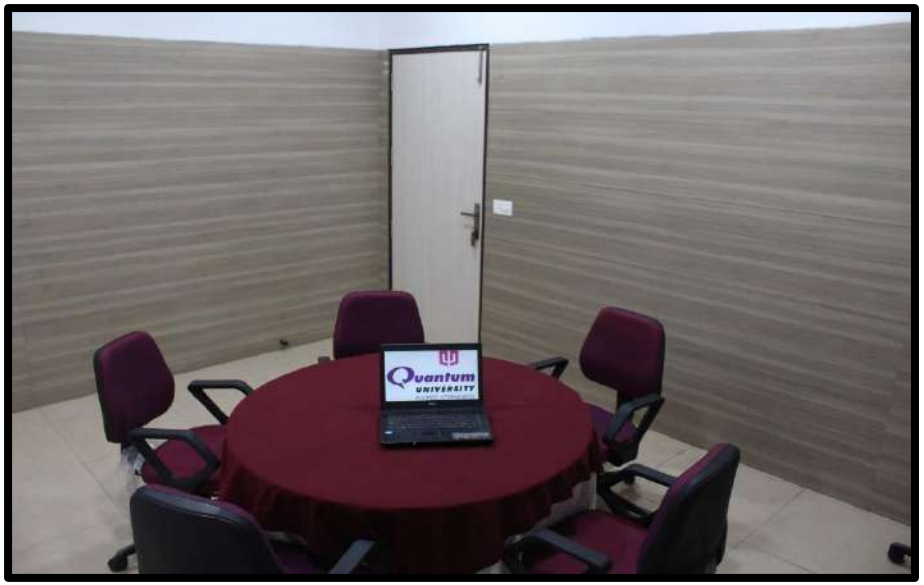

Quantum University, Roorkee- Teaching and Learning Facilities

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AUDITORIUM

Shyam Ji Auditorium at Quantum University stands as an epitome of modernity and functionality, offering seating for up to 550 guests in a centrally air-conditioned space. Equipped with cutting-edge amenities such as multimedia projectors and superior sound systems, it provides an ideal setting for hosting prestigious international conferences and exhibitions. With its expansive lobbies and verandahs, Shyam Ji Auditorium not only facilitates academic endeavors like seminars and placement drives but also serves as a vibrant hub for the Quantum community, hosting lively celebrations and social events, thereby enriching campus life.

Presenting Images of Shyam Ji Auditorium

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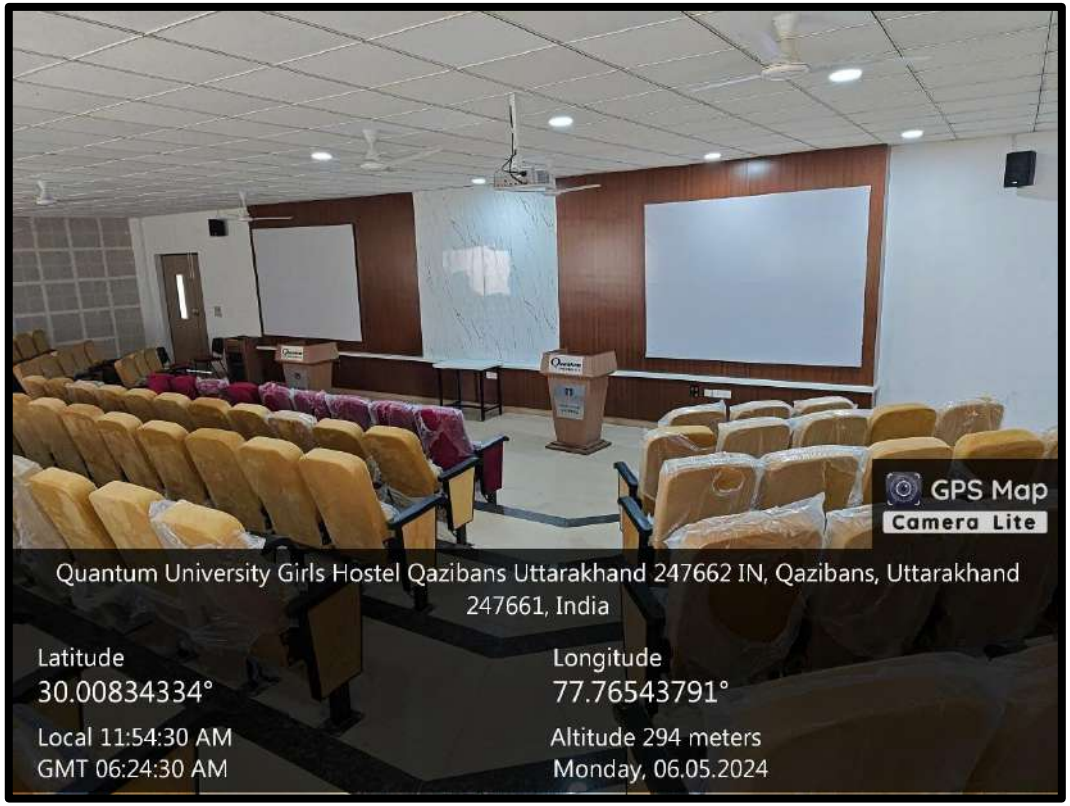
Meanwhile, **the Mini Auditorium** at Quantum University offers a cozy and intimate setting with seating for 165 individuals, all in a fully air-conditioned environment. Despite its smaller size, it boasts modern facilities including multimedia capabilities, making it a versatile space for various events. From academic discussions to smaller-scale gatherings, the Mini Auditorium provides a conducive environment for engaging seminars and workshops, catering to the diverse needs of students and faculty members

