

## COE CT

The Mechanical Engineering department at Government College of Engineering Bargur is home to a specialized Center of Excellence in Coating Technology (COE CT). This center is dedicated to advancing the field of coating technology through state-of-the-art equipment and facilities. Key setups within the COE CT include:

1. **CMT Welding Cladding Setup:** Utilized for advanced welding processes, particularly in the application of cladding to enhance surface properties of materials.
2. **Pulse on Plating Setup:** A high-precision plating system that allows for the deposition of coatings with controlled thickness and quality.
3. **Cold Metal Spray:** An innovative technique for applying metallic coatings at low temperatures, preserving the integrity of the base material.

The COE CT also features essential metallurgical testing and preparation tools, including:

- **Metallurgical Microscope:** For detailed microstructural analysis of coated materials.
- **Rough Grinding Machine:** Used in the initial preparation stages of metallurgical samples.
- **Low-Speed Abrasive Cutting Machine:** Ensures precise sectioning of samples without damaging the material.
- **Diamond Cutting Machine:** Provides high-precision cuts for metallurgical examination.
- **Semiautomatic Polishing Machine:** Facilitates the polishing of samples to a mirror finish, critical for accurate microscopic analysis.

These facilities enable cutting-edge research and development in coating technologies, supporting both academic projects and industry collaborations. The COE CT is integral to the department's mission to provide hands-on, practical education and to drive innovation in material science and engineering.