



**SHRI VISHNU ENGINEERING COLLEGE FOR WOMEN:: BHIMAVARAM
(AUTONOMOUS)**

DEPARTMENT OF MECHANICAL ENGINEERING

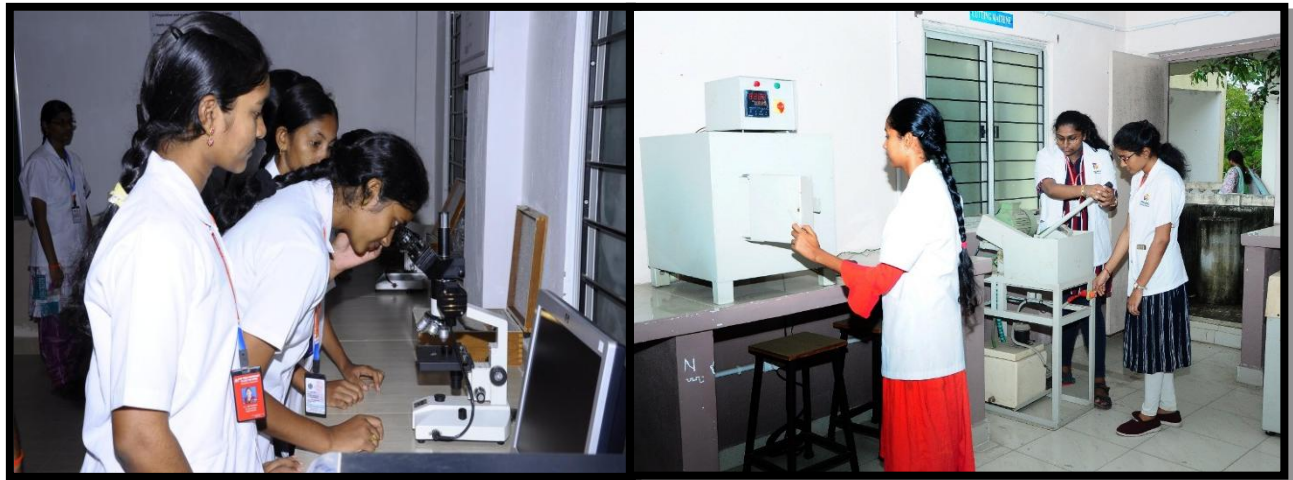
METALLURGY LAB

Laboratory In-charge : Dr. Asnit Gangwar

Laboratory Technician : Mr. K.V. S. S. S. Varma

OBJECTIVE:

The objective of metallurgical laboratory is to study the microstructural properties of engineering materials like ferrous, nonferrous, and alloys. Metallurgy lab provides the facilities for the students to prepare the sample for microstructural analysis under a metallurgical microscope. In this laboratory, students learn about sample cutting, mounting, grinding, polishing, and microscope handling. Metallurgy lab also facilitates our students about the various heat treatment process like annealing, normalizing, and hardening.



Lab Equipments:

Sr. No	Description	Stock	Cost (Rs.)
1	Single disc Polisher	1	10,800
2	Muffle Furnace	1	17,343
3	Jominy end Quench Apparatus	1	20,250
4	Microscopes (Binocular)	2	32,400
5	Microscopes (Trinocular)	1	27,283
6	Metal cutter	1	46,372
7	Colored image capture system	1	40,500
8	Belt Grinder	1	11,340
9	Different Standard metallographic specimens	12	9,892
Total			2,16,180

List of Experiments:

Sr. No.	Name of the experiments
1	Preparation of specimen and study of Metallurgical microscope
2	To mount a specimen in Bakelite powder using specimen mounting press
3	Preparation and study of the microstructure of conventional metals
4	Preparation and study of the microstructure of cast iron
5	Preparation and study of the microstructure of mild steels and carbon steels
6	To study the microstructures of non-ferrous (Al alloys)
7	To study the micro structures of heat treated steels
8	Determination of hardenability of mild steel by Jominy end Quench test
9	To find out the hardness of various treated and untreated steels
10	Determination of grain size using intercept method