

Government Polytechnic, Pune

'180OB' – Scheme

Programme	Diploma in /CE/EE/ ET/ME/MT/CM/IT/DDGM
Programme code	01/02/03/04/05/06/07/08/16/17/21/22/23/24/26
Name of Course	Environmental science
Course Code	AU4101
Prerequisite course code and name	

1. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P)		Examination Scheme				Total Marks
					Theory		Practical		
L	T	P	C		ESE	PA	*ESE	PA	
-	-	02	02	Marks	-	-	-	50	50
				Exam Duration	-	-	-		

Legends: L- lecture-Tutorial/teacher guided theory practice-practical, ESE-End semester examination, A- Progressive Assessment.

2. RATIONALE

This is an interdisciplinary course, introduced with an aim to create awareness about environmental issues among the diploma students. The rate Industrialization and Urbanization is very fast, and the country/world is facing the issues like draught, flood, deforestation, increase in earth temperature, pollution and depletion of resources. In view of this the management of resources' and dilution of pollutants is of prime need to keep the environment safe and clean.

3. COMPETENCY

The aim of this course is to attend following industry identified competency through various teaching learning experiences:

- **To create environmental awareness for sustainable development".**

4. COURSE OUTCOMES (COs)

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented COs associated with the above mentioned competency:

1. Create awareness for conservation of natural resources and preserving the environment.
2. Perform/Contribute in sustainable development.
3. Undertake preventive measures to control different pollutions.
4. Differentiate between Conventional and Non-conventional energy sources.
5. Identify the role of SPCB/CPCB and EPA in Environment protection

5. SUGGESTED PRACTICALS/ EXERCISES

The practicals in this section are PrOs (i.e. sub-components of the COs) to be developed and assessed in the student for the attainment of the competency:

Sr. No.	Practical Exercises (Outcomes in Psychomotor Domain)	Relevant CO	Approximate Hours Required.
1.	Visit to “KacharaDepot,(dumping yard) and write a report.*	CO1,3,,5	6*
2.	Identify the Environmental issues and group discussion on the efforts made to increase public awareness and prepare a report. *	CO1,2,3	4*
3.	Assignment/Report on ecosystem and its components.	CO2	2
4.	Expert lecture on Role of NGOs and Government in Conserving Environment and write a report on it.*	CO2,3,5	4*
5.	Visit to a local area -Environmental assets such as river /forest / grassland / hill / mountain and writing report on it.	CO1,3	8
6.	Activity based on – “Best out of Waste” (use of waste paper, plastic, glass bottles, clothe, scrap.)*	CO3	2*
7.	Video Demonstration /Expert Lecture Report on Climate Change and Global warming.	CO1,2,3, 4,5	2
8.	Write a report on E-waste - * 1. Describing E-waste and it's type. 2. State its impact/hazards on environment. 3. State importance of E-waste disposal and disposal methods. 4. Comments on how E-waste is handled globally. (Role play can be enacted by each group representing different countries) 5. Description of how India handles e-waste. (Role play can be enacted by a group)	CO1,2,3	4*
9.	Visit to nearby site ,using nonconventional energy source (e.g solar/wind)	CO4	8
10.	Visit to nearby Poly house and write a report. (product, financial assistance, ,limitations ,difficulties in operating, any other related information),.	CO2	8
11.	Individual Presentation on Environmental issues and his/her contribution towards Environment.*	CO12,3, 4,5	4*
12.	Write an assignment on Green House effect, carbon footprint, carbon trading.	CO2,3,4	2
13.	Assignment on disposal of medical waste.(To study Incineration.)	CO3	2
14.	Identify the issues related to the programmes in the institute and write the report. * (here disciplinary or interdisciplinary activity can be carried out)	CO2,3	4*
15.	Write an assignment on role of Ministry of Environment and Forest Organizational Structure (MOEF) and Central Pollution Control Board(CPCB), State Pollution Control	CO5	4*

	Board(SPCB), Environment Protection Act.*		
	Total Hrs		32

Practical marked with* are compulsory.

S.No.	Performance Indicators	Weightage in %
a.	Observation , collection ,and analysis of data	40
b.	Preparation of report	30
c.	Interpretation of result/ observation and conclusion	10
d.	Answer to questions	10
e.	Submission of report in time	10
Total		100

6. MAJOR EQUIPMENT/ INSTRUMENTS REQUIRED
NA

7. THEORY COMPONENTS

The curriculum is activity based. It is expected from teacher to explain to students the scientific theory behind each assignment.

For eg.- The assignment stating best out of waste..... Does not mean to make only decorative items from waste....

In this case it is expected to explain the concept of 4R I.e. reduce, reuse, recycle, reproduce...

