

Shree Govind GuruUniversity GODHRA

Syllabus of B.Sc. Sem.I

Elective Course : Water Analysis

**(Based on CBCS)
Effective from June 2016**

- Total credit for the subject is 2.
- Each unit contains ½ (half) credit.
- Total working hours per semester is 26.

UNIT I

Introduction and important :(6 Lecture)

Types of water, Uses and Importance of water, Sources and Availability of water, Physical/Chemical/Biological Characteristics of water, Drinking water standard (WHO & CPCB India), conservation and harvesting of water, sample collection technique .

UNIT II

Water Pollution :(6 Lecture)

Water Pollutants ,Origin of water pollutants, Sources of water pollutants (Specially for Fertilizer and Pesticides), Effects of water pollutants, Physico –chemical effects ,Biological effects, Toxic effects, Pathogenic effects.

UNIT III

Water Analysis for Drinking Water :(7 Lecture)

Physical Analysis: Colour, Temperature, Odour and Taste Transparency, Turbidity.

Chemical Analysis : pH , Total Dissolve Solids(Winkler's method) , Total Hardness, Chloride and Fluoride,

UNIT IV

Water Analysis for Irrigation Water :(7 Lecture)

Determination method of EC, pH , carbonate, bicarbonate ,chloride, Calcium, magnesium and sodium from irrigation water, Criteria's for quality of Irrigation Water, Quality of irrigation water, Suitability of irrigation water.

References :

- (1) Vogel A I, Text Book of Quantitative Inorganic Analysis, 4th Edn., ELBS, London.
- (2) Methods in Environmental Analysis Water, Soil and Air. P.K. Gupta. Second Edition.
- (3) Chopra, S.L. and Kanwar, J.S. 1991. Analytical Agriculture Chemistry. Kalyani Publishers, New Delhi, India.
- (4) CPCB, Pollution Control Acts, Rules and Notifications Issues Thereunder, Central Pollution Control Board, New Delhi.