

DEPARTMENT OF SCIENCE AND HUMANITIES

FACILITIES

Infrastructure



Class rooms: In our department we have 15 rejuvenated lecture halls. The total size of lecture halls is about 1330.28 square metres. Nearly 65 students are accommodated in each of this class room. Effective learning process takes place in these well maintained lecture halls. These spacious lecture halls are sufficient enough not only for the lectures, but also to have various classroom activities. Students are highly motivated in various numbers of ways by making use of these lecture halls as an effective tool to make the learning process successful.

Smart class room: A well equipped advanced smart class room is maintained in our department to enrich the quality of teaching learning process visually efficient and effective. It is completely air-conditioned and furnished for 65 students with an area of 86 sq.m. A smart board, a power podium and a projector are provided.



Drawing hall: Our department has a huge drawing hall exclusively designed to improve the knowledge and the accuracy on the subject, Engineering Graphics with 65 tables and drawing boards with an area of 289.61sq.m. It is spacious enough for students to practice the drawing of Engineering Graphics. In addition to that, we have the same facility for another 220 students in the drawing hall located above the Central library.

Training hall: In our department, three training halls are furnished for a smaller group (30 students each) and are effectively used for the purpose of conducting various activities such as debate, group discussion, conversation and individual presentation, etc., to enrich their communication skill. It covers an area of 146.37 sq.m. One training hall is enhanced by wall mounted SONY LED 42” TV with Wi-Fi facility to develop the listening skill through videos and audios.



Activity Based learning hall: ABL hall gives a platform to our students in developing their soft skills. They are given enough training to overcome language barrier through communication skill. The classroom set up of ABL hall is very flexible in its seating arrangement to conduct various group activities with an area of 88.11 Sq.m.

Seminar Hall: Our department has a Seminar hall, which is well equipped with multimedia facility like PA system, LCD Projector and also special equipments for Presentation. It is completely air-conditioned and furnished for 150 students with an area of 173.10 Sq.m. It is effectively utilized as a discussion forum such as meetings, club events etc.



Department Library: Department of S&H has its own library consisting of nearly 4000 books related to Physics, English, Chemistry and Mathematics subjects for the benefit of the students and the staff members. Under the skill development scheme, the department library also provides magazines such as Auto Car, Electronics for You, Competition Success Review, GK Today, Electrical India, Data Quest and India Today and daily newspapers like The Hindu, The New Indian Express.

Laboratories: Labs with sufficient facilities can be availed by the students. Every lab has equipments with respect to the subjects in the curriculum.

Language Lab: Effective language education stems from offering variety of learning opportunities and tools. The sophisticated Language Lab consists of 60 systems. The nature and quality of the recorded materials, the length and the frequency of laboratory periods, the subtle but powerful factor of motivation are the variables on hand which help in efficient working of our Language Lab.

Exquisite language proficiency boosting software like

- TOEFL Mastery,
- Globarena,
- Orell digital Language Lab (Odll),
- Clarity Snet Language Lab

are installed here to confront interview with poise. B.E. & B.Tech. students attend this lab sessions regularly and their language skills are assessed in the end semester practical examination. The soothing atmosphere aids in evoking the students' interest to listen and practice various software during 5p.m. to 6 p.m. in all working days. Further, the lab is efficiently utilized for conducting IELTS and BEC coaching classes and BEC online examination. It is also used to conduct online Exams like NPTEL and some Government Exams.



Mathematics Lab: The lab consists of 8 computers with LAN, Internet and Multimedia facilities. Students make effective use of this lab for aptitude training, online aptitude test and learning NPTEL online course. The lab is mainly used to develop and stimulate mathematical skills through analytical thinking among the young Engineers. Also the computers are installed with

- MAPLE software
- MAT LAB

through which students become skilled and sure-footed at Engineering Mathematics.

Physics lab: With a well-equipped lab, the faculties of Physics department are assiduously making it possible for the students to realize the fundamentals of Physics in Engineering and Technology. Physics Laboratory is well ventilated and fully outfitted for present curriculum requirements. The Semiconducting Physics Lab provides a platform for the students to gain useful practice in working with resistors, capacitors, diodes, and transistors. The laboratory incorporates the theory taught in the class room and facilitates the students to get the knowledge of the basics of electronics with practical design



Chemistry lab: Possessing an enviable state-of-art infrastructure and latest equipments, the Chemistry lab is best utilized to improve the scientific temper of students. This Laboratory supports learning and understanding the fundamentals of Chemistry with the relevant resources. Effective use of this lab has enabled the students to pursue their studies with enthusiasm.

