

**3rd SEMESTER
SKILL ENHANCEMENT COURSE**

GL318S: WATER QUALITY ANALYSIS

CREDITS: THEORY: 02, PRACTICAL: 02

THEORY: 02 CREDITS

Unit-1

Various chemical parameters and classification of groundwater. Water sampling, Interpretation of chemical, physical and bacterial analysis. Pollution of groundwater by agricultural and chemical industries. Pollution control, Prevention and control of salt water intrusion.

Unit-2

Methods of water collection and preparation of samples for analysis. Analysis of major and minor elements. Analytical techniques - Colorimetric - Flame photometric methods. ISI and WHO standards for drinking, irrigation and industrial quality, Treatment methods for improving quality.

PRACTICAL: 02 CREDITS

Unit-1

Sampling of surface water, lake water, groundwater and water from hand pumps for physical, chemical and biological quality of water.

Unit-2

Analysis of Physico-chemical parameters including pH, EC, TDS, temperature, colour, odour, Ca, Mg, Na, K, HCO₃, CO₃, SO₄, NO₃, Cl, F, As.

Suggested Readings:

Hydrogeology, Davies and De Weist, John Wiley & Sons 1965.
Groundwater Hydrology, Todd.D.K. 1988, John Wiley & Sons.
Groundwater Management, K.R.Karanth, S.R.Technico Book House, Ashokrajpath, Patna- 800 006.
H.M.Ragunath, 1983, Ground water, John Wiely & Sons Ground water and wells, 2nd Ed.
Dr.B.D.Patak, 1988, Hydrogeology of India, Central Board Irrigation and power, Mecha Marg, Chanakayapuri, New Delhi.