

KONGUNADU ARTS AND SCIENCE COLLEGE
(Autonomous)
Coimbatore - 641 029



**LAB FACILITIES
FOR
TEACHING - LEARNING**

List of Laboratories

S.No	Name of the Department	No. of Labs	Name of the Labs
1.	Tamil	1	Language Lab
2.	English (Aided)		
3.	English (Unaided)		
4.	Mathematics (Aided)	1	Research Scholar Lab with Computer-1
5.	Mathematics (Unaided)		Maintained by Computer Department
6.	Physics (Aided)	3	UG Lab - 1, PG Lab - 1, Nanotechnology Lab (Research Lab) - 1
7.	Chemistry (Aided)	3	UG Lab - 1, Research Lab - 1, Instrumentation Lab - 1
8.	Chemistry (Unaided)	2	PG Lab - 1, Research Lab - 1
9.	Zoology (Aided)	6	UG Lab - 1, PG Lab - 2, Research Lab - 1
			Instrumentation Lab - 1, Virtual Lab - 1
			Aquarium - 1
			Museum - 1
10.	Computer Science (Aided & Unaided)	7	Both UG & PG Labs (6 for Unaided and 1 for Aided)
11.	Biochemistry (Aided)	1	UG Lab-1
12.	Biochemistry (Unaided)	4	PG Lab-1, Research Lab- 2, Project Lab-1, Mushroom Unit (For Research Purpose) -1
13.	Biotechnology (Unaided)	8	UG Lab-1, PG Lab-1, Research Lab-1, Instrumentation Lab-1, PTC-1, ATC-1, Microbiology Lab-1, Green House-1
14.	Botany (Aided)	7	UG Lab-1, PG Class cum Lab -2, Research Lab-1, Instrumentation Lab-1, Microbiology Lab - 1, Tissue Culture Lab -1
			Medicinal Garden-1
			Herbarium Center-1
15.	Costume Design and Fashion	3	Pattern Making and Garment Construction Lab-1, Fashion Illustration and Draping Lab-1, Textile Processing and Textile Testing Lab-1
16.	Common Instrumentation Lab	1	Maintained by College
17.	Green House	1	Maintained by College
18.	Artificial Intelligence and Machine Learning, Computer Science with Data Analytics	1	Computer lab 8.

Total Number of Laboratories - 50

S.No	Types of Lab	Number
1	UG Science Lab	7
2	PG Science Lab	8
3	Research Lab	16
4	Green House	2
5	Costume Design Lab	3
6	Computer Lab (UG & PG)	8
7	Language Lab	1
8	Instrumentation Lab	5
Total		50

DEPARTMENT OF COMPUTER SCIENCE

The spacious Computer Laboratories of our College is equipped with 120 computers with latest configuration. All the software is available for the students as prescribed in the syllabus. Students were allotted in the lab as 1:1 (student: computer) ratio. Students are allowed to perform their work under the supervision of the staff members and technical Lab Assistant and instruction are given to the students using power point presentation for better concept clarity. Multi-media and high speed Internet facilities, projectors are also available in the Computer Laboratory to encourage the students to surf web pages and gather relevant detailed information through web pages under Staff supervision.

Objectives of the Computer Lab:-

- To design and provide Staff and students with a vast array of IT resources needed to promote learning.
- To enhance the Classroom teaching with Internet based real time online re-searchable study environment for the Staff and students.
- Incorporate latest software's, hardware and networking solutions to provide state of the art service to all the stakeholders of the computer lab in the college.
- Provide training and guidance to students and staff in IT in Technology.
- Present an environment conducive for E-learning and research.
- Keep all the computer hardware, software and other items in superior functioning condition.

Highlights:-

- Multi-media projector with projector screen is available .
- Internet Connections and capability to Conference and Web browsing.
- Ready technology for conducting Seminars, presentations, Conferences etc.
- Internet bandwidth management and Network monitoring

DEPARTMENT OF COSTUME DESIGN AND FASHION

Pattern Making and Garment Construction Lab

The pattern making laboratory is equipped with standard tables for pattern making and cutting. In this lab the student learn how they can independently create patterns for different kinds of garments in common use.

The garment construction laboratory is equipped with the entire range of apparel sewing machinery ranging from the Siruba lock stitch machines to over lock and knitwear flat lock machines. Industrial steam irons, ironing arm boards and cutting machines provide the students of the department an extensive knowledge in achieving high standards of garment finishing techniques.

Fashion Sketching Lab

This lab is primarily designed to bring out the creative talents in the students and provide them with professional guidance to develop them. It deals with effective use of colour, form and material to match the latest trends in fashion. Students will be provided with hands-on exercises and demonstrations, to develop fashion illustrations and equipping them with detailed renderings of their design concepts.

Textile Testing and Processing Lab

Quality control and testing lab is furnished with all the latest tools for ensuring the quality, which is the need of the global industry. Processing lab is fully equipped to dye and print the fabric which provides the student with the skills of adding value to textile material and develops the sense of colour. By conducting rigorous testing and employing advanced processing techniques. This lab contributes to the development of innovative and high quality textile materials.

DEPARTMENT OF BIOTECHNOLOGY

The microbiology laboratory in PG and Research Department of Biotechnology is well equipped with instruments such as Laminar air flow chambers, Incubators, Hot air oven, Orbital shakers, Autoclave, Microscopes and Refrigerator. The equipments are routinely used by students and scholars for practical, projects and research.

The Department has a separate instrumentation room which is thoroughly equipped with latest instruments including Gradient PCR, Real time PCR, Cooling centrifuges, Microfuge, Gel Doc, Bench top bioreactor, Lyophilizer, UV- visible spectrometer, Ice maker, Freezer, AGE apparatus and PAGE apparatus. Students and research scholars working in the field of molecular biology utilize the facilities for their studies.

The plant tissue culture laboratory in the department is well organized with a separate preparatory room, semi-sterile area and sterile culture room. The preparatory room is equipped with Laminar air flow chamber, Fluorescent microscope, Hot air oven, Autoclave, Rotary vacuum evaporator, Clevenger apparatus, Soxhlet apparatus and refrigerator. The sterile culture room is well illuminated and temperature controlled with sufficient racks and has Laminar air flow chamber. Different Orchid species are being maintained and students and scholars use the laboratory for practical and research.

Animal tissue culture laboratory is present in the department where different cell lines are under continuous maintenance. The laboratory is used by the students during practical and is also utilized by scholars. The laboratory has an organized setup with wash area, preparatory area and sterile working room. The preparatory room is provided with Incubator, Millipore water unit and Refrigerator. The sterile working room has clean air flow system and UV illumination facility for sterilization purpose and is well equipped with Laminar air flow chamber, CO₂ incubator and inverted microscope.

There is a separate sterilization unit with equipped autoclaves which serve the decontamination purpose. This unit is provided with basic needs including wash areas and racks. The unit is continuously utilized by both students and scholars and they are made aware about safe disposal of wastes. The department has a walk-in cold room which is being used for molecular biology and protein characterization studies. The facility is also used by students and scholars for storing reagents and microbial cultures.

