



**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 Courses)**  
**ODD Sem**

COURSE CODE	CATE-GORY	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*				
<b>GUCE101</b>	<b>GE</b>	<b>Water Pollution and Its Management</b>	60	20	20	0	0	3	0	0	3

**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:**

To learn the fundamental concepts in the field of water pollution and its 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**

**08 Hrs.**

**Sources & Characteristics of Water Pollution** - Water Pollution-Sources & types of water pollution –Physical, chemical & biological –Effect of water pollution. Drinking water quality standards Wastewater treatment –Primary, secondary, tertiary-water pollution prevention & control act – 1974.

**UNIT II**

**08 Hrs.**

**Water Quality & 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 d Chemical quality of drinking water.

**UNIT III**

**08 Hrs.**

**Industrial Activity & 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**

**08 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**

**09 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: Assessment and Management by Arvind Kumar, Daya Publishing House
2. Fair.G.M, "Water and Wastewater engineering Vol.I & II". John Wiley and sons, New York. 2010.

**Reference Books:**

1. Aruna Venkat Environmental Law and Policy", PHI learning private limited New Delhi, 2011.
2. Water Management in India," Concept Publishing Company", New Delhi, 2004.

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