

Course Name:

Aqueous Systems Analysis Laboratory

Course Number:

20606

Credit:

1

Course Content (outline):

- Introduction, Sampling, Presentation of the results, Sensitivity and accuracy
- Basic chemistry review and familiarity with the laboratory safety
- Physico-chemical measurements
 - pH- Electrical conductivity- Alkalinity- Hardness- Temperature
 - Particles in water samples
 - Turbidity and coagulation
 - Dissolved oxygen
 - Biological Oxygen Demand (BOD)
 - Chemical Oxygen Demand (COD) and Total Organic Carbon (TOC)
 - Nitrogen analysis
 - Phosphorus analysis
- Chlorination
- Biodegradation of water-microorganisms
- Advanced analytical devices

References:

- “Standard Methods for the Examination of Water and Wastewater”, American Public Health Association (APHA), USA, 2006.
- “Chemistry for Environmental Engineering”, Sawyer & McCarty, McGraw Hill Book Co., 1978.