Presenting Images of Mini Auditorium



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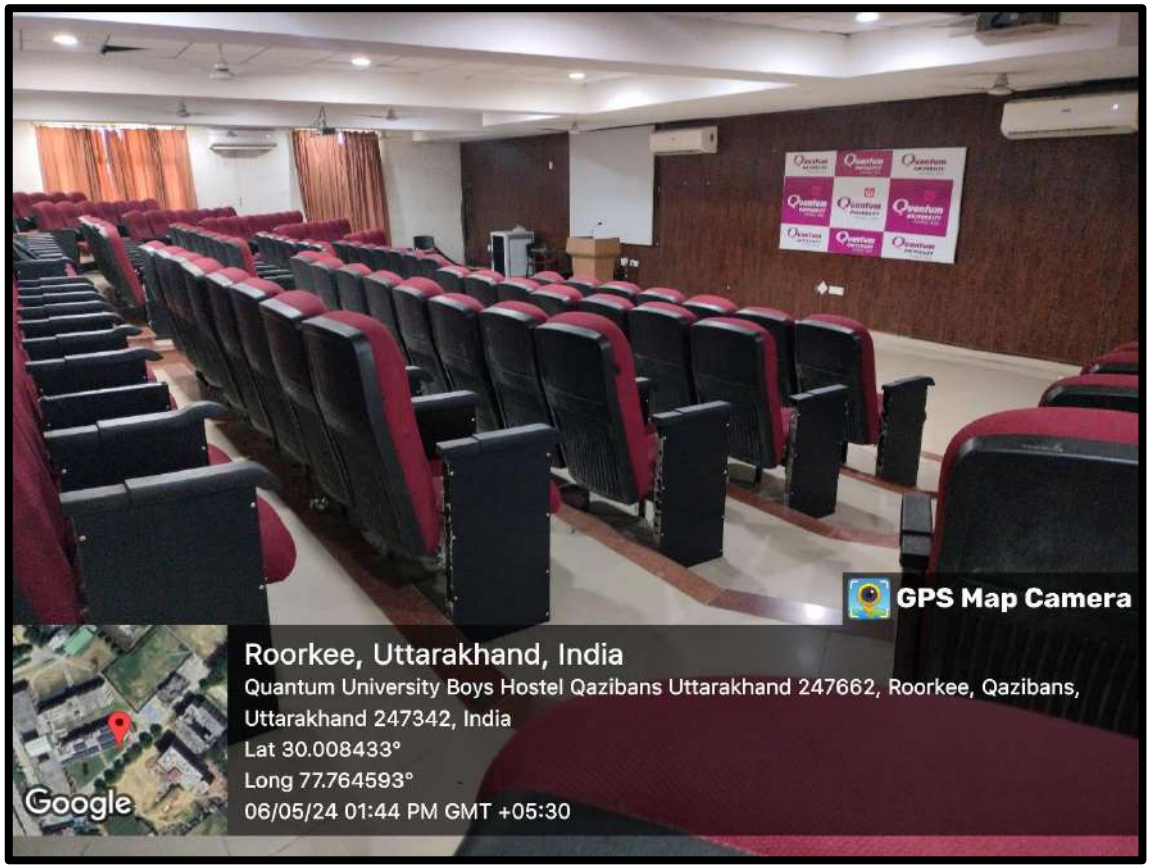