Major Equipments:

Major equipments in physics and chemistry lab are,

- Digital Storage Oscilloscope
- Spectrometer
- Travelling Microscope
- Regulated Power Supply
- Ultrasonic Interferometer
- Band Gap Apparatus
- Hall Coefficient Measurement Apparatus
- Logic Gates Kit
- Conductivity Meter
- Digital Electronics Balance
- Flame Photometer (Model - 381 E) (EI-make)
- Incubater (Inner Chamber 35x35x35 cm)
- Neflometer - VSI - 13 N digit 200 NTV
- pH Meter
- Potentiometer
- Spectrophotometer - Systronics (Model - 105)
- Wash analysis Kit (Model 161 E)

- Mechanical stirrer
- Distillation Unit- DD Water set - 5 lit capacity
- Mechanical Shaker
- Thermostat Ovan
- Oswald Viscometer - Borosil

Chemistry Research Centre Instrumentation Facilities (CRCIF)

SHIMADZU UV-2450 UV Visible Spectrophotometer with Peltier system (10-110 °C)

Measurements

Spectrum (solid and liquid),

Kinetics (include time course),

Photometric (include quantization)

Technical Details

Wavelength Slew rate : 3200 nm/min

Wavelength scan rate : 900-190 nm/min

Monitor scan rate : 2500 nm/min

Absorbance : 4-5 Abs

Transmittance,

Reflectance : up to 100%



JASCO FP-8300 Spectrofluorometer with Peltier system (10-110 °C)



Measurements

Characterization of fluorescent Probe

Protein dynamics

Quantitative analysis

Cellular membrane studies

Enzyme kinetics

Technical Details

Six-digit dynamic range

Auto-SCS and Auto-Gain functions

High sensitivity S/N > 1,600, RMS

High-speed scanning up to 20,000 nm/min

Wavelength range, 200 to 900 nm

SHIMADZU 8400S Fourier Transform Infrared Spectrophotometer (FTIR)

Measurement

IR Spectrum (Powder Sample)

PLS quantitation

Curve fitting, Mapping

Macro platform

Pharma Report Program

Technical Detailswave number range : $3,800\text{cm}^{-1}$ - 350cm^{-1}

Measuring Mode : KBR pellet

Light Source : High brightness ceramic

**CHI-Electrochemical workstation with spectrophotometry-620E****Measurement**

Cyclic Voltammetry (CV)

Linear Sweep Voltammetry (LSV)

Chronoamperometry (CA)

Chronocoulometry (CC)

Differential Pulse Voltammetry (DPV)

Normal Pulse Voltammetry (NPV)

Square Wave Voltammetry (SWV)

Bulk Electrolysis with Coulometry (BE)

Impedance - Time (IMPT)

Impedance - Potential (IMPE)

Open Circuit Potential - Time (OCPT)

Technical Details

Zero resistance ammeter

Reference electrode input impedance: 1×10^{12} ohm

Fast waveform update: 10 MHz @ 16-bit

CV and LSV scan rate: 0.000001 to 10,000 V/s

Automatic and manual iR compensation

SHIMADZU Liquid Chromatography- LC2010C (HPLC)**Technical Details**

Light source; Deuterium lamp, Low pressure mercury lamp

Flow rate: 0.001-5 mL/min

Deep well plates; Max. 4 plates (up to 384 samples with 96 plates)

Temperature setting range; 4-60 Degree C, 1 Degree C step

Wavelength range: 190-600 nm



ONLINE TEACHING RESOURCES

Online Teaching Resources: Our department is fully equipped with online teaching resources such as Wacom, Webcam, HD camera, Document Writer, Head Phone with Mike, Mobile Tripod Stand and White board. With the help of these online teaching resources we can recreate the offline classes in this pandemic situation.



Online Teaching Resources in the Department

- Webcam C925e Logitech Camera
- Wacom One Creative Pen Display
- Full HD Camera – 1080 Model: TVS WC103
- Head Phone with Mic (Model : Logitech)
- Speaker 2.1 Model -Fingers Joss
- Collar Microphone with cable Make Boya BY- MI
- Document Camera Lumens DC 170
- Mobile Tripod Stand
- Camera Tripod Stand
- Wacom One Display Pen Tablet
