

Instrument Name	Current Location	Type	Working status	Application	Access
Spinning Disc Confocal Microscopy	Central Facility, Ground Floor	Microscope	Working	Spinning-disk confocal microscope facility is suitable for capturing fast changing phenomena, such as, imaging swimming bacteria, etc. Most powerful tools for <u>live cell imaging</u> .	One time Training / Open
Bio- atomic force microscope facility (BIO-AFM)	Central Facility, Ground Floor	Microscope	Working	This facility measures the topography, morphology and mechanical and electrical properties of samples and is specifically designed to work with soft and wet <u>samples, i.e., biological cells and tissues</u> .	One time Training / Open
Laser scanning Confocal Microscopy	Central Facility, Ground Floor	Microscope	Working	Laser scanning confocal microscopy employs spatial filtering techniques to eliminate any out-of-focus light in specimens with finite thickness and leads to the formation of high-resolution images. Studies related to Live cell imaging for <u>longer duration</u>	One time Training / Open
Flow Associated cell sorter (FACS)	Central Facility, Ground Floor	Flow Cytometer	Working	Studied involving Apoptosis, Cell cycle, DNA ploidy, immune-phenotyping, reporter gene studies (GFP, RFP & mcherr0, cell internalization studies, fluorescent cell barcoding, Nano particle conjugation studies, live dead assay, invasion assay, Mitochondrial Potential studies, 6 color experiments, identifying different sizes beads (Microfluidics device studies) & ROS detection.	Restricted access
3d Laser Lithography	Central Facility, Ground Floor	Lithography	Working	Used in the fabrication of three dimensional micro/nano structures such as <u>photonic crystals, metamaterials, scaffold etc.</u>	Restricted access
Autoclaves	101A, Pantry room, First floor	Autoclave	Working	Commonly used for sterilization of media required for bacterial culture in Microbiology & Genetic Engineering lab experiments. Also, used for the decontamination of the used media, bacterial culture after their use in <u>laboratory works</u> .	Open
Circular Dichroism Spectropolarimeter (Jasco) J-1500	CD Room, 107, First floor CIR	Spectropolarimeter	Working	Circular dichroism (CD) spectroscopy measures differences in the absorption of left handed polarized light versus right handed polarize light which arises due to structural asymmetry. CD is most applicable to characterize the secondary <u>structure</u> .	One time Training / Open
Circular Dichroism Spectropolarimeter (Jasco) J-810	CD Room, 107, First floor CIR	Spectropolarimeter	Not Working	Circular dichroism (CD) spectroscopy measures differences in the absorption of left handed polarized light versus right handed polarize light which arises due to structural asymmetry. CD is most applicable to characterize the secondary <u>structure</u> .	One time Training / Open
Spectrophotometer (Perkin Elmer) Lambda 25	107, First floor CIR	Spectrophotometer	Working	Quantitative & Qualitative estimation of biological macromolecules – proteins, DNA, sugars, Amino acids, & widely used to the study of kinetic parameters of <u>enzymes. Study growth and enzymatic Kinetics</u> .	One time Training / Open
Spectrophotometer (Perkin Elmer) Lambda 25	107, First floor CIR	Spectrophotometer	Working	Quantitative & Qualitative estimation of biological macromolecules – proteins, DNA, sugars, Amino acids, & widely used to the study of kinetic parameters of <u>enzymes. Study growth and enzymatic Kinetics</u> .	One time Training / Open
Spectrophotometer (Jasco) V730	107, First floor CIR	Spectrophotometer	Working	Quantitative & Qualitative estimation of biological macromolecules – proteins, DNA, sugars, Amino acids, & widely used to the study of kinetic parameters of <u>enzymes. Study growth and enzymatic Kinetics</u> .	One time Training / Open
Spectrophotometer (Jasco) V730	107, First floor CIR	Spectrophotometer	Working	Quantitative & Qualitative estimation of biological macromolecules – proteins, DNA, sugars, Amino acids, & widely used to the study of kinetic parameters of <u>enzymes. Study growth and enzymatic Kinetics</u> .	One time Training / Open

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Fourier-Transform Infrared Spectrometer (Jasco) 4700	107, First floor CIR	FTIR	Working	It gives information on the vibrational and rotational modes of motion of a molecule and hence an important instrument for identification and characterization of a functional group. The infrared spectrum of an organic compound provided a unique fingerprint, which is readily distinguished from the absorption patterns of all other compounds.	One time Training / Open
Spectrofluorometer (Jasco) FP 750	107, First floor CIR	Spectrofluorometer	Not Working	The Fluorescence Spectrophotometer offers the ultimate sensitivity in fluorescence or emission profile of the complex under investigation. The instrument is easy to use and is controlled by software with Origin embedded for sophisticated data analysis.	One time Training / Open
Spectrofluorometer (Jasco) FP 8500	107, First floor CIR	Spectrofluorometer	Working	The Fluorescence Spectrophotometer offers the ultimate sensitivity in fluorescence or emission profile of the complex under investigation. The instrument is easy to use and is controlled by software with Origin embedded for sophisticated data analysis.	One time Training / Open