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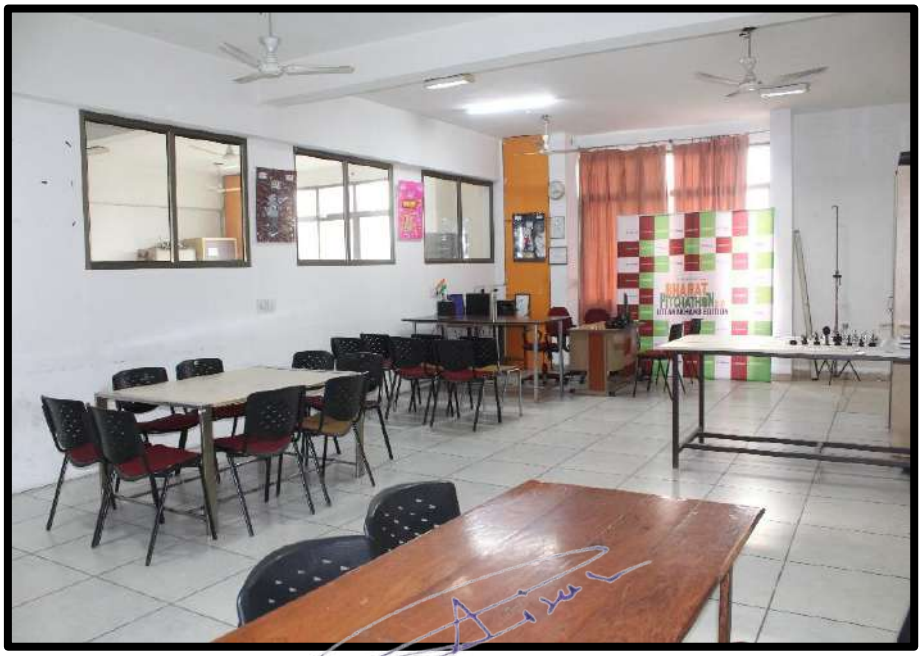
Quantum University, Roorkee- Teaching and Learning Facilities

INCUBATION CENTRE

The Quantum University Incubation Centre for the Innovation Council (QUIC), known as "The Genesis," is established to champion research, innovation, and entrepreneurship. This initiative encourages the creation and nurturing of startups by students, faculty, alumni, and external applicants, fostering an entrepreneurial ecosystem within and beyond the institution. Operating as a section 8 company under the Companies Act 2013, QUIC is committed to developing professional entrepreneurial abilities in society. Quantum University's goal is to promote entrepreneurship and the practical application of knowledge for public benefit. To guide this mission, Quantum has implemented the Incubation Policy, providing a structured framework for entrepreneurship development in a concise and effective manner.

Presenting Images of Incubation Centre



Quantum University, Roorkee- Teaching and Learning Facilities

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CENTRAL INSTRUMENTATIONAL CENTRE

The Central Instruments Centre(CIC) stands as a cutting-edge facility within Quantum University, housing a comprehensive array of sophisticated analytical instruments. This central hub is meticulously designed to meet the diverse needs of both faculty members and research scholars. By offering access to state-of-the-art equipment, the CIC fosters an environment conducive to groundbreaking research and academic pursuits. The facility not only enhances the University's research capabilities but also promotes innovation and excellence in scientific exploration.

Presenting Images of Central Instrumentation Centre

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MOOT COURT

Moot court of Quantum University is a simulated legal exercise for law students, offering a practical platform to enhance advocacy skills. Participants form teams and engage in oral arguments and brief writing based on a hypothetical legal case. The competition involves judging panels, often composed of legal professionals, providing valuable feedback for skill improvement. Moot court helps students develop crucial abilities such as public speaking, critical thinking, and legal research, preparing them for real-world legal practice. Competitions occur at various levels, fostering professional development and exposing participants to different legal systems. Overall, moot court is a vital component of legal education, bridging theory with practical application.

