**Advanced Material Research Lab**

Advanced materials research lab was established in the year of 2018 to provide research facilities to the faculty and students of physical, chemical and engineering sciences, and strengthen interdisciplinary research in material and Nano technology domain. The lab has twelve core faculties along with engineering stream.

Currently AMR lab focus on

* Development of anticorrosion materials
* Synthesis of Nanocomposites
* Studies on Optical, Electrical Properties of nanomaterials
* Synthesis and studies of flame retardant polymer materials
* Synthesis of Bioactive heterocyclic compounds

Equipment available:

* Autoclave (complete SS)
* Digital pH meter (model: 335)
* KBr Pallet Maker
* Magnetic Stirrer 2L
* Oil bath
* Sonicator Bath (2.5L)
* Tubular Furnance
* UV Cabinet

**English Language and Communication Skills Lab**

**Objectives**

* To train students to use language effectively in everyday conversations.
* To expose the students to a varied blend of self-instructional, learner-friendly modes of language learning.
* To enable students learn better pronunciation through emphasis on individual speech sounds.
* To hone presentation skills of students
* To expose students to a varied blend of self-instructional, learner-friendly modes of language learning.
* To enable students learn better pronunciation through emphasis on word accent, intonation, and rhythm.

**Infrastructure**

English Language Lab provides learners a sustainable access to self-instructional and computer aided language learning as a means complementary to participation of students in various language development activities such as dialogues, role play, information transfer, presentation. Language Lab creates an opportunity to learn the rudiments of group discussion and interviews through multimedia lab.

English Language lab is equipped with 63 computer machines and One Teacher console (Server). All the machines are connected through a network-based teaching software, Clarity SNET Language Lab. This software is purchased at a cost of over 1.7 lacks from Young India Films, Chennai. The teacher can remotely control, monitor, broadcast, and assist students through teacher console.

Each student console is provided with a headphone and a web camera to directly interact with the teacher. Various other software is installed to help the students in language learning.

**Software available**

Clarity SNET Language Lab for 1 Teacher + 60 students.

Clarity Active Reading (60 user).

Clarity Active Listening (60 user).

Clarity Business Writing (60 user).

Clarity It’s your Job (60 user).

Sky Pronunciation Suite (60 user).

Globarena English Lab (60 user).

Globarena Career Lab (60 user).

Clarity Pronunciation Power 1 (60 user).

Clarity Technical Report Writer (60 user).

**Infrastructure:**

Dell Inspiron Desktop Computers - 62

Dell Poweredge Server – 1

**Engineering Physics Lab**

**Objectives**

* The student will handle and understanding of different apparatus to perform experiments.
* The student will learn practical measurement of different physical quantities.
* The student will characterize the materials and their properties.
* The student learn practical experience of theory conceptual values.

**Major Equipment available:**

Hall effect apparatus

Spectrometers

B-H curve board and CRO

Laser with single and double slit

Travelling microscope

Coupled Oscillator setup

Strain Gauge sensor

Dielectric constant setup

Stewart-gee’s apparatus

wavelength setup

Optical fiber kit FOT-1

Meldi’s apparatus

Semiconductor laser

Torsional pendulum

Energy gap of diode

Sodium Vapour lamp

Sodium Vapour lamp

Diffraction grating

Single Slit

Newton Rings Lenses

Mercury Vapour lamp

Prisms

**Chemistry Lab**

**Objectives**

* The student will learn practical understanding of the redox reaction.
* The student will learn the preparation and properties of synthetic polymers and other material that would provide sufficient impetus to engineer these to suit diverse applications.
* The student will also learn the hygiene aspects of water would be in a position to design methods to produce potable water using modern technology.

**Major equipment available:**

Digital bomb calorimeter

Digital conductivity meter

Redwood viscometer – II

Magnetic stirrer

Digital Ph meter

Digital Potentiometer

Redwood viscometer – I

Magnetic stirrer with Oil bath

Deionizer plant

Digital electronic balance

Digital colorimeter

Redwood viscometer – I

Analytical balance