



Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore
Shri Vaishnav Institute of Technology and Science
Choice Based Credit System (CBCS) in Light of NEP-2020
Civil Engineering Department
Generic Elective (Undergraduate Program)
2024

COURSE CODE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY		PRACTICAL			L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
GUCE101	GE	Water Pollution and Its Management	60	20	20	0	0	4	0	0	4

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit.

***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives:

The student will be able to learn scientific and technical background in water quality monitoring, pollution control technologies and environmental management.

Course Outcomes:

The student will be able to

1. To know the basics, importance of water pollution.
2. To study the various Effects of water pollution.
3. To learn the importance of methods of control of water pollution.
4. To understand the various water pollution control act.

UNIT I

12 Hrs.

Sources and Characteristics of Water Pollution: Water Pollution, sources, and types of water pollution; Physical, Chemical and Biological; Effect of water pollution; Drinking water quality standards; Wastewater treatment; Primary, secondary, tertiary-water pollution prevention and control act – 1974.

UNIT II

12 Hrs.

Water Quality and Standards: Quality of surface waters; Water quality in flowing waters; Water quality in impounded waters; Groundwater quality; Water quality standard; Microbiological quality of drinking water and Chemical quality of drinking water.

UNIT III

12 Hrs.

Industrial Activity and Mitigation Measures: Role of water in different industries; Effluent discharge characteristics; Discharge Standards for Rivers and Streams; Role of stakeholders; Public, NGOS, Government in Protection of Water Bodies; Control Measures; Mitigation Measures for industrial water contamination due to industries.

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UNIT IV

12 Hrs.

Water Pollution Regulations: Administrative regulation under recent legislations in water pollution control; Water (Prevention & control of pollution) Act 1974 as amended by Amendment Act 1988; Water (Prevention & control of pollution) Rules 1975 Water (Prevention & control of pollution) Cess Act. 1977 as amended by Amendment Act 1991.

UNIT V

12 Hrs.

Role of Regulatory Boards: Sustainable Development; Rainwater Harvesting Methods; Water pollution causes and effects; Role of regulatory bodies and local bodies-CPCB TWAD Board – CMWSSB etc.; Case Studies related to Effective Water Management.

Text Books:

1. Water Pollution and Management by C.K Varshney, New Age International (P) Ltd., Publishers, 2018.
2. Water Pollution and Management by D. S. Malik, Sunil Kumar, Umesh Bharti, Biotech Books, 2011.

Reference Books:

1. Water Pollution: Assessment and Management by Arvind Kumar, Daya Publishing House, 2008.
2. Environmental Law and Policy by Aruna Venkat, PHI learning private limited New Delhi, 2011.

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