DEPARTMENT OF BIOCHEMISTRY

The laboratory in PG and Research Department of Biochemistry is well equipped with instruments such as Laminar air flow chambers, Incubators, Hot air oven, Colorimeter, Spectrophotometer, Orbital shakers, Autoclave, heating mantle, magnetic stirrer, normal centrifuge, Water bath, Fume hood chamber, Muffle Furnace, Water distillation unit, Microscopes and Refrigerator. The equipments are routinely used by students and scholars for practical, projects and research.

The Department has a separate instrumentation room which is thoroughly equipped with latest instruments including Real time PCR, Cooling centrifuges, Gel Doc, UV- visible spectrometer, Freezer, AGE apparatus and PAGE apparatus. Students and research scholars working in the field of molecular biology utilize the facilities for their studies. The preparatory room is equipped with Laminar air flow chamber, Hot air oven, Autoclave, Rotary vacuum evaporator, Soxhlet apparatus and refrigerator. The sterile culture room is well illuminated and temperature controlled with sufficient racks and has Laminar air flow chamber.

The Mushroom spawn production and Baking technology laboratory in the department is well organized with a separate preparatory room, sterile area and sterile culture room. The preparatory room is equipped with Laminar air flow chamber, Autoclave, Incubator, Baking Oven, Mushroom Sauce grinding machine, mushroom cutter, dryer. The sterile culture room is well illuminated and temperature controlled with sufficient racks.

DEPARTMENT OF ZOOLOGY

The virtual laboratory is an innovative and valuable tool that will facilitate experimentation for people who lack the resources. The Virtual Lab is an initiative of the Ministry of Human Resource Development (MHRD) under the National Mission on Education through ICT. Despite the availability of the live animals to do the dissection, UGC has stopped the live animal dissection in order to save the biodiversity.

The Animal virtual laboratory at Department of Zoology, Kongunadu Arts and Science College, Coimbatore provides in-depth information about organ systems of Cockroach, Earthworm, Sea star fish, Snail (Pila) (Invertebrates), Frog and Rat (Vertebrates). The virtual laboratory aims to provide students a first-hand experience of dissecting animals and study about the organ systems with the help of Images of the live animal laboratory experiments. In addition to this, students will be provided study material to enhance their knowledge about the organ systems of the animals. The modules planned for this laboratory will provide a comprehensive overall understanding of the various organ systems in animals about planning and performing an experiment using live animals.

The UG, PG & Research laboratories in PG and Research Department of Zoology is provided with minor and major equipments such as Laminar air flow chambers, Incubators, Centrifuges, Spectrophotometer, Calorimeter, Hot air oven, Orbital shakers, Autoclave, Microscopes and Refrigerator. The equipments are routinely used by the students and scholars for their practical, projects and research purpose. The Department has a separate instrumentation room which is equipped with some equipments including Gradient PCR, UV-visible spectrometer, Agarose Gel Electrophoresis and Polyacrylamide Gel Electrophoresis Inverted Microscope etc., Students and Research scholars working in the field of Molecular biology, Immunology Microbiology utilize the facilities for their studies.

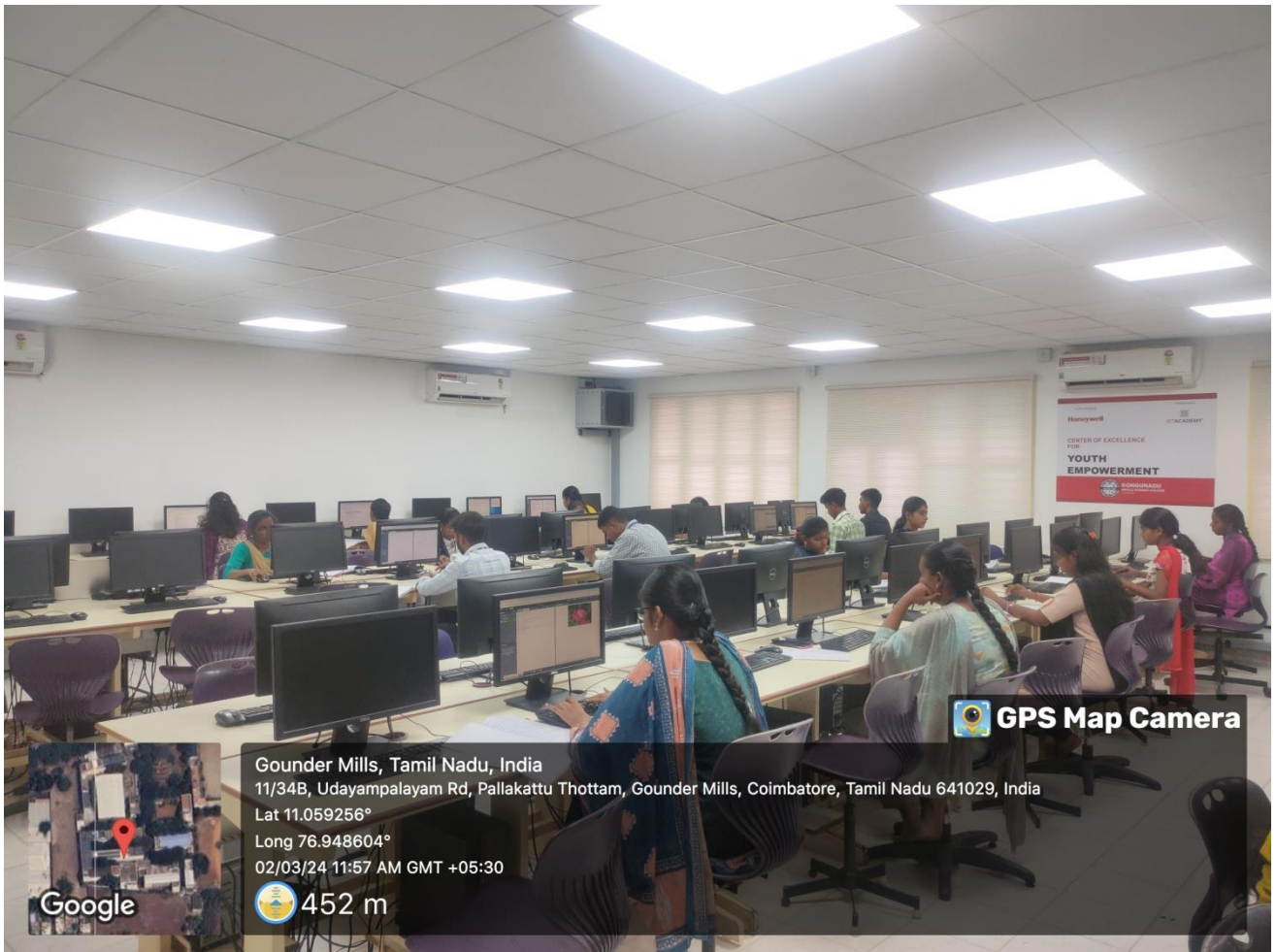
A museum “Life After Death” being maintained in our department with high number of maximum 1000 number of valuable rare specimens such as Leopard, Gaur, Coral Reefs, Gastropod shells, invertebrate and vertebrate specimens etc. Every Year, School and college students from in an around Coimbatore visit our Zoology Museum in order to enhance their knowledge on animal biodiversity.

