



Three Days Skill Development Training Program on  
**ANALYTICAL TECHNIQUES AND INSTRUMENTATION  
FOR WATER QUALITY ASSESSMENT**

Venue: CSIR-CMERI, Durgapur

Date: 3<sup>rd</sup> – 5<sup>th</sup> August, 2022



CSIR-Central Mechanical Engineering Research Institute (CSIR-CMERI), the only national laboratory dedicated to Mechanical Engineering, carry out dedicated research and development over a broad spectrum of mechanical engineering and allied disciplines of science and technology. The Environmental Engineering Group of CSIR-CMERI carry out dedicated R&D efforts towards clean water technology, water testing, water purification technology etc. The group has developed iron and arsenic filters for both domestic and community levels, a number of which have been commercially exploited through licenses. The water testing facility is recognized by the WB pollution control board (WBPCB) and inaugurated by Dr. Subhas Sarkar, Hon'ble Minister of State for Education, Govt. of India.

Over large parts of the world, rivers, lakes and other water bodies show increasing trends of water pollution, especially for developing countries under economic expansion and increasing population sizes. Therefore, assessment of the physical, chemical and biological water quality is essential for the reduction of freshwater pollution.

**Who can participate / Eligibility Criteria:** Unemployed Youth with a Bachelor / Master degree or equivalent in Science or Engineering or a related discipline (pursuing or pass out) can apply / participate. Participants complete the training in a period of 3 days with a workload of 4 hours of theory and 12-14 hours of hands-on training on water and wastewater parameters following standard procedures.

## Objectives of the Training:

- To aware about water related issues [water conservation, water pollution, water quality parameters (for drinking and waste water) and their testing, water related diseases etc.]
- Hands-on training on testing of water quality parameters by using sophisticated analytical instruments, laboratory test procedures, characterization and assessment.

## Training Covered:

- **Water Quality:** To understand and apply concepts of water quality and pollution processes in water bodies and to gain knowledge on factors affecting the water pollution.
- **Water Quality Assessment:** To understand and apply standard procedures to test various water quality parameters (TDS, hardness, pH, residual chlorine, alkalinity, sodium, potassium, arsenic, iron, fluoride, chromium, nickel, lead, zinc, phenol, oil & grease, BOD, COD, total coliform, E. coli etc.) by using sophisticated instruments like Atomic Absorption Spectrophotometer with GFS, UV-VIS spectrophotometer, Flame photometer Ion-selective electrodes, Turbidity Meter, Lamina Flow etc.

**Certificate:** After successful completion of the training, participation certificate will be provided to the participants

**Course Fee:** Rs. 1000/- [The course fee includes Registration kit, Tiffin, Lunch & Tea for the 3 training days' period. The course fee does not include lodging. However, accommodation may be made available (depends on availability) on chargeable basis]

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Water is life's matter and matrix, mother and medium. There is no life without water--: Albert Szent-Gyorgyi