

TEACHING PLAN (TP)

Academic Year: 2025-26 (EVEN)

Institute Code and Name: 0078- K. K. Wagh Polytechnic, Nashik
Programme and Code: Information Technology (IF)
Course and Code: Environmental Education and Sustainability
Name of Faculty: Mrs.M.K.Wadekar
CLASS: SYIF (Param)

Semester: Fourth
Course Code: 314301
Scheme: K
Allocated Hrs. 30

COURSE LEVEL LEARNING OUTCOMES (COS)

- CO1 - Develop python programs using control flow statements.
- CO2 - Perform operations on various data structures in Python.
- CO3 - Develop packages to solve given problem using python.
- CO4 - Apply object-oriented approach to solve given problem using python.
- CO5 - Use relevant built-in python package to develop application.

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			
				C L	T L	L L			FA- TH			SA - TH	Total		FA- PR	SA-PR			SLA		
													Max	Min		Max	Min			Max	Min
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 Hour 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		
CO2	-	2	2	-	3	2	3		
CO3	-	-	-	-	3	1	2		
CO4	1	-	-	-	3	2	2		
CO5	1	-	2	-	3	2	3		

Legends :- High:03, Medium:02,Low:01, No Mapping: -
*PSOs are to be formulated at institute level

Maharashtra State Board of Technical Education, Mumbai

TEACHING PLAN (TP)

Academic Year: 2025-26 (EVEN)

Institute Code and Name: 0078- K. K. Wagh Polytechnic, Nashik

Programme and Code: Information Technology (IF)

Course and Code: Environmental Education and Sustainability

Name of Faculty: Mrs.M.K.Wadekar

CLASS: SYIF (Param)

Semester: Fourth

Course Code: 314301

Scheme: K

Allocated Hrs. 30

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		Unit - I Environment and climate change					Chalk, Board, PPT+ LCD Videos, Learn Live	
				02 Lectures					
		TLO 1.1	1.1Introduction: 1 Explain the need of studying environment and its components. 1.2 Investigate the impact of population growth and industrialization on the relevant environmental issues and suggest remedial solutions	16/12/25	18/12/25				
		TLO 1.2 TLO 1.3	1.3 Explain the Concept of 5 R w.r.t. the given situation TLO 1.4 Elaborate the relevance of Sustainable Development Goals in managing the climate change	02 Lectures					
		TLO 1.4	1.5 Explain the concept of zero carbon-footprint with carbon credit	23/12/25	30/12/25				
02 (10)	CO2		Unit - II Sustainability and Renewable Resources					Chalk, Board, PPT Videos,	
				02 Lectures					
		TLO 2.1	2.1 2.1 Justify the importance of natural	08/01/26	13/01/26				

Maharashtra State Board of Technical Education, Mumbai

TEACHING PLAN (TP)

Academic Year: 2025-26 (EVEN)

Institute Code and Name: 0078- K. K. Wagh Polytechnic, Nashik**Programme and Code:** Information Technology (IF)**Course and Code:** Environmental Education and Sustainability**Name of Faculty:** Mrs.M.K.Wadekar**CLASS:** SYIF (Param)**Semester:** Fourth**Course Code:** 314301**Scheme:** K**Allocated Hrs.** 30

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
			resources in sustainable development					Learn Live	
		TLO 2.2	2.2 Explain the need of optimum use of natural resources to maintain the sustainability	02 Lectures					
				15/01/26	20/01/26				
		TLO 2.3 TLO 2.4	2.3 Differentiate between renewable and non-renewable sources of energy Suggest the relevant type of energy source as a green solution to environmental issues	04 Lectures					
22/01/26	03/02/26								
03 (08)	CO3		Unit - III Functions, Modules and Packages in Python					Chalk, Board, PPT+ Videos, Learn Live	
		TLO 3.1 TLO 3.2	3.1 Explain the characteristics and functions of ecosystem 3.2 Relate the importance of biodiversity and its loss in the environmental sustainability	03 Lectures					
				05/02/26	10/02/26	10/02/26			
				03 Lectures					

Maharashtra State Board of Technical Education, Mumbai

TEACHING PLAN (TP)

Academic Year: 2025-26 (EVEN)

Institute Code and Name: 0078- K. K. Wagh Polytechnic, Nashik

Programme and Code: Information Technology (IF)