Aquariums are dynamic miniature ecosystems that are popular tools for teaching students about scientific concepts and skills. Aquariums can be used to demonstrate concepts such as the food chain, the nitrogen cycle, the water cycle and fish anatomy, development and reproduction. Aquariums, in particular, can demonstrate the role of the abiotic factors in maintaining life within an environment. Students can learn about the behavior and characteristics of fish, as well as the importance of maintaining a healthy environment.

Computer Lab - 1



Computer Lab – 2



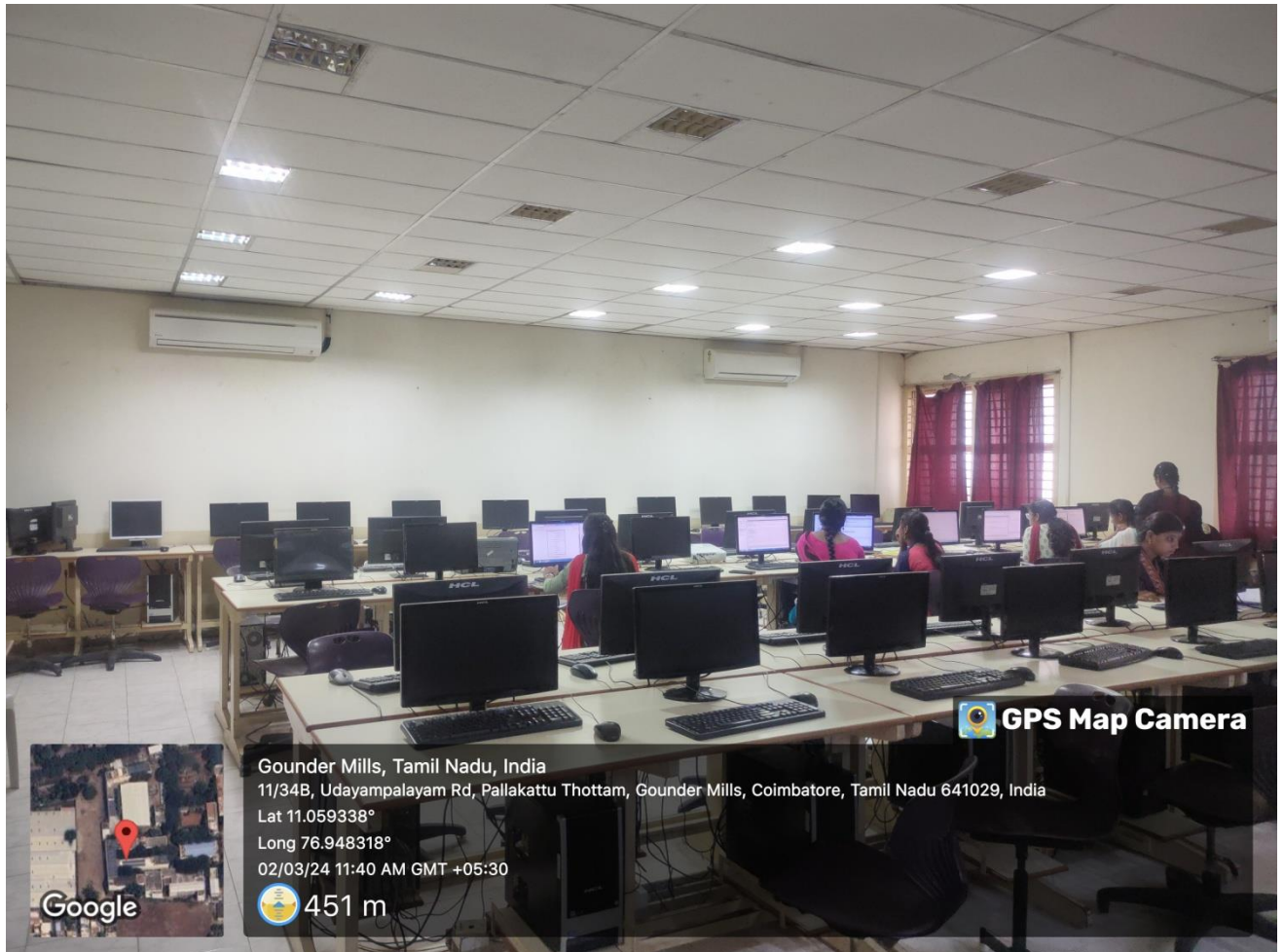
Computer Lab - 3



Computer Lab - 4



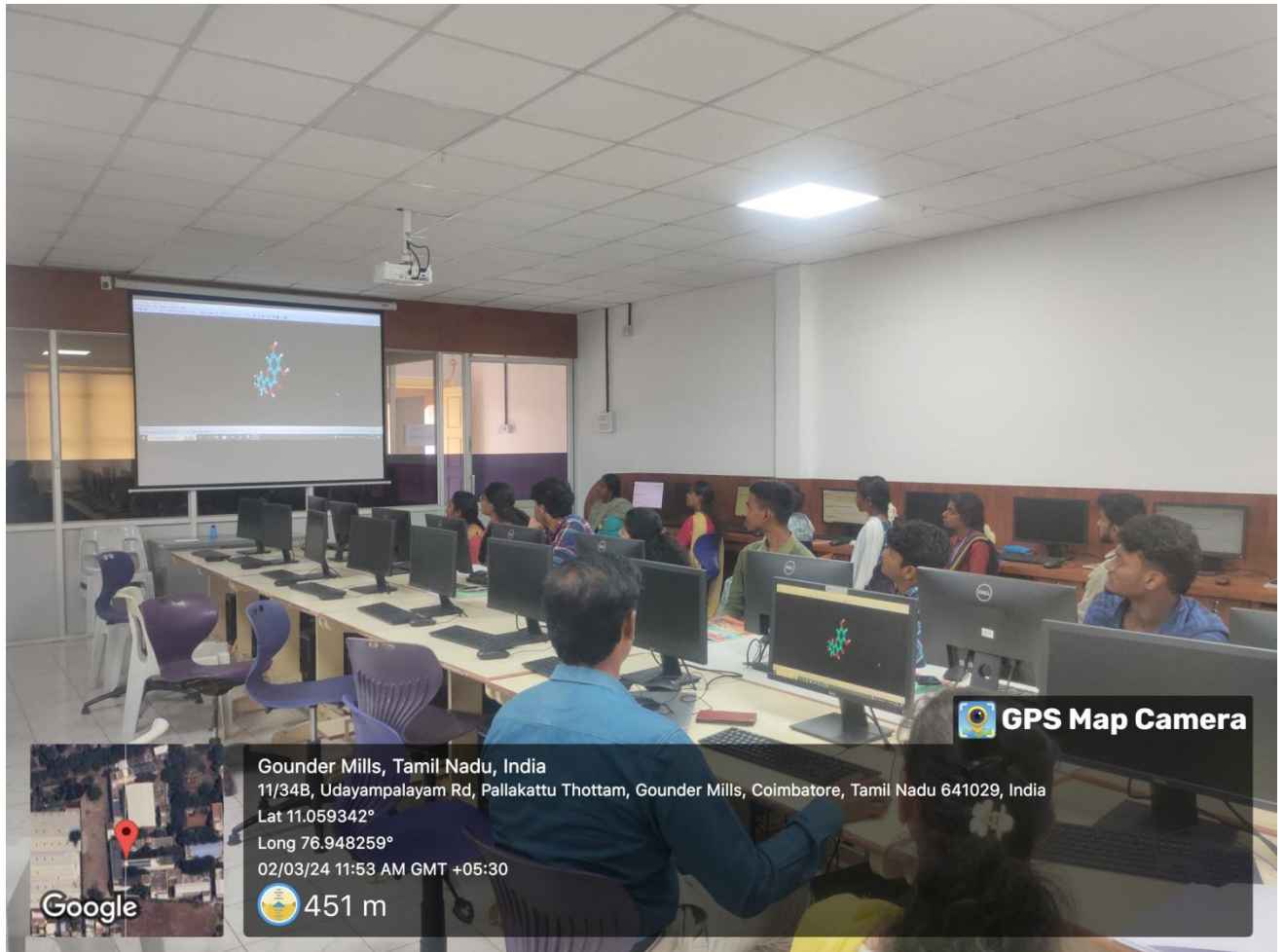
Computer Lab - 5



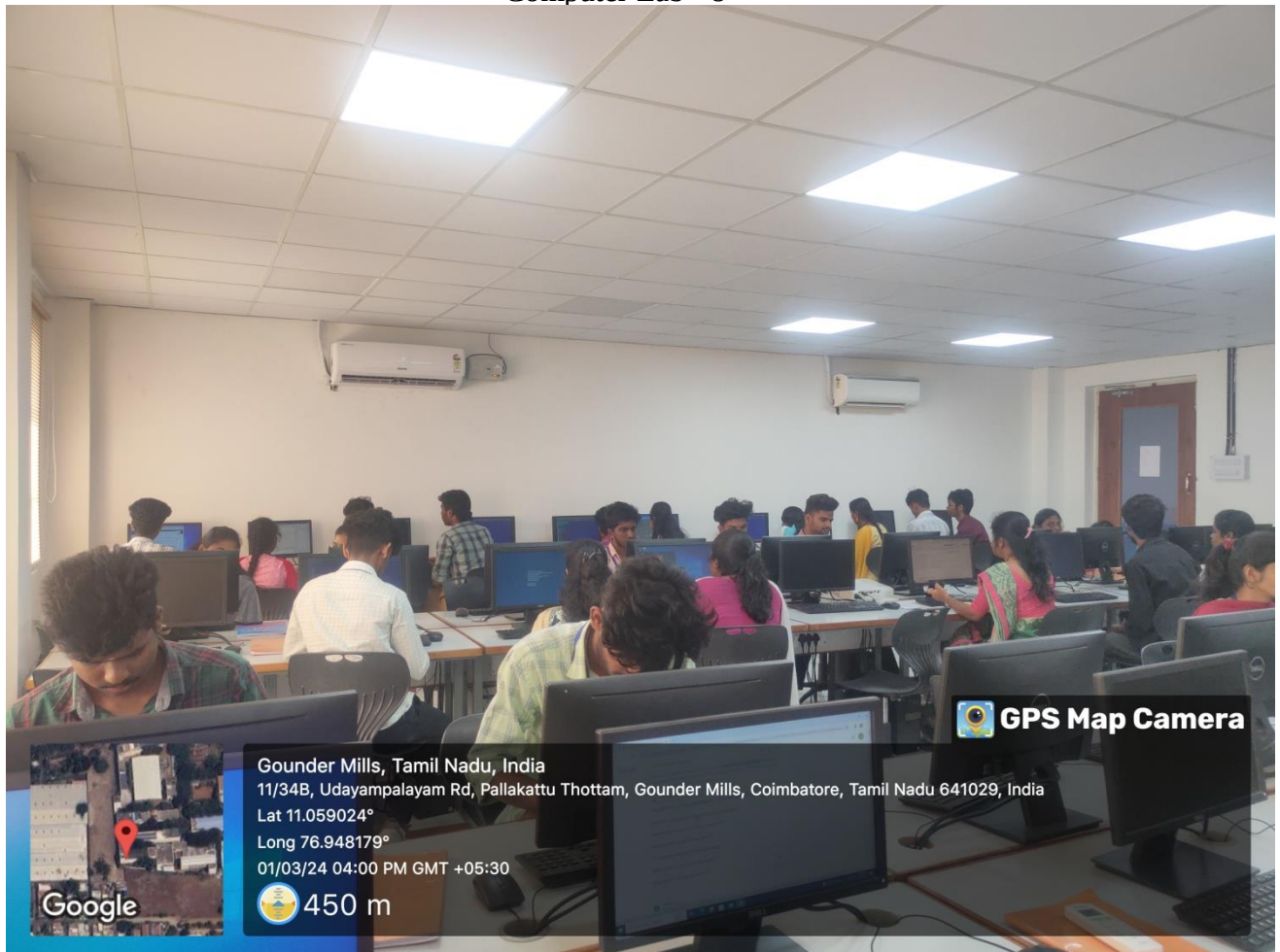
Computer Lab - 6



Computer Lab - 7



