

# Maharashtra State Board of Technical Education, Mumbai

## TEACHING PLAN (TP)

**Institute Name:** 0078-K. K. Wagh Polytechnic, Nashik

Academic Year: **2025-26 (EVEN)**

**Programme:** Information Technology (IF)

**Course:** Environmental Education and Sustainability (EES)

**Course Code:** 312303

**Scheme:** K

**Semester:** Fourth

**CLASS:** SYIF (CRAY)

**Name of Faculty:** Mr. T.G.Uphade

### COURSE LEVEL LEARNING OUTCOMES (COS)

- CO1 - Identify the relevant Environmental issues in specified locality.
- CO2 - Provide the green solution to the relevant environmental problems.
- CO3 - Conduct SWOT analysis of biodiversity hotspot
- CO4 - Apply the relevant measures to mitigate the environmental pollution.
- CO5 - Implement the environmental policies under the relevant legal framework.

### TEACHING-LEARNING & ASSESSMENT SCHEME

Course Code	Course Title	Abbr	Course Category	Learning Scheme						Credits	Paper Duration	Assessment Scheme									
				Actual Contact Hrs./Week			SLH	NLH	Theory				Based on LL & TSL Practical				Based on SL		Total Marks		
				CL	TL	LL			FA			SA	Total	FA-PR	SA-PR	SLA					
																Max	Min	Max		Min	Max
314301	ENVIRONMENTAL EDUCATION AND SUSTAINABILITY	EES	VEC	3	-	-	1	4	2	1.5	30	70*#	100	40	-	-	-	-	25	10	125

Total IKS Hrs. for Sem.: 0 Hrs.

Abbreviations: CL- Classroom Learning , TL- Tutorial Learning, LL-Laboratory Learning, SLH-Self Learning Hours, NLH-Notional Learning Hours, FA -Formative Assessment, SA -Summative assessment, IKS - Indian Knowledge System, SLA - Self Learning Assessment Legends: @ Internal Assessment, # External Assessment, \*# On Line Examination , @\$ Internal Online Examination

### SUGGESTED COS - POS MATRIX FORM

Course Outcomes (COs)	Programme Outcomes (POs)							Programme Specific Outcomes (PSOs)	
	PO-1 Basic and Discipline Specific Knowledge	PO-2 Problem Analysis	PO-3 Design/ Development of Solutions	PO-4 Engineering Tools	PO-5 Engineering Practices for Society, Sustainability and Environment	PO-6 Project Management	PO-7 Life Long Learning	PSO- 1	PSO- 2
CO1	-	1	-	-	3	2	3	2	2
CO2	-	2	2	-	3	2	3	3	2
CO3	-	-	-	-	3	1	2	3	3
CO4	1	-	-	-	3	2	2	3	3
CO5	1	-	2	-	3	2	3	3	3

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Legends: - High:03, Medium:02, Low:01, No Mapping: -

\*PSOs are to be formulated at institute level

Unit No. (Allocated Hrs.)	CO	TLO aligned to COs	Title/ Details	Plan (No. of Lectures)		Actual Execution (From-To & No. of Lectures)		Pedagogy used (Teaching method /Media)	Remarks
				From	To	From	To		
01 (08)	CO1		<b>Unit - I Environment and climate change</b>					Chalk, Board, PPT+ LCD Videos, Google Classroom, Learn Live	
					02 Lectures				
		TLO 1.1, TLO 1.2	<b>1.1</b> Environment and its components <b>1.2</b> Environmental Issues-	16/12/25	18/12/25				
		TLO 1.3	<b>1.3</b> Concept of 5R	02 Lectures					
				18/12/25	20/12/25				
		TLO 1.4	<b>1.4</b> Impact of Climate change	02 Lectures					
				20/12/25	23/12/25				
		TLO 1.5	<b>1.5</b> Zero Carbon footprint for sustainable development	02 Lectures					
				23/12/25	27/12/25				
02 (10)	CO2		<b>Unit - II Sustainability and Renewable Resources</b>					Chalk, Board, PPT Videos, Learn Live	
					03 Lectures				
		TLO 2.1	<b>2.1 Natural Resources:</b>	30/12/25	03/01/26				
		TLO 2.2	<b>2.2</b> Impact of overexploitation of natural resources	02 Lectures					
				03/01/26	06/01/26				
		TLO 2.3	<b>2.3</b> Energy forms	02 Lectures					
		08/01/26	13/01/26						
		TLO 2.4	<b>2.4</b> Green Solutions	02 Lectures					
				13/01/26	15/01/26				