Spectrofluorometer (Schimadzu) RF5301PC	107, First floor CIR	Spectrofluorometer	Working	The Fluorescence Spectrophotometer offers the ultimate sensitivity in fluorescence or emission profile of the complex under investigation. The instrument is easy to use and is controlled by software with Origin embedded for sophisticated data analysis.	One time Training / Open
Probe Sonicator (Sonics) Vibra Cell	107, First floor CIR	Sonicator	Working	Apply sound energy to agitate particles in a sample, for various purposes such as the extraction of multiple compounds from plants, microalgae and seaweeds.	One time Training / Open
Gradient PCR Machine (Applied Biosystem) Veriti	107, First floor CIR	PCR	Working	The Applied Biosystems 2720 Thermal Cycler is an automated instrument, specifically designed for the amplification of DNA, RNA and genes using the GeneAmp Polymerase Chain Reaction (PCR) process. It is also used to set ligation reaction.	One time Training / Open
PCR Machine (Applied Biosystem) 2720	107, First floor CIR	PCR	Working	The Applied Biosystems 2720 Thermal Cycler is an automated instrument, specifically designed for the amplification of DNA, RNA and genes using the GeneAmp Polymerase Chain Reaction (PCR) process. It is also used to set ligation reaction.	One time Training / Open
Fume hood (Modern Lab Interio)	107, First floor CIR	Fume hood	Working	Fume hood is an enclosed bench which is used to protect operator hazardous fumes generated during chemical reactions. This hood consists of two ports for water and four ports for gases. It is also equipped with a compressor to remove fumes if any.	One time Training / Open
Orbital Shaker (Trishul)	107, First floor CIR	Shaker	Working	Orbital shaker is used for growing microbial culture in a suitable environment. It provides the required optimal mixing and ambient temperature to grow microbial cells. It facilitates the orbital swirling motion which helps in the efficient growth of microorganism.	Open
Bacterial Incubator (Pooja Labs)	107, First floor CIR	Incubator	Working	Growth and Maintenance of cell culture at optimum conditions	Open
Deep Freezer -80 Deg C (Sanyo) MDF-U32V	107, First floor CIR	Freezer	Working	Stores biological samples upto -80°C. Preservation of glycerol stock of micro-organisms and competent.	Open
Water chiller cum circulator (Renuka Enterprises)	107, First floor CIR	Water chiller	Working	Used to cool the instruments generating heat.	Open

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Orbital shaker (Pooja Labs)	101, First floor, M.Sc Teaching Lab	Shaker	Working	Orbital shaker is used for growing microbial culture in a suitable environment. It provides the required optimal mixing and ambient temperature to grow microbial cells. It facilitates the orbital swirling motion which helps in the <u>efficient growth of microorganism.</u>	Open
Gel Documentation System (UVP photo Doc IC)	101, First floor, M.Sc Teaching Lab	Gel Doc	Working	Imaging of stained gels, Documenting photographic data for Nucliec acids and proteins. Used in the Experiments : Agarose Gel Electrophoresis, Polyacrylamide Gel electrophoresis performed in both Biochemistry & Genetic Engineering lab and Thin layer Chromatography of Amino acid & Hydrocarbons specifically in Biochemistry lab for their visualization. Used in the Visualisation & documentation of DNA & protein gels.	One time Training / Open
Gel Documentation System (GE)	101, First floor, M.Sc Teaching Lab	Gel Doc	Working	Imaging of stained gels, Documenting photographic data for Nucliec acids and proteins. Used in the Experiments : Agarose Gel Electrophoresis, Polyacrylamide Gel electrophoresis performed in both Biochemistry & Genetic Engineering lab and Thin layer Chromatography of Amino acid & Hydrocarbons specifically in Biochemistry lab for their visualization. Used in the Visualisation & documentation of DNA & protein gels.	One time Training / Open
Bacterial Incubators (Imtech)	101, First floor, M.Sc Teaching Lab	Incubator	Working	Growth and Maintainence of cell culture at optimum conditions	Open
Laminar air flow (Various Vendors)	101 & 103, First floor, M.Sc Teaching Lab	LAF	Working	To maintain sterile environment while performing asceptic technique.	Open
Rough weighing machine (Citizen/Aczet)	101, First floor, M.Sc Teaching Lab	Weighing machine	Working	Precise and accurate weighing of Samples	Open
Analytical weighing machine (Sartorius)	101, First floor, M.Sc Teaching Lab	Weighing machine	Working	Precise and accurate weighing of Samples	Open
Analytical weighing machine (Mettler Toldeo)	101, First floor, M.Sc Teaching Lab	Weighing machine	Working	Precise and accurate weighing of Samples	Open
Cold Cabinets (Pooja Labs)	103, First floor, M.Sc Teaching Lab	Freezer	Working	Important in the long term storage of all chemicals, reagents, chemical stocks, <u>Purification Kits, media, culture plates etc.</u>	Open
DNA gel [agarose gel] Apparatus (Genei)	101, First floor, M.Sc Teaching Lab	AGE aparatus	Working	DNA samples are loaded on the Agarose gel and allowed to run in the Agarose gel electrophoresis apparatus. Helps in the Visualisation of nucleic acid.	One time Training / Open
Protein gel [PAGE] Apparatus (Genei & Biorad)	101, First floor, M.Sc Teaching Lab	AGE aparatus	Working	Proteins are loaded onto polyacrylamide gels and allowed to run in the PAGE Apparatus.	One time Training / Open
Micro centrifuge (Genei, Eppendorf and Remi)	101, First floor, M.Sc Teaching Lab	Centrifuge	Working	A microcentrifuge, also called a microfuge, is an important piece of lab equipment used to spin small (2 ml or less) liquid samples at high speeds (max. <u>speed 14000 rpm</u> )	One time Training / Open