Computer Lab - 8



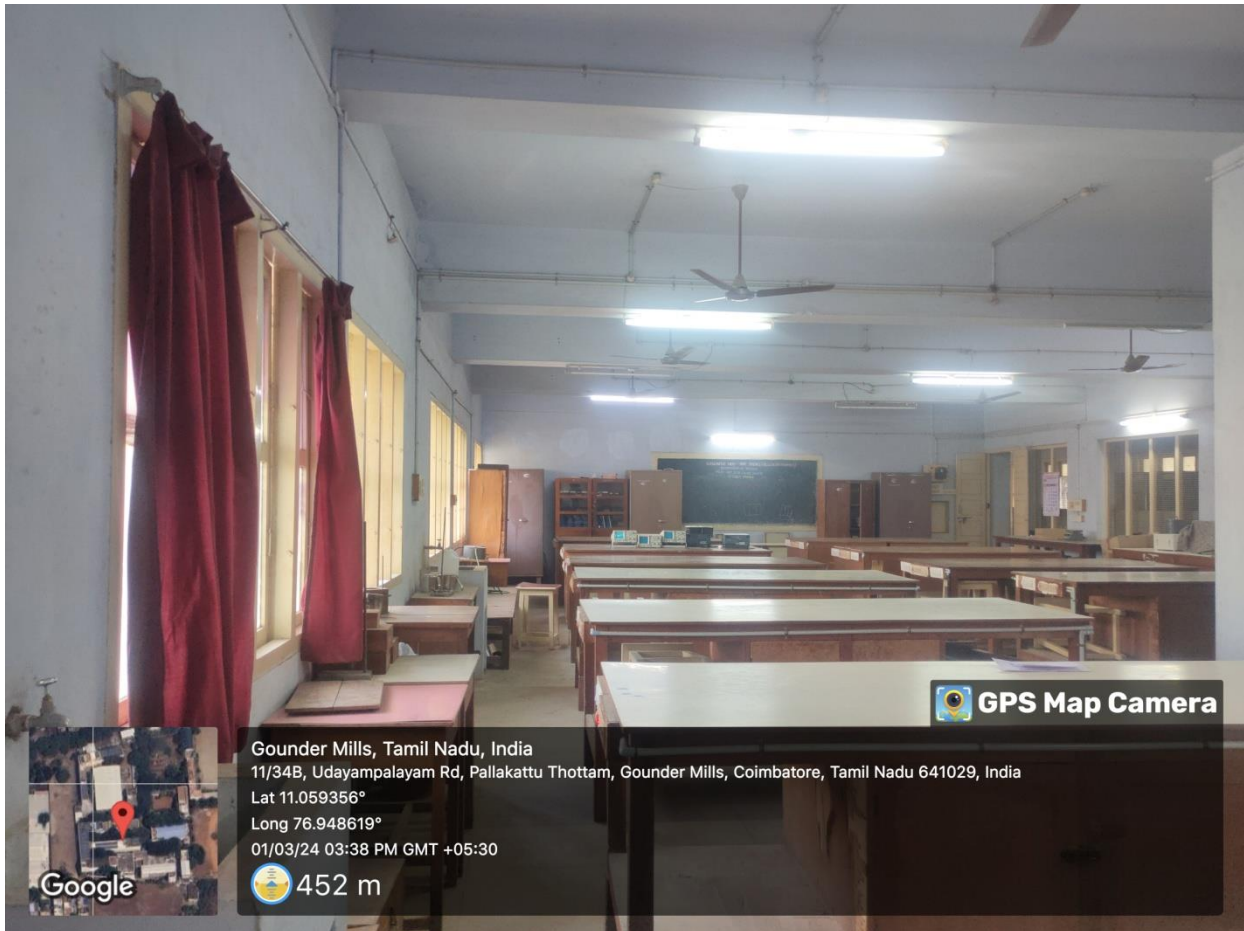
Botony Lab



UG Physics Lab



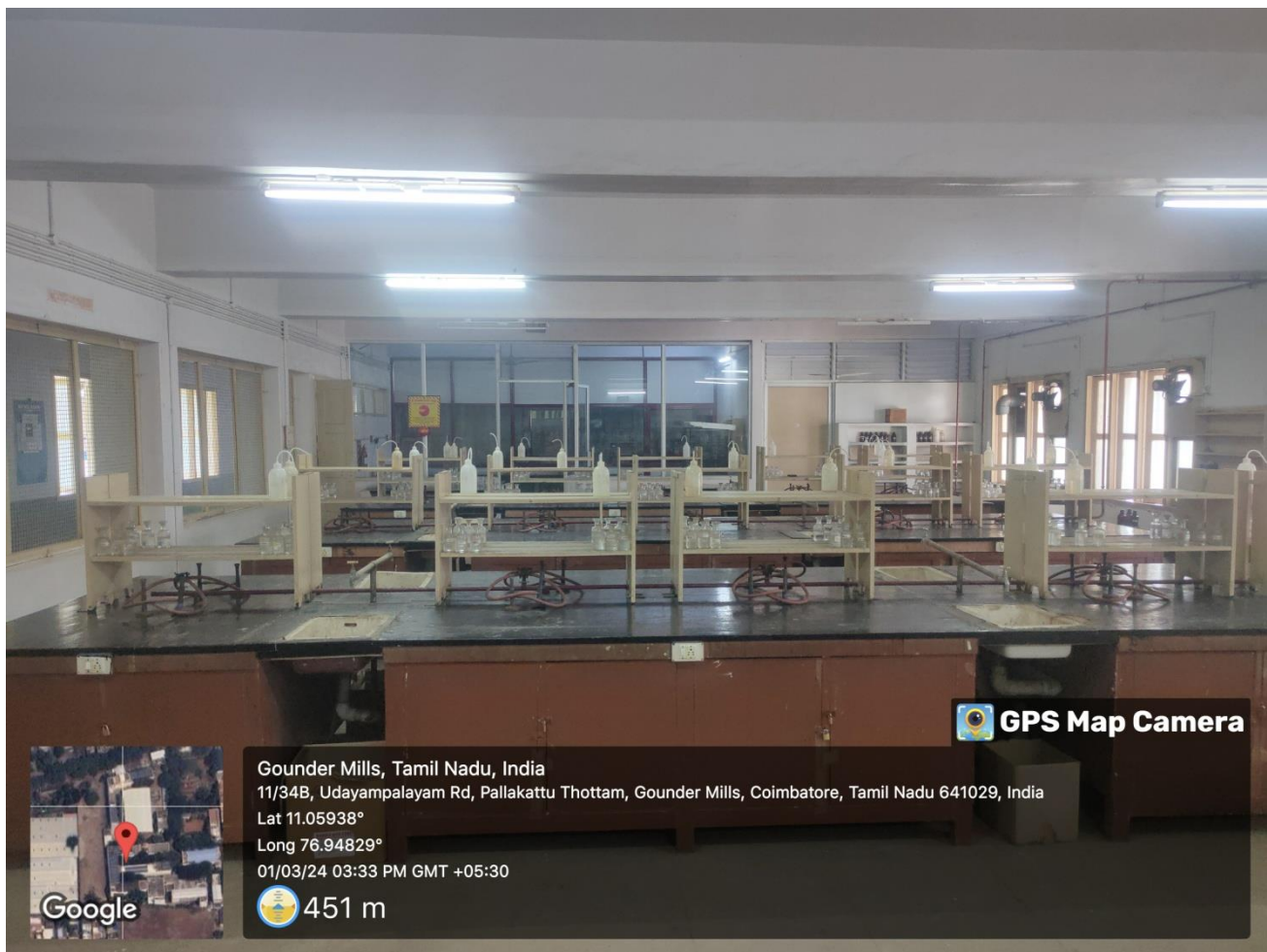
PG Physics Lab



UG Chemistry Lab



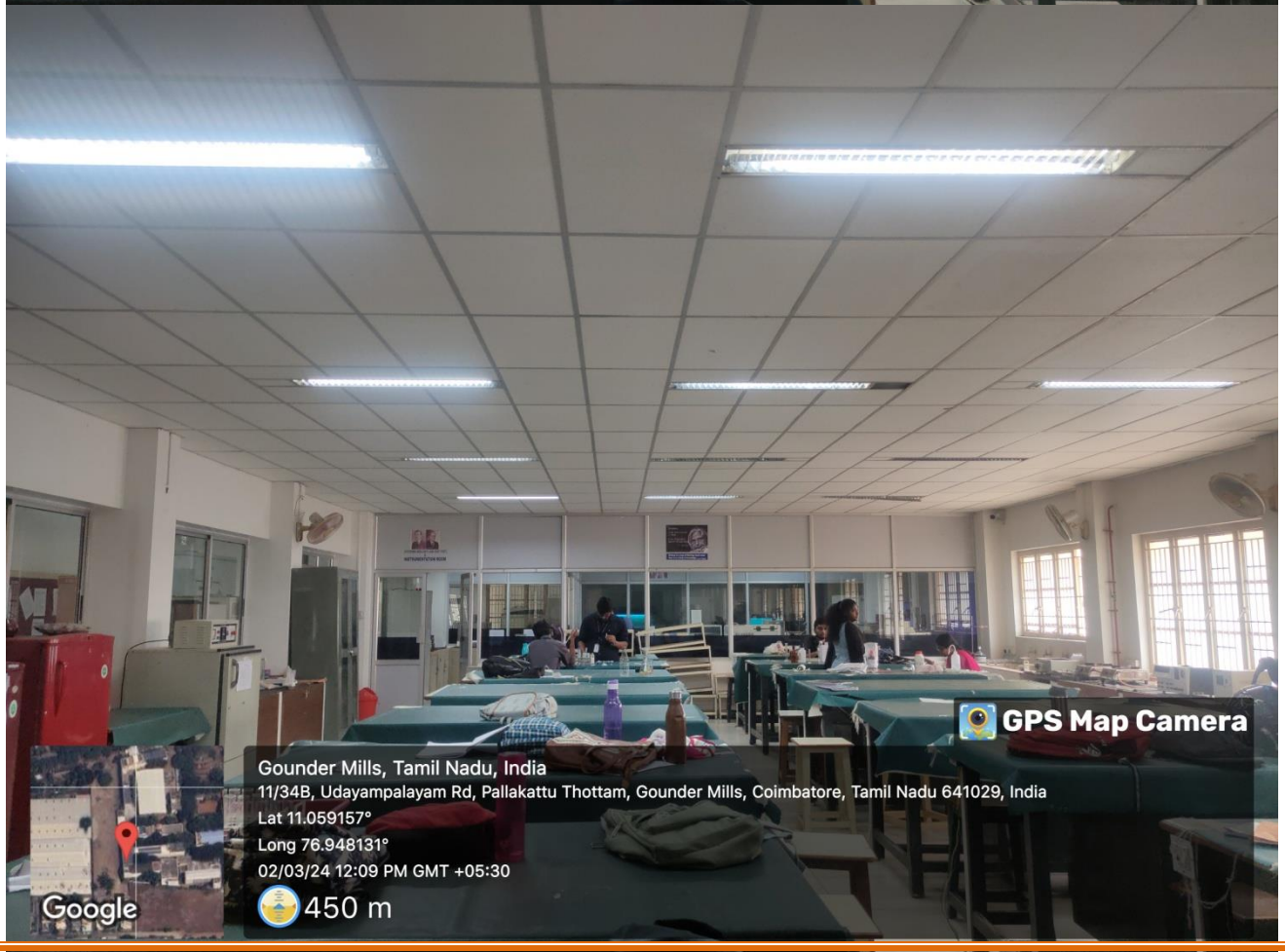
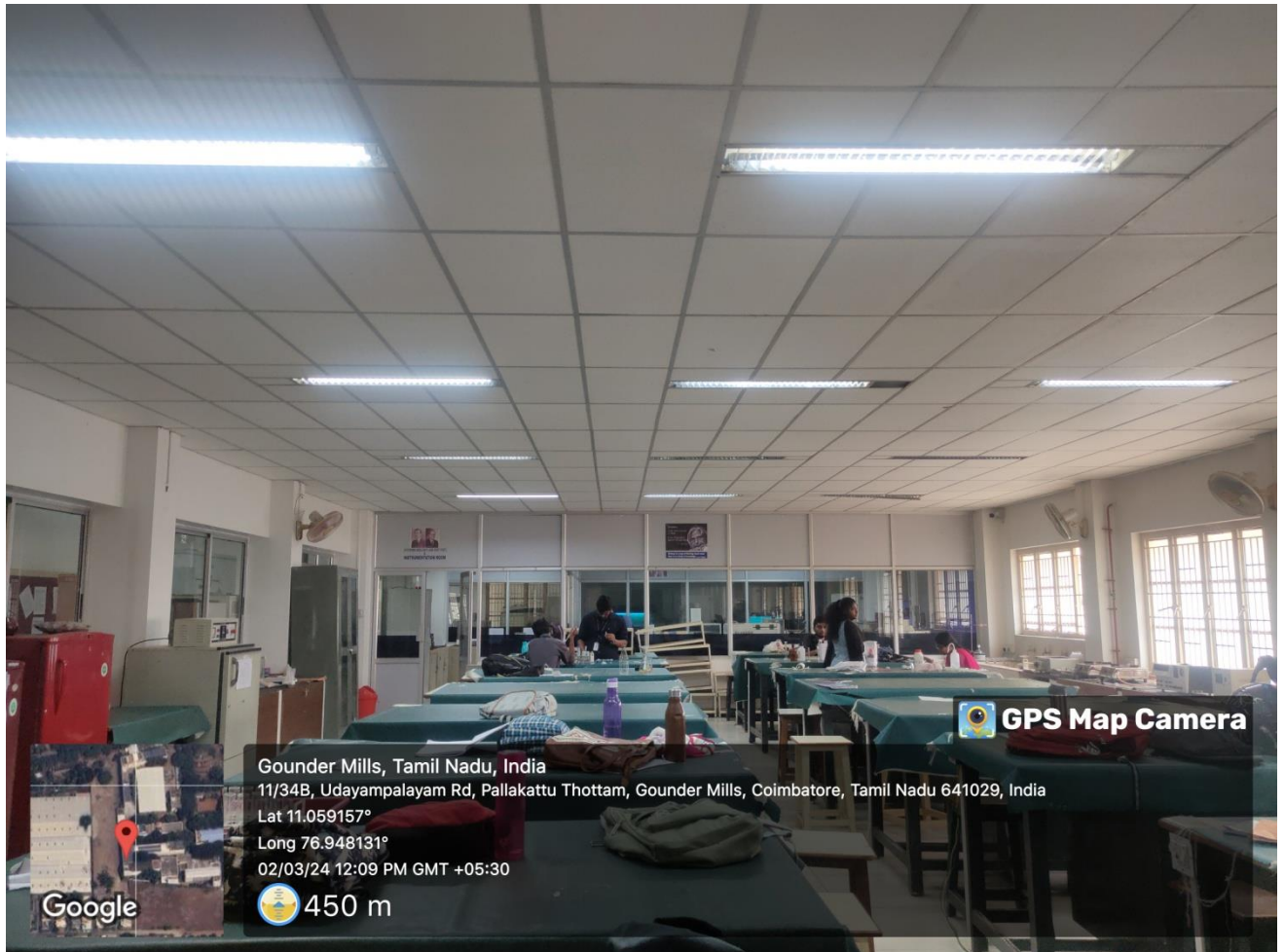
PG Chemistry Lab



