

Velammal College of Engineering and Technology, Madurai
Department of Information Technology
Innovative Teaching Methodology

Name of the course: Engineering Chemistry

Topic: Water Technology

Course Incharge: Dr. C. Sankar

Innovative Method: Role Play



The role play method is used to demonstrate the concepts of water quality testing. To illustrate this, four students are acted as parameter of water quality.

Role-playing in water testing is having participants act as various role in a water-related scenario to learn about water quality testing and management. This method can be used to simulate real-world scenarios such as a town meeting to enhance water safety, which each participant is assigned a specific position, objective, and problem. By actively contributing, students get a better knowledge of other points of view, difficult challenges such as water scarcity or pollution, and the value of collaboration.

This teaching method generated a lively learning environment in which all students participated. This strategy increased their understanding of concepts and also boosting their confidence level.

Name of the course: Engineering Chemistry

Topic: Calcination of Nanomaterial

Course Incharge: Mrs. S. Lavanya

Innovative Method: Hands on Training



The lecturer demonstrated a unique teaching method for students on how to synthesized nanoparticles using an autoclave.

The solvothermal process produces nanoparticles by interacting precursor chemicals in a closed vessel (an autoclave) at temperatures higher than the solvent's boiling point, resulting in high pressure. This high-temperature, high-pressure environment enables fine control over nanoparticle size, shape, and characteristics by carefully adjusting the solvent type and reaction conditions. The technique typically involves heating a precursor solution in an autoclave to temperatures higher than the solvent's normal boiling point, resulting in high pressure that promotes the reaction and crystallization to generate nanoparticles.

This hands-on training increased how nano particles are synthesised. The activity-based approach made engaging and memorable for students.