Vortex Mixer (Tarson)	101, First floor, M.Sc Teaching Lab	Vortex	Working	Used for vigorous mixing to prepare uniform and homodenous solutions of buffers, stocks, samples.	Open

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Magnetic Stirrer (DBK and Tarsons)	101, First floor, M.Sc Teaching Lab	Stirrer	Working	Used to stir & dissolve large volume of chemical stocks, buffers etc.	Open
pH meter (Eutech)	101, First floor, M.Sc Teaching Lab	pH meter	Working	Used to adjust and measure the pH of solutions, Buffers, chemical stocks, media etc.	Open
Deep Freezer -20 Deg C (Siemens and Pooja Labs)	103, First floor, M.Sc Teaching Lab	Freezer	Working	Stores biological samples upto -20°C. Preservation of glycerol stock of micro-organisms and competent.	Open
Deep Freezer -80 Deg C (Pooja Labs)	103, First floor, M.Sc Teaching Lab	Freezer	Not Working	Stores biological samples upto -80°C. Preservation of glycerol stock of micro-organisms and competent.	Open
Hot air oven (Pooja lab)	103, First floor, M.Sc Teaching Lab	Oven	Working	Used when require to work with higher temperatures upto 160 Degrees.	Open
Water bath (Trishul)	103, First floor, M.Sc Teaching Lab	Water bath	Working	It is used to incubate samples in water at a constant temperature over a long period of time. It is also used to enable certain chemical reactions to occur at high temperature.	Open
Dry bath (Trishul)	101, First floor, M.Sc Teaching Lab	Dry bath	Working	A dry bath is a laboratory equipment used to heat samples on blocks. Dry baths are often used in molecular biology, microbiology, biochemistry and genetic applications. Utilized for incubating sample at controlled temperature for specified time.	Open
Ultracentrifugation facility	Pantry room, Second floor	Centrifuge - XPN100 high speed	Working	Separation of cells or particles at specific temperature and rotation	Open
Bio-safety level 2 facility	201, Second floor	Bio-safety	Working	Klenzaid's Contamination Control Pvt. Ltd. - This facility helps to perform experiments on infectious microorganisms (viruses as well as bacteria) that are classified as Category-2 pathogens by Department of Biotechnology, Ministry of Science & Technology, Govt. of India. It maintains desired level of negative pressure and has multiple layers of HEPA filter based exhaust systems for higher containment	
Respiratory rate, tachypnea, apnea monitoring setup (TMI)	205, Second floor, M.Tech teaching lab	TMI setup	Working	Measure heart activities	One time Training / Open
ECG heart rate alarm set up with HRV, Opto coupler & telemetry modules (TMI)	205, Second floor, M.Tech teaching lab	ECG setup	Working	Detect irregular heart signals.	One time Training / Open
ECG heart rate alarm set up with HRV, Opto coupler & telemetry modules (TMI)	205, Second floor, M.Tech teaching lab	ECG setup	Working	Detect irregular heart signals.	One time Training / Open
Magnetic stirrer with ceramic hot plate (Malti enterprises) (2)	205, Second floor, M.Tech teaching lab	Stirrer	Working	Used to stir & dissolve large volume of chemical stocks, buffers etc. Creates rotating magnetic field to spin quickly for stirring. A stirrer with a hot plate is used to agitate and dissolve mixtures or solvents using heat.	Open

Instrument Name	Current Location	Type	Working status	Application	Access
Magnetic stirrer with ceramic hot plate (Biolinx)	205, Second floor, M.Tech teaching lab	Stirrer	Working	Used to stir & dissolve large volume of chemical stocks, buffers etc. Creates rotating magnetic field to spin quickly for stirring. A stirrer with a hot plate is used to agitate and dissolve mixtures or solvents using heat.	Open
Fume hood (1500L x 900W x 2400H mm)	205, Second floor, M.Tech teaching lab	Fume hood	Working	Fume hood is an enclosed bench which is used to protect operator hazardous fumes generated during chemical reactions. This hood consists of two ports for water and four ports for gases. It is also equipped with a compressor to remove fumes if any.	Open
Syringe pump (2)	205, Second floor, M.Tech teaching lab	Syringe pump	Working	Infuse or withdraw liquid at defined flow rate and target volume.	One time Training / Open
Rotary vacuum evaporator	205, Second floor, M.Tech teaching lab	Rotary vacuum evaporator	Working	Remove low boiling organic chemicals from a mixture of compounds.	One time Training / Open
Vacuum oven with pump	205, Second floor, M.Tech teaching lab	Oven	Working	Dry samples by heating in vacuum.	One time Training / Open
Digital hot air oven (Trishul)	205, Second floor, M.Tech teaching lab	Oven	Working	Uses a thermostat to control the temperature. Digital display and control unit, mainly used for drying samples, curing PDMS. Used when require to work with higher temperatures upto 160 Degrees.	One time Training / Open
MIKO compound microscope	205, Second floor, M.Tech teaching lab	Microscope	Working	View samples at high magnification.	Open
Olympus microscope	205, Second floor, M.Tech teaching lab	Microscope	Working	Has a wide range of magnifications, uses the 10x eyepieces and the body with a built in seamless 0.7x to 11.5x zoom and a 0.5x and 1.0x objective lens system. Magnifications range from 3.5x all the way up to 230x without troublesome lens changes. Has high sensitivity and speed for live cell or deep tissue imaging.	One time Training / Open
Handheld UV lamp	205, Second floor, M.Tech teaching lab	UV	Working	Produce UV light in a range of wavelengths for detection, disinfection, and other laboratory application.	Open