Course and Code: Environmental Education and Sustainability

Name of Faculty: Mrs.M.K.Wadekar

CLASS: SYIF (Param)

Semester: Fourth

Course Code: 314301

Scheme: K

Allocated Hrs. 30

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
		TLO 3.3 TLO 3.4	3.3 Describe biodiversity assessment initiatives India 3.4 Conduct the SWOT analysis of the biodiversity hot spot in India	12/02/26	12/02/26	17/02/26			
04 (12)	CO4		Unit - IV Environmental Pollution	02 Lectures				Chalk, Board, PPT+ LCD Videos, Learn Live	
		TLO 4.1	4.1 Classify the pollution based on the given criteria 4.2 Justify the need of preserving soil as a resource along with the preservation techniques	17/02/26	24/02/26				
		TLO 4.3 TLO 4.4 TLO 4.5	4.3 Maintain the quality of water in the given location using relevant preventive measures 4.4 State the significance of controlling the air pollution to maintain its ambient quality norms 4.5 Compare the noise level from different zones of city with justification	02 Lectures					
				24/02/26	26/02/26				
05 (07)	CO5		Unit V Environmental legislation and sustainable practices	02 Lectures				Chalk, Board, PPT+ LCD Videos, Learn Live.	
		TLO 5.1	5.1 Explain Constitutional provisions related to environmental protection.	05/03/26	10/03/26				
		TLO 5.2	5.2 Explain importance of public participation (PPP) in enacting the relevant	02 Lectures					
				12/03/26	17/03/26				

TEACHING PLAN (TP)

Academic Year: 2025-26 (EVEN)

Institute Code and Name: 0078- K. K. Wagh Polytechnic, Nashik
Programme and Code: Information Technology (IF)
Course and Code: Environmental Education and Sustainability
Name of Faculty: Mrs.M.K.Wadekar
CLASS: SYIF (Param)

Semester: Fourth
Course Code: 314301
Scheme: K
Allocated Hrs. 30

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
			lawstkinter, Widgets						
		TLO 5.3 TLO 5.4	5.3 Use the relevant green technologies to provide sustainable solutions of an environmental problem 5.4 Explain the role of information technology in environment protection	02 Lectures					
				17/03/26	24/03/26				

ASSESSMENT METHODOLOGIES/TOOLS

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

- Continuous assessment based on process and product related performance indicators. Each practical will be assessed considering 1) 60% weightage is to process 2) 40% weightage to product

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

End Semester Exam based on Practical performance and Viva-voce.

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 Science	University Grants Commission, New Delhi
3	Rajagopalan	Environmental Studies: From Crisis to Cure	Oxford University Press, USA, ISBN: 9780199459759, 0199459754
4	Shashi Chawla	A text book of Environmental Science	Tata Mc Graw-Hill New Delhi
5	Arvind Kumar	A Text Book of Enviornmental science APH	Publishing New Delhi (ISBN 978-8176485906

TEACHING PLAN (TP)

Academic Year: 2025-26 (EVEN)

Institute Code and Name: 0078- K. K. Wagh Polytechnic, Nashik
Programme and Code: Information Technology (IF)
Course and Code: Environmental Education and Sustainability
Name of Faculty: Mrs.M.K.Wadekar
CLASS: SYIF (Param)

Semester: Fourth
Course Code: 314301
Scheme: K
Allocated Hrs. 30

LEARNING WEBSITES & PORTALS

Sr. No	Link / Portal	Description
1	https://sdgs.un.org/goals	United Nation's website mentioning Sustainability goals
2	http://www.greenbeltmovement.org/news	Green Belt Movement Blogs on various climatic changes and other issues
3	http://www.greenbeltmovement.org/what-we-do/tree-planting-for-watersheds	Green Belt Movement's work on tree plantation, soil conservation and watershed management techniques
4	https://www.youtube.com/@ierekcompany/videos	International Experts For Research Enrichment and Knowledge Exchange – IEREK's platform to exchange the knowledge in fields such as architecture, urban planning, sustainability
5	www.mahayouthnet.in	UNICEF Initiative for youth leadership for climate action

Ms.M.K.Wadekar
 (Name & Signature of Staff)

Ms. M. S. Karande
 (Name & Signature of HOD)