UG Bio-Technology Lab



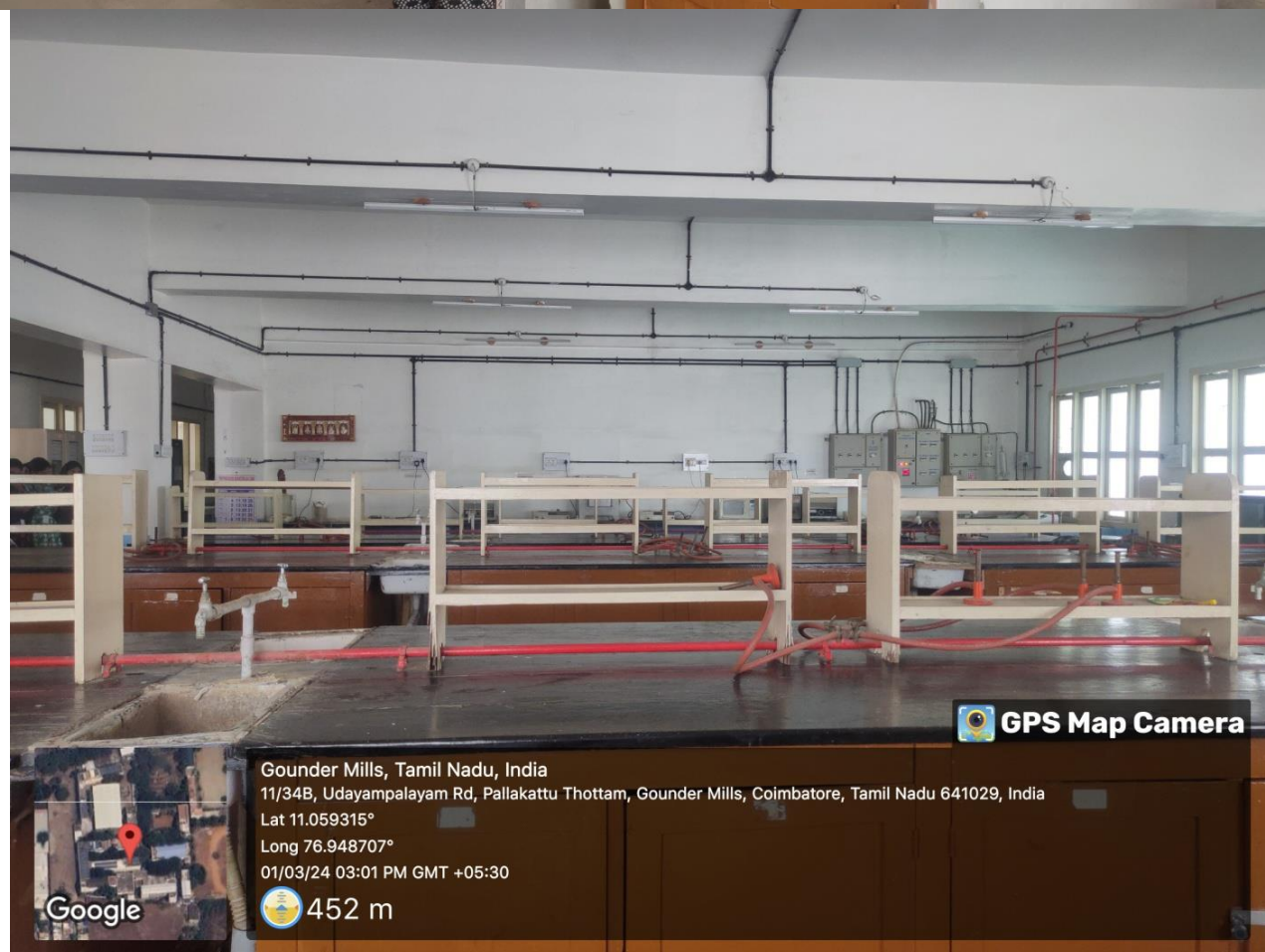
PG Bio-Technology Lab



PG Bio-Technology Lab



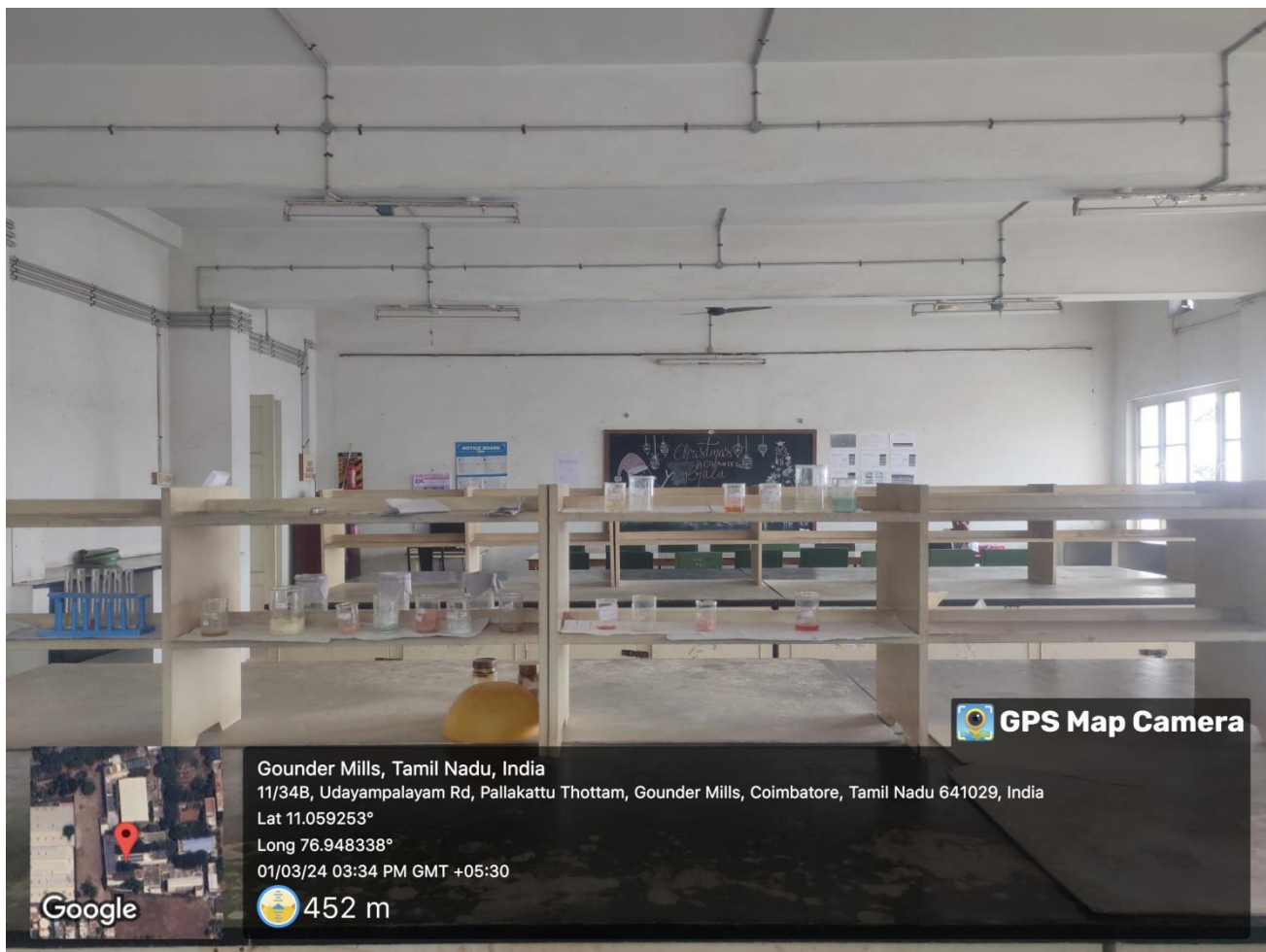
Bio-Chemistry Lab



Zoology Lab



Chemistry Lab



Department of Costume Design and Fashion



Coimbatore, TN, India