Shutter for UV lamp	205, Second floor, M.Tech teaching lab	UV	Working	Prevent operator exposure to ultraviolet and visible light when lifting shields.	Open
Hotplate	205, Second floor, M.Tech teaching lab	Hot plate	Working	Stirrable for high viscosity sample with temperature control, chemical resistance, heat conductive aluminium with ceramic coating.	Open
UV flood exposure source	205, Second floor, M.Tech teaching lab	UV	Working	Expose most photoresists, polymer linking, novel resists.	One time Training / Open
EMG biofeed back setup & PCG system (Phonocardiogram)	205, Second floor, M.Tech teaching lab	EMG setup	Working	Detect a change in skeletal muscle activity, which is then fed back by a visual or auditory signal.	One time Training / Open
EMG biofeed back setup & PCG system (Phonocardiogram)	205, Second floor, M.Tech teaching lab	EMG setup	Working	Detect a change in skeletal muscle activity, which is then fed back by a visual or auditory signal.	One time Training / Open

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Weighing balance (Sartorius 0.01)	205, Second floor, M.Tech teaching lab	Weighing machine	Working	High sensitive, accurate measurement of low mass sample, mainly PDMS.	Open
Weighing balance (Sartorius 0.0001)	205, Second floor, M.Tech teaching lab	Weighing machine	Working	High sensitive, accurate measurement of low mass sample, mainly PDMS.	One time Training / Open
Ultrasonic bath (Sonicator)	205, Second floor, M.Tech teaching lab	Sonicator	Working	Apply sound energy to agitate particles in a sample, for various purposes such as the extraction of multiple compounds from plants, microalgae and seaweeds.	Open
Magnetic stirrer	205, Second floor, M.Tech teaching lab	Stirrer	Working	Used to stir & dissolve large volume of chemical stocks, buffers etc. Creates rotating magnetic field to spin quickly for stirring. A stirrer with a hot plate is used to agitate and dissolve mixtures or solvents using heat.	Open
Magnetic stirrer with hot plate	205, Second floor, M.Tech teaching lab	Stirrer	Working	Used to stir & dissolve large volume of chemical stocks, buffers etc. Creates rotating magnetic field to spin quickly for stirring. A stirrer with a hot plate is used to agitate and dissolve mixtures or solvents using heat.	Open
Spinot digital magnetic stirrer hot plate	205, Second floor, M.Tech teaching lab	Stirrer	Working	Stirrable for high viscosity sample with temperature control, chemical resistance, heat conductive aluminium with ceramic coating, digital display. A stirrer with a hot plate is used to agitate and dissolve mixtures or solvents using heat.	Open
Benchtop Plasma cleaner + vacuum pump + gas flow mixer setup	205, Second floor, M.Tech teaching lab	Plasma cleaner	Working	Tabletop plasma instrument with a hinged door, viewing window, and fine control metering valve, suitable for nanoscale surface cleaning and activation of small samples.	One time Training / Open
Static contact angle measuring system (ACAM-S1)	205, Second floor, M.Tech teaching lab	Angle measurement	Working	Measure contact angle of a droplet with the surface.	One time Training / Open
Vertical deep freezer (-20)	205, Second floor, M.Tech teaching lab	Freezer	Working	Stores biological samples upto -20°C. Preservation of glycerol stock of micro-organisms and competent.	Open
Digital multimeters (34410A)	205, Second floor, M.Tech teaching lab	DMM	Working	Setup for electronics experiments.	Open
Function generators (6)	205, Second floor, M.Tech teaching lab	Function generator	Working	Variable frequency, amplitude signal generator for electronics experiments.	Open
Dual channel arbitrary function generator (Ketronicks)	205, Second floor, M.Tech teaching lab	Function generator	Working	To create arbitrary functioning circuit in low price.	Open
Arbitrary function generator (2)	205, Second floor, M.Tech teaching lab	Function generator	Working	To create arbitrary functioning circuit in low price.	Open
DC power supply with tripple o/p OE3 (4)	205, Second floor, M.Tech teaching lab	Power supply	Working	Stable DC power supply for electronics experiments.	Open
DC power supply E3613A	205, Second floor, M.Tech teaching lab	Power supply	Working	Stable DC power supply for electronics experiments.	Open
DC power supply tripple o/p LQ6324 (Aplab)	205, Second floor, M.Tech teaching lab	Power supply	Working	Stable DC power supply for electronics experiments.	Open

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DC power supply tripple o/p (2)	205, Second floor, M.Tech teaching lab	Power supply	Working	Stable DC power supply for electronics experiments.	Open
DC multiple power supply L06324 (3)	205, Second floor, M.Tech teaching lab	Power supply	Working	Stable DC power supply for electronics experiments.	Open
Dual channel 60MHz Oscilloscope (3)	205, Second floor, M.Tech teaching lab	DSO	Working	Signal monitoring, visualizing and storage.	Open
60MHz storage oscilloscope (TDS1002) + Communication module (TDS2)	205, Second floor, M.Tech teaching lab	DSO	Working	Signal storage facility for communication experiments.	One time Training / Open
Digital storage oscilloscope (3)	205, Second floor, M.Tech teaching lab	DSO	Working	Signal monitoring, visualizing and storage.	Open
Spin coater Single Wafer Spin processor	205, Second floor, M.Tech teaching lab	Spin coater	Working	Commonly used to coat substrates with polymer or dye. It offers a vacuum secured sample holder with capabilities ranging from very small samples to up to 150 mm diameter or 101.6 mm x 101.6 mm square substrates. There can be up to 99 steps per program, 0 - 2,000 rpm/sec acceleration, a max speed of 10,000 rpm and a maximum time per step of 6000 seconds.	One time Training / Open