Presenting Images of MOOT Court

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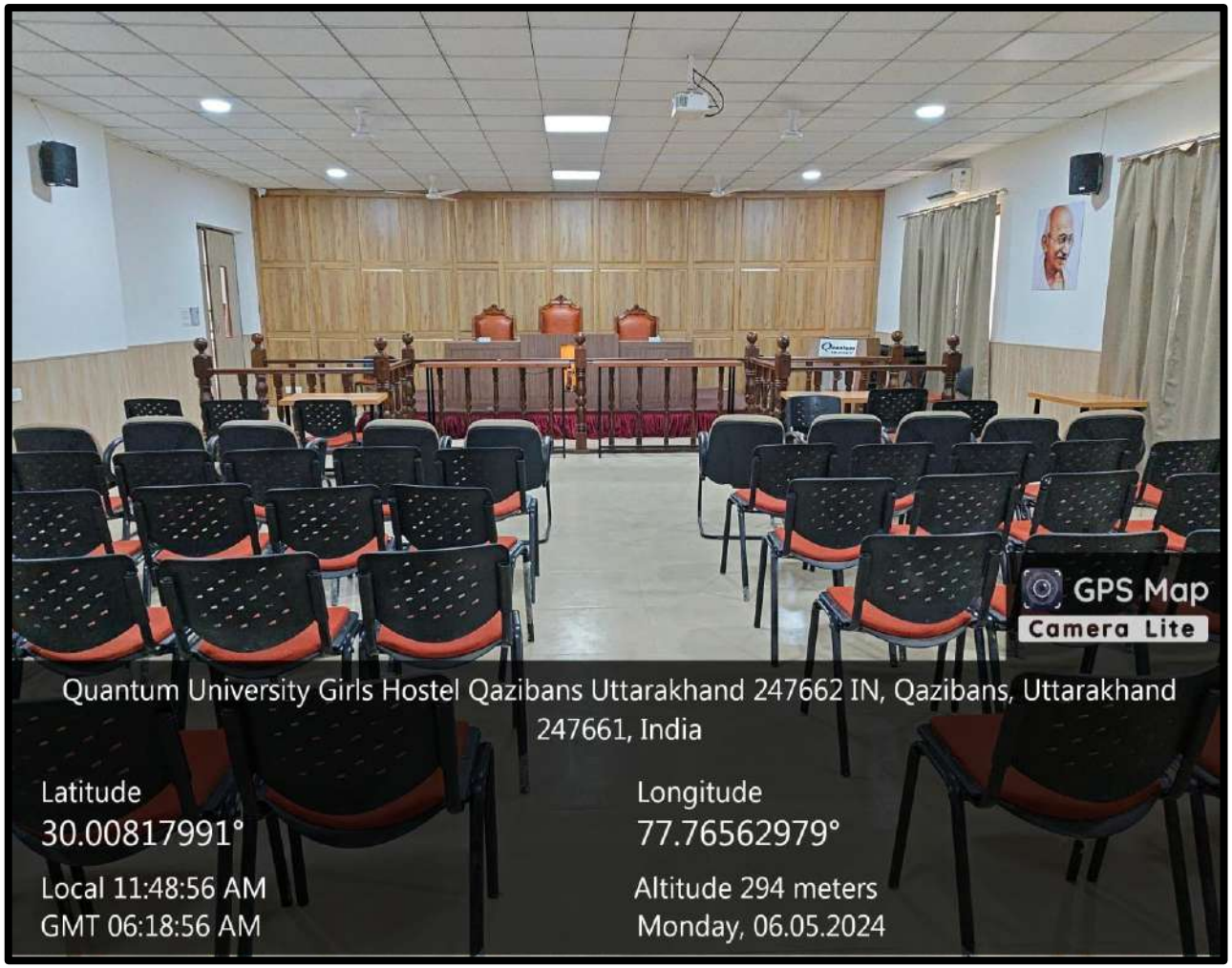

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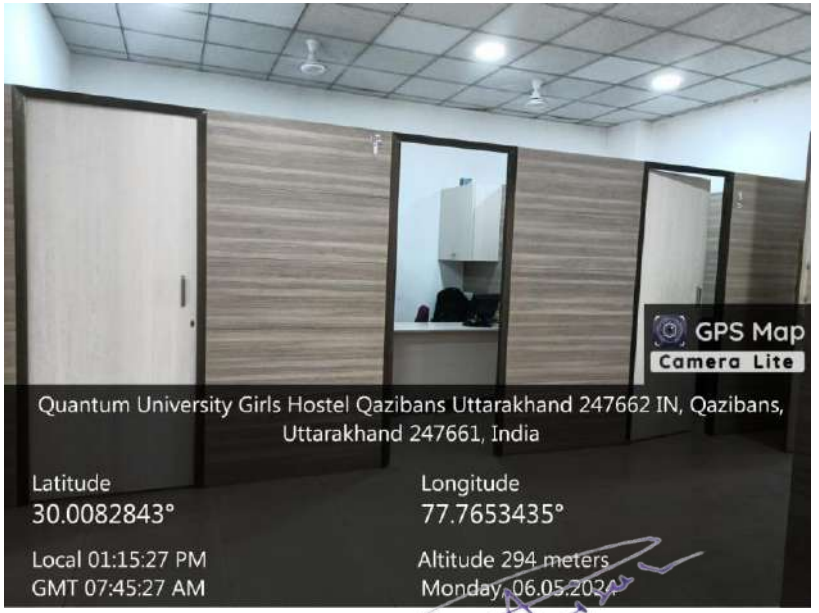
FACULTY CABIN