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03 (08)	CO3		<b>Unit - III Ecosystem and Biodiversity</b>					Chalk, Board, PPT, Learn Live		
		TLO 3.1, TLO 3.2, TLO 3.3	3.1 Ecosystem -	02 Lectures		15/01/26	17/01/26			
			3.2 Biodiversity 3.3 Biodiversity Assessment Initiatives in India	03 Lectures		20/01/26	24/01/26			
		TLO 3.3 TLO 3.4	3.4 SWOT analysis 3.5 Conservations of biodiversity	03 Lectures		24/01/26	03/02/26			
04 (12)	CO4		<b>Unit - IV Environmental Pollution</b>					Chalk, Board, PPT Videos, Learn Live		
				02 Lectures						
		TLO 4.1	4.1 Definition of pollution, types-	05/02/26	07/02/26					
		TLO 4.2	4.2 Soil / Land Pollution –	03 Lectures		10/02/26	14/02/26			
		TLO 4.3	4.3 Water Pollution -	02 Lectures		12/02/26	14/02/26			
		TLO 4.4	4.5 Noise pollution -	02 Lectures		17/02/26	21/02/26			
TLO 4.5	4.6 Pollution Control Boards at Central and State Government level:	03 Lectures		24/02/26	28/02/26					
05 (07)	CO5		<b>Unit - V Environmental legislation and sustainable practices</b>					Chalk, Board, PPT Videos, Learn Live		
				02 Lectures						
		TLO 5.1	5.1 Article (48-A) and (51-A (g))	05/02/26	07/03/26					
		TLO 5.2	5.2 Public awareness	02 Lectures		10/03/26	14/03/26			
TLO 5.3,	5.3 Green technologies	03 Lectures								

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		TLO 5.4	5.4 Role of information	17/03/26	28/03/26				

#### ASSESSMENT METHODOLOGIES/TOOLS

##### A. Formative assessment (Assessment for Learning) (FA-TH)

Two-unit tests (MCQs) of 30 marks will be conducted and average of two-unit tests considered. Formative assessment of self-learning of 25 marks should be assessed based on self-learning activity such as UNICEF Certification(s)/Micro project/assignment/activities. (60 % weightage to process and 40 % to product)

##### B. Summative Assessment (Assessment of Learning) (SA-TH)

Online MCQ type Exam

#### SUGGESTED LEARNING MATERIALS / BOOKS

Sr. No	Author	Title	Publisher
1	Y. K. Singh	Environmental Science	New Age International Publishers, 2006, ISBN: 81- 224-2330-2
2	Erach Bharucha	Environmental Studies	University Grants Commission, New Delhi
3	Rajagopala R.	Environmental Studies: From Crisis to Cure.	Oxford University Press, USA, ISBN: 9780199459759, 0199459754

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#### LEARNING WEBSITES & PORTALS

Sr. No	Link /Portal	Description
1	<a href="https://sdgs.un.org/goals">https://sdgs.un.org/goals</a>	United Nation's website mentioning Sustainability goals
2	<a href="http://www.greenbeltmovement.org/news-and-events/blog">http://www.greenbeltmovement.org/news-and-events/blog</a>	Green Belt Movement Blogs on various climatic changes and other issues
3	<a href="http://www.greenbeltmovement.org/what-we-do/tree-plantingfor-watersheds">http://www.greenbeltmovement.org/what-we-do/tree-plantingfor-watersheds</a>	Green Belt Movement's work on tree plantation, soil conservation and watershed management techniques

**Mr. T. G. Uphade**  
(Name of Faculty)

**Ms. M. S. Karande**  
**HOD-IF**