Optical breadboards	205, Second floor, M.Tech teaching lab	Breadboard	Working	Vibration control platform	Open
Four channel data acquisition system	205, Second floor, M.Tech teaching lab	Data acquisition	Working	Measure physical characteristics and convert in digital at the same time.	One time Training / Open
Model HSKS material testing machine (UTM)	205, Second floor, M.Tech teaching lab	UTM	Working	Test tensile strength and compressive strength of materials.	One time Training / Open
Micro plate reader (Eliza)	205, Second floor, M.Tech teaching lab	Plate reader	Working	Measure chemical, biological or physical reactions, properties and analytes within the well of a microplate.	One time Training / Open
<u>Dessicators (2 small, 2 medium, 2 big)</u>	205, Second floor, M.Tech teaching lab	Dessicator	Working	Preserve moisture-sensitive items, remove traces of water from almost dry samples, achieve low humidity.	One time Training / Open
Compact Nanoimprint lithography Instrument setup (CNI)	205, Second floor, M.Tech teaching lab	Nanolithography	Working	The Compact Nanoimprint Tool (CNI) performs thermal and UV nanoprint lithography and hot embossing.	Restricted access
RF generator unit (Hyperthermia setup)	207, Second floor CIR	Hyperthermia	Working	Test components, receivers used in Hyperthermia setup.	One time Training / Open
Vacuum oven (Centrofix)	204A, Second floor CIR	Oven	Working	Used for delicate drying processes, such as drying tiny parts or removing flammable solvents. The low pressure environment also minimizes oxidation during drying.	Open
Spin coating system	204A, Second floor CIR	Spin coater	Working	Deposit uniform thin films onto flat substrates, microfabrication of functional oxide layers on glass or single crystal substrates.	One time Training / Open

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Automatic spin tissue processor	207, Second floor CIR	Spin tissue processor	Working	Uses Vacuum function to accelerate the speed of tissue processing for animal and human tissues automatically.	One time Training / Open
Paraffin embedding workstation	207, Second floor CIR	Workstation	Working	Features a digital programmable interface which enables to program individual temperature settings for the paraffin reservoir, cassette bath, mold warmer and work surface.	One time Training / Open
Semi automatic rotary microtome	207, Second floor CIR	Microtome	Working	Outline sectioning, pathology, histopathology textile applications.	One time Training / Open
Automatic slide stainer	207, Second floor CIR	Slide stainer	Working	A programmable Microbiology and histology staining instrument. Reduce technologist bench time, constant rinse cycle eliminates cross contamination, producing a standardized, clear stained film.	One time Training / Open
Manual cutting Cryostat with UV disinfection (Thermo Scientific)	207, Second floor CIR	Cryostat	Working	Cryostat are used in medicine to cut histological slides. They are usually used in a process called frozen section histology.	One time Training / Open
Lyophilizer (Benchtop freeze dryer)	204A, Second floor CIR	Dryer	Working	Freeze drying – used for removing water from samples at sub-zero temperature by using vacuum. Finds application for heat sensitive materials.	Restricted access
Tabletop Scanning Electron Microscope (SEM)	204A, Second floor CIR	Microscope	Working	Scanning electron microscope facility (SEM) is able to scan a sample with a focused electron beam and deliver images with information about the sample's topography and composition. It is a highly flexible high definition imaging and analysis tool delivering fast, accurate and repeatable results across all samples.	One time Training / Open
Nikon Stereo Zoom Fluorescence Microscope	204A, Second floor CIR	Microscope	Working	Imaging and microscopic analysis of biological, inorganic and man-made materials.	Restricted access
Sputter coater system	204A, Second floor CIR	Spin coater	Working	For depositing Au nanoparticles on sample surface for making it conductive for SEM analysis.	Restricted access
Cold room facility (Blue Star)	Pantry room, Third floor	Freezer	Working	ZX020ETFD- To perform experiments which require low temperature (2-10 DEGREES) for a long duration, Protein purification.	Open
Ice machine	Pantry room, Third floor	Ice machine	Not Working	Ice making	Open
Centrifuge (Hettich)	307, Third floor CIR	Centrifuge - high speed	Working	Used for the separation of fluids, gas or liquid, based on density. Separation is achieved by spinning a vessel containing material at high speed; the centrifugal force pushes heavier materials to the outside of the vessel. Separation of cells or particles at specific temperature and rotation.	One time Training / Open
Centrifuge (Thermo)	307, Third floor CIR	Centrifuge - high speed	Working	Used for the separation of fluids, gas or liquid, based on density. Separation is achieved by spinning a vessel containing material at high speed; the centrifugal force pushes heavier materials to the outside of the vessel. Separation of cells or particles at specific temperature and rotation.	One time Training / Open



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Orbital Shaker	307, Third floor CIR	Shaker	Working	Orbital shaker is used for growing microbial culture in a suitable environment. It provides the required optimal mixing and ambient temperature to grow microbial cells. It facilitates the orbital swirling motion which helps in the efficient growth of microorganism.	Open