At Quantum University, a faculty cabin is commonly understood as an exclusive office space assigned to a faculty member or professor within the educational institution. These cabins function as personalized workspaces where educators can conduct research, create lectures, meet with students, and handle administrative duties. Typically furnished with essential amenities like a desk, chair, bookshelves, and occasionally a computer, faculty cabins provide a conducive and concentrated setting for faculty members to fulfill their academic responsibilities. While the design and dimensions of these cabins may differ, their fundamental objective remains consistent: to provide a designated area that facilitates teaching, research, and other professional endeavors.

Presenting Images of Faculty Cabins



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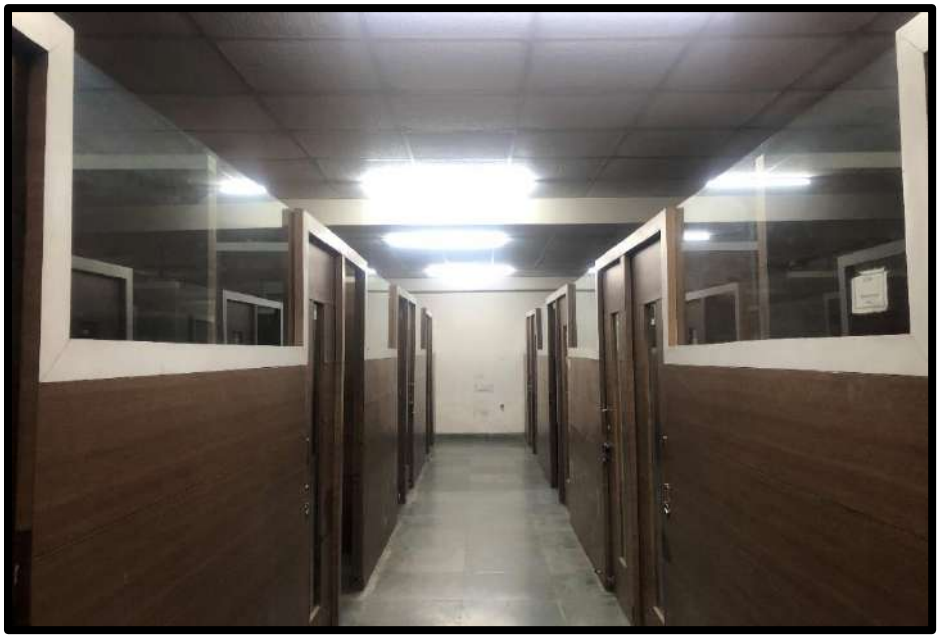

Quantum University, Roorkee- Teaching and Learning Facilities

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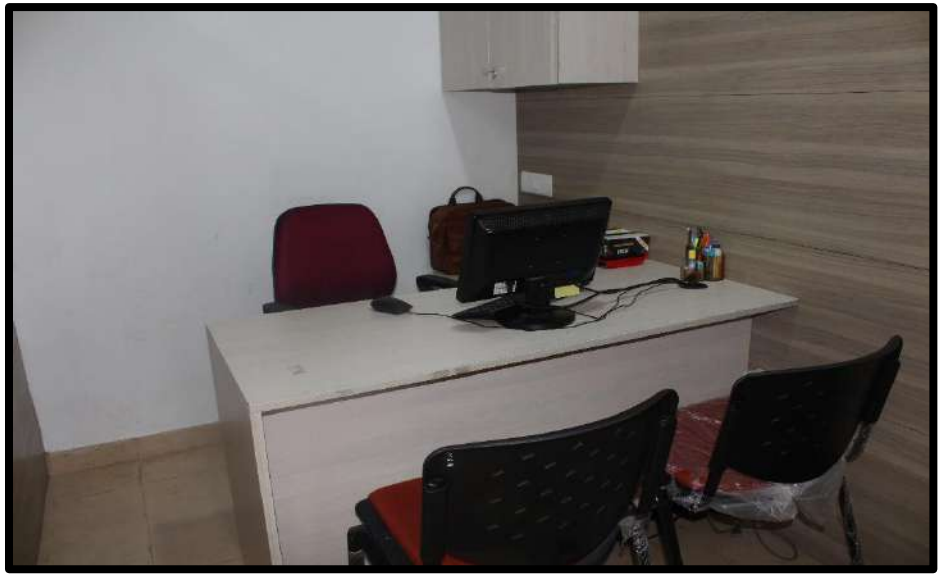

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