Urumandampalayam Road, GN Mills,

Coimbatore, 641029, TN, India

Lat 11.060510, Long 76.948490

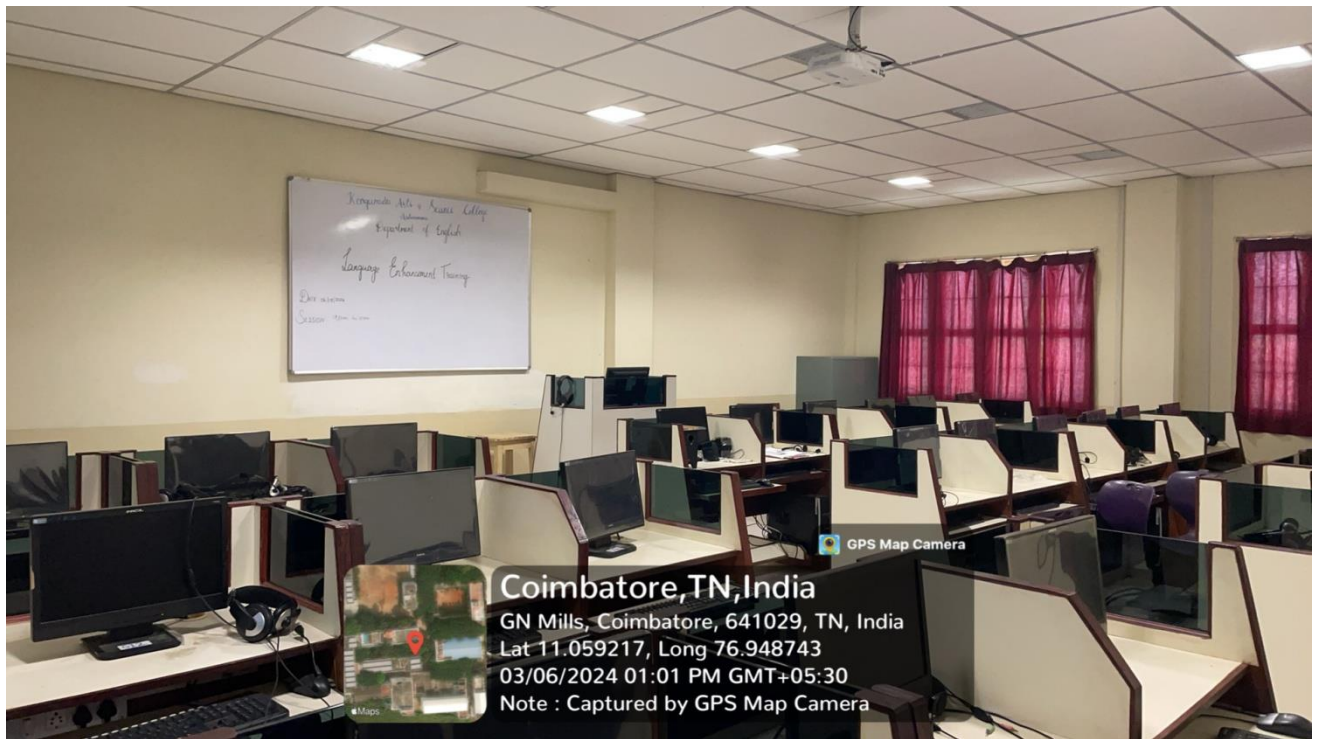
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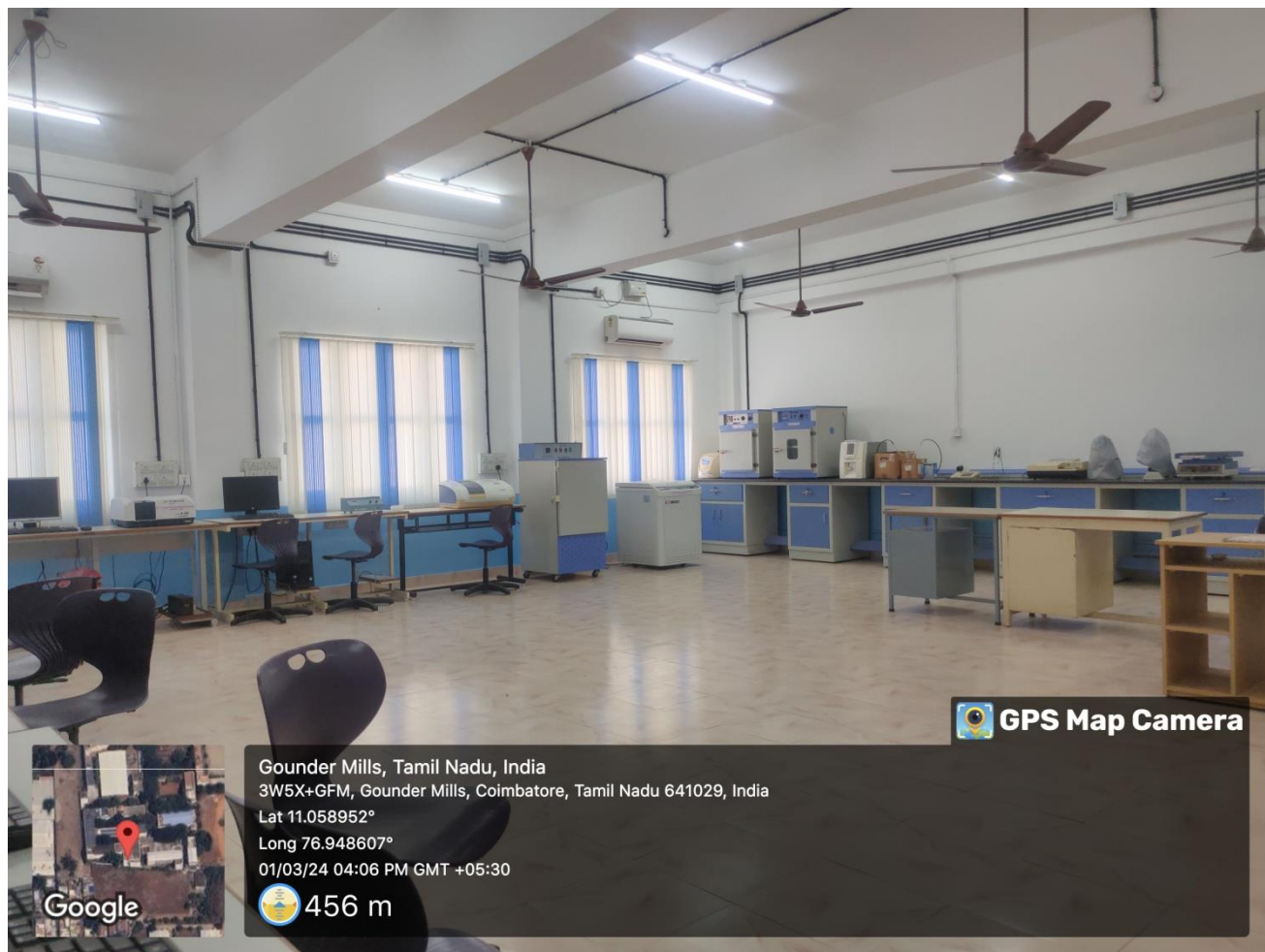
Mathematics



Language Lab



Common Instrumentation Lab



Green House