Orbital Shaker (Trishul)	307, Third floor CIR	Shaker	Working	Orbital shaker is used for growing microbial culture in a suitable environment. It provides the required optimal mixing and ambient temperature to grow microbial cells. It facilitates the orbital swirling motion which helps in the efficient growth of microorganism.	Open
Water Bath (Neo Lab)	307, Third floor CIR	Water bath	Working	It is used to incubate samples in water at a constant temperature over a long period of time. It is also used to enable certain chemical reactions to occur at high temperature.	Open
Fume Hood	307, Third floor CIR	Fume hood	Working	Fume hood is an enclosed bench which is used to protect operator hazardous fumes generated during chemical reactions. This hood consists of two ports for water and four ports for gases. It is also equipped with a compressor to remove fumes if any.	Open
Deep Freezer -80 Deg C (Sanyo)	307, Third floor CIR	Freezer	Working	Stores biological samples upto -80°C. Preservation of glycerol stock of micro-organisms and competent.	Open
FPLC (GE Healthcare)	307, Third floor CIR	Protein Purification system	Working	Purification of protein samples	One time Training / Open
4 Degree Cabinet (Pooja Lab)	307, Third floor CIR	Freezer	Working	To perform experiments which require low temperature (2-10 DEGREES) for a long duration, Protein purification.	Open
Sonicator bath PCI	307, Third floor CIR	Sonicator	Working	Apply sound energy to agitate particles in a sample, for various purposes such as the extraction of multiple compounds from plants, microalgae and seaweeds.	Open
Typhoon Scanner	307, Third floor CIR	Gel Scanner	Working	A variable mode laser scanner with modular access to the optical components and excitation sources, providing both versatile and flexible imaging for precise quantitation of proteins, nucleic acids, and other biomolecules.	One time Training / Open
Microarray	307, Third floor CIR	Gel Scanner	Not Working	To study the extent to which certain genes are turned on or off in cells and tissues.	One time Training / Open
Autoclave (Equiptron & Asco)	Pantry room, Fourth floor	Autoclave	Working	Commonly used for sterilization of media required for bacterial culture in Microbiology & Genetic Engineering lab experiments. Also, used for the decontamination of the used media, bacterial culture after their use in laboratory works.	Open
Probe Sonicator(Sonics)	407, Fourth floor CIR	Sonicator	Working	Apply sound energy to agitate particles in a sample, for various purposes such as the extraction of multiple compounds from plants, microalgae and seaweeds.	Open

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Orbital shaker	407, Fourth floor CIR	Shaker	Working	Orbital shaker is used for growing microbial culture in a suitable environment. It provides the required optimal mixing and ambient temperature to grow microbial cells. It facilitates the orbital swirling motion which helps in the <u>efficient growth of microorganism.</u>	Open
Refrigerated Centrifuge (Kubota)	407, Fourth floor CIR	Centrifuge	Working	Used for the separation of fluids, gas or liquid, based on density. Separation is achieved by spinning a vessel containing material at high speed; the centrifugal force pushes heavier materials to the outside of the vessel. Separation of cells or particles at specific temperature and rotation.	One time Training / Open
Gel Documentation System (Model-Uvisave)	407, Fourth floor CIR	Gel Doc	Working	Imaging of stained gels, Documenting photographic data for Nucleic acids and proteins. Used in the Experiments : Agarose Gel Electrophoresis, Polyacrylamide Gel electrophoresis performed in both Biochemistry & Genetic Engineering lab and Thin layer Chromatography of Amino acid & Hydrocarbons specifically in Biochemistry lab for their visualization. Used in the Visualisation & documentation of DNA & protein gels.	One time Training / Open
Ice Flaker machine	407, Fourth floor CIR	Ice flaker	Working	Generation of ice flakes.	Open
Laminar Air flow (Klenziads)	407, Fourth floor CIR	LAF	Working	To maintain sterile environment while performing aseptic technique.	Open
A3 size scanner (Umax)	407, Fourth floor CIR	Scanner	Working	Scanner for A3 size sheet	Open
Spectrophotometer (Perkin Elmer)	407, Fourth floor CIR	Spectrophotometer	Working	Quantitative & Qualitative estimation of biological macromolecules – proteins, DNA, sugars, Amino acids, & widely used to the study of kinetic parameters of <u>enzymes. Study growth and enzymatic Kinetics.</u>	One time Training / Open
Deep freezer (Sanyo) -80	407, Fourth floor CIR	Freezer	Working	Stores biological samples upto -80°C. Preservation of glycerol stock of micro-organisms and competent.	Open
French Press (Thermo)	407, Fourth floor CIR	Press	Not Working	French press	Open
Fermentor (Bioengineering)	407, Fourth floor CIR	Fermentor	Not Working	A substrate of low value is utilized by living cells or enzymes to generate a product of higher value.	One time Training / Open
Vacuum pump	407, Fourth floor CIR	Vacuum pump	Working	To generate vacuum for various purposes.	Open
Milli Q System (2)	407, Fourth floor CIR	Milli Q	Working	Produces analytical-grade water quality with reduced bacterial counts removes particles and free chlorine from the water, reduces levels of organic and mineral contaminants.	One time Training / Open

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Tissue Culture Facility	TC lab, Central facility, Fifth floor	Tissue culture	Working	The facility houses four tissue culture laboratories for culturing a wide range of mammalian cells, cancer cells, viruses and protozoan parasites. The facility also includes a microscopy room and a general purpose storage room. The facility is equally helpful for both basic and applied research. It is being used by more than 20 PhD research scholars as well as MSc and MTech students for their project work. Funds from Mr. and Mrs. Chaudhari have been utilized to equip the facility with: Ten Class II Biosafety Cabinets, Eight CO2 incubators, Two liquid nitrogen storage units, Inverted microscope, Table top centrifuges	Restricted access
Ice machine (Icematic)	Pantry room, Fifth floor	Ice machine	Working	Ice making	Open
Cold room facility (Blue Star)	Pantry room, Fifth floor	Freezer	Working	Important in the long term storage of all chemicals, reagents, chemical stocks, Purification Kits, media, culture plates etc.	Open
Dark room	Dark room, Fifth floor	Dark room	Working	Gel analysis and extraction	Restricted access
Refrigerated Centrifuge (Kubota)	507, Fifth floor CIR	Centrifuge	Working	Used for the separation of fluids, gas or liquid, based on density. Separation is achieved by spinning a vessel containing material at high speed; the centrifugal force pushes heavier materials to the outside of the vessel. Separation of cells or particles at specific temperature and rotation	One time Training / Open
HPLC(Agilent)	507, Fifth floor CIR	HPLC - Fluidics based	Working	The high performance liquid chromatography is an important tool in organic chemistry to separate, identify and quantify the components in the mixture of compounds.	One time Training / Open
Gel Documentation System (Perkin Elmer)	507, Fifth floor CIR	Gel Doc	Working	Imaging of stained gels, Documenting photographic data for Nucliec acids and proteins. Used in the Experiments : Agarose Gel Electrophoresis, Polyacrylamide Gel electrophoresis performed in both Biochemistry & Genetic Engineering lab and Thin layer Chromatography of Amino acid & Hydrocarbons specifically in Biochemistry lab for their visualization. Used in the Visualisation & documentation of DNA & protein gels.	One time Training / Open
Centrifuge Table top Hitachi	507, Fifth floor CIR	Centrifuge	Working	Used for the separation of fluids, gas or liquid, based on density. Separation is achieved by spinning a vessel containing material at high speed; the centrifugal force pushes heavier materials to the outside of the vessel. Separation of cells or particles at specific temperature and rotation	One time Training / Open
Deep freezer (Forma Scientific) -80	507, Fifth floor CIR	Freezer	Not working	Stores biological samples upto -80°C. Preservation of glycerol stock of micro-organisms and competent.	Open
Freeze Dryer/Lyophilizer (Labconco)	507, Fifth floor CIR	Dryer	Working	Lyophilizers work by freezing the material, then reducing the pressure and adding heat to allow the frozen water in the material to sublimate.	One time Training / Open

Instrument Name	Current Location	Type	Working status	Application	Access
Water Purification System (TKA)	507, Fifth floor CIR	Water purification	Not working	Produces analytical-grade water quality with reduced bacterial counts removes particles and free chlorine from the water, reduces levels of organic and mineral contaminants.	Open
Homogenizer (Polytron)	507, Fifth floor CIR	Homogenizer	Not working	Homogenization of various types of material, such as tissue, plant, food, soil, and many others.	One time Training / Open
Bath Sonicator	507, Fifth floor CIR	Sonicator	Not working	Apply sound energy to agitate particles in a sample, for various purposes such as the extraction of multiple compounds from plants, microalgae and seaweeds.	Open
Deep Freezer -80 Deg C (Sanyo)	507, Fifth floor CIR	Freezer	Working	Stores biological samples upto -80°C. Preservation of glycerol stock of micro-organisms and competent.	Open
Imset Biohood (Glove Box)	507, Fifth floor CIR	Bio-safety	Not working	Klenzaid's Contamination Control Pvt. Ltd. - This facility helps to perform experiments on infectious microorganisms (viruses as well as bacteria) that are classified as Category-2 pathogens by Department of Biotechnology, Ministry of Science & Technology, Govt. of India. It maintains desired level of negative pressure and has multiple layers of HEPA filter based exhaust systems for higher containment.	Open
Lynchem photoreactor	507, Fifth floor CIR	Photoreactor	Not working	Carrying out simple basic photochemical research.	One time Training / Open
Freezer -20 deg	507, Fifth floor CIR	Freezer	working	Stores biological samples upto -20°C. Preservation of glycerol stock of micro-organisms and competent.	Open
4 deg storage cabinet	507, Fifth floor CIR	Freezer	working	Storage of samples at low temperature (~4 deg C).	Open
GM Counter microRAD - I	607, Radioactivity room, 6th floor	Radiation survey meter	Working	A portable counter used for detecting and measuring alpha, beta and gamma radiation. It consists of a pair of electrodes with a high voltage running between them. Radiation entering the tube ionizes the gas. Electrons and ions are attracted to the electrodes, producing an electric current.	Restricted access
GM Counter microRAD -II	607, Radioactivity room, 6th floor	Radiation survey meter	Working	A portable counter used for detecting and measuring alpha, beta and gamma radiation. It consists of a pair of electrodes with a high voltage running between them. Radiation entering the tube ionizes the gas. Electrons and ions are attracted to the electrodes, producing an electric current.	Restricted access
Liquid Scintillation Counter	607, Radioactivity room, 6th floor	Radioisotope counter	Working	Liquid scintillation counting is the most widely used technique for the detection and quantification of radioactivity. This measurement technique is applicable to all types of emissions, though it is most often used for beta particles. The Tri-Carb® liquid scintillation counter relies on interactions between radioactive decay energy and a scintillator, a component of the "scintillation cocktail." The scintillator converts ionizing radiation from the radionuclide into photons of light (scintillation). The intensity of light produced during scintillation is proportional to the initial energy of the beta particle.	Restricted access

Instrument Name	Current Location	Type	Working status	Application	Access
Fume Hood - I	607, Radioactivity room, 6th floor	Fume Hood	Working	Fume hood is an enclosed bench which is used to protect operator hazardous fumes generated during chemical reactions. This hood consists of two ports for water and four ports for gases. It is also equipped with a compressor to remove fumes if any.	Restricted access
Fume Hood - II	607, Radioactivity room, 6th floor	Fume Hood	Working	Fume hood is an enclosed bench which is used to protect operator hazardous fumes generated during chemical reactions. This hood consists of two ports for water and four ports for gases. It is also equipped with a compressor to remove fumes if any.	Restricted access
Phosphor imager	607, Radioactivity room, 6th floor	Imager	Not working	Phosphor Imaging is a form of solid state scintillation where radioactive material can be detected in a two dimensional field (X-Y area).	Restricted access
UV Crosslinker	607, Radioactivity room, 6th floor	UV	Working	The Crosslinker is a multi-purpose ultraviolet exposure instrument for use in the laboratory. A wide variety of applications for ultraviolet radiation exist in the laboratory. nitrocellulose, nylon or nylon-reinforced nitrocellulose membranes after Northern, Southern, slot or dot blotting	Restricted access
Table top centrifuge	607, Radioactivity room, 6th floor	Centrifuge - max. 14000 rpm	Working	A microcentrifuge, also called a microfuge, is an important piece of lab equipment used to spin small (2 ml or less) liquid samples at high speeds (max. speed 14000 rpm)	Restricted access
Water bath -I	607, Radioactivity room, 6th floor	Water bath	Not Working	A laboratory water bath is used to heat samples in the lab. It generally consists of a heating unit, a stainless steel chamber that holds the water and samples, and a control interface. It is used to incubate samples in water at a constant temperature over a long period of time. It is also used to enable certain chemical reactions to occur at high temperature.	Restricted access
Water bath -II	607, Radioactivity room, 6th floor	Water bath	Not Working	A laboratory water bath is used to heat samples in the lab. It generally consists of a heating unit, a stainless steel chamber that holds the water and samples, and a control interface. It is used to incubate samples in water at a constant temperature over a long period of time. It is also used to enable certain chemical reactions to occur at high temperature.	Restricted access
Dry bath -I	607, Radioactivity room, 6th floor	Dry bath	Working	A dry bath is a laboratory equipment used to heat samples on blocks. Dry baths are often used in molecular biology, microbiology, biochemistry and genetic applications. Utilized for incubating sample at controlled temperature for specified time.	Restricted access
Dry bath -II	607, Radioactivity room, 6th floor	Dry bath	Working	A dry bath is a laboratory equipment used to heat samples on blocks. Dry baths are often used in molecular biology, microbiology, biochemistry and genetic applications. Utilized for incubating sample at controlled temperature for specified time.	Restricted access

Instrument Name	Current Location	Type	Working status	Application	Access
Hybridization oven	607, Radioactivity room, 6th floor	Oven - Rotating the membranes used for blots	Not Working	A hybridization oven is used in Southern, northern, and western blots. The constant rotation of the plates inside the hybridization oven helps the probes (used to identify proteins) to distribute evenly over the membranes, leading to a more reliable result.	Restricted access
Hybridization oven UVP	607, Radioactivity room, 6th floor	Oven - Rotating the membranes used for blots	Working	A hybridization oven is used in Southern, northern, and western blots. The constant rotation of the plates inside the hybridization oven helps the probes (used to identify proteins) to distribute evenly over the membranes, leading to a more reliable result.	Restricted access
Magnetic stirrer (Genei.)	607, Radioactivity room, 6th floor	Stirrer	Working	A stirrer with a hot plate is used to agitate and dissolve mixtures or solvents using heat.	Restricted access
Table top refrigerator	607, Radioactivity room, 6th floor	Freezer	Working	Storage of samples at low temperature (~4 deg C).	Restricted access
Freezer (-20 deg Celsius)	607, Radioactivity room, 6th floor	Freezer	Working	Stores biological samples upto -20°C. Preservation of glycerol stock of micro-organisms and competent.	Restricted access