8. SUGGESTED SPECIFICATION TABLE FOR QUESTION PAPER DESIGN
NA

9. SUGGESTED STUDENT ACTIVITIES
NA

10. SUGGESTED SPECIAL INSTRUCTIONAL STRATEGIES (if any)

These are sample strategies, which the teacher can use to accelerate the attainment of the various outcomes in this course:

- Massive open online courses (**MOOCs**) may be used to teach various topics/sub topics.
- About **15-20% of the topics/sub-topics** which is relatively simpler or descriptive in nature is to be given to the students for **self-directed learning** and assess the development of the COs through classroom presentations (see implementation guideline for details).

11. SUGGESTED MICRO-PROJECTS

NA

(Only for Class Declaration Courses)

12. SUGGESTED LEARNING RESOURCES

S.N.	Title	Author, Publisher, Edition and Year of publication	ISBN Number
1.	Basic Civil and Environmental Engineering	S.P. Nisture, D. A. Joshi, G.S.Chhawsaria, Pearson	978-1282531819
2.	Basics of Environmental Studies	AninditaBasak, D.L. Manjunath, Pearson	978-8131756072
3.	Global Warming The Hard Science	L.D.DannyHarvey Pearson	978-8131733318
4.	Environmental Studies	BennyJosephTataMcGraw Hill	978-9352605170
5.	Renewable Energy	Godfrey Boyle, Oxford Publications	0199261784, 9780199261789
6.	Environmental studies	R. Rajagopalan, Oxford University Press	9780199459759

13. SOFTWARE/LEARNING WEBSITES

1. www.nptel.com
2. <http://www.mpcb.gov.in/>
3. <http://www.cpcb.nic.in/>
4. <http://www.envfor.nic.in/>
5. <http://www.neeri.res.in/>

14. PO - COMPETENCY- CO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	1	1	2	1	3	1	3
CO2	1	1	2	1	3	1	3
CO3	1	1	2	2	2	1	3
CO4	1	1	2	1	2	1	3
CO5	1	1	2	1	2	1	3

CO	PSO1	PSO2	PSO3
CO1	--	1	1
CO2	1	1	1
CO3	1	1	1
CO4	1	1	1
CO5	2	--	1

List of Experts &Faculties Who Contributed For This Curriculum:

S.N.	Name	Designation	Institute / Industry
1.	DR. SMS Shashidhara.	Chairman PBOS	Head Civil Engg. Dept. GOVT. POLYTECHNIC,PUNE
2	Shri .Sanjay Deshpande.	Director,Sanjivani Development	Industry person
3.	Mrs.M.U.Kokate	Faculty from Institute	Head IT. Dept. GOVT. POLYTECHNIC,PUNE
4	Mrs.SeemaV.Kolhe	Faculty from Institute	Lecturer in Civil Engg. GOVT. POLYTECHNIC,PUNE
5	Shri .M.K.Panchawate	Faculty from Institute	Lecturer in Civil Engg. GOVT. POLYTECHNIC,PUNE
6	Mrs. P.M.Zilpe	Faculty from Institute	Lecturer in Electronics Engg. GOVT. POLYTECHNIC,PUNE
7	Mrs. S.S.Chhatwani .	Faculty from Institute	Lecturer in Electronics Engg. GOVT. POLYTECHNIC,PUNE
8	Mrs. M. H. Bilgi	Faculty from Institute	Lecturer in Electrical Engg. GOVT. POLYTECHNIC,Pune

Sign:	Sign:
Name:Mrs.S.V.KOLHE / M.K.Panchawate (Course Expert /s)	Name: DR.SMS SHASHIDHARA (Program Head) (Civil Engg Dept.)
Sign:	
Name: Shri A.S.Zanpure (CDC)	

Government Polytechnic, Pune

'180OB' – Scheme

Programme	Diploma in Computer Engineering and Information Technology
Programme code	06, 26,07
Name of Course	Digital Marketing
Course Code	AU4105
Prerequisite course code and name	(NA)

1. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P)		Examination Scheme				
					Theory		Practical		Total Marks
L	T	P	C		ESE	PA	*ESE	PA	50
00	00	02	02	Marks	00	00	25	25	
				Exam Duration	--	--	--	--	

(*):OE (Oral Examination)

Legends: L- lecture,T-Tutorial/teacher guided theory practice,P-practical,ESE-End semester examination,PA- Progressive Assessment.

Note: ESE for the course will be based on oral examinations

2. RATIONALE

Digital marketing is advertising or promotions of products and services using digital platforms. Digital Marketing is rapidly evolving technology. And social media is ever growing marketing platform for users. The course will help students to improve skills to market their product or service in the digital media. The course will enable students to explore and create something new who wants to be a good entrepreneur or good professional in design and development.

3. COMPETENCY

The aim of this course is to attend following industry identified competency through various teaching learning experiences:

- Enhance business using various digital media channels

4. COURSE OUTCOMES (COs)

The practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry-oriented COs associated with the above-mentioned competency:

1. Identify advertisement sections of web pages in a website.
2. Install Google analytics on a website.
3. Use Google analytics for reading analytics data.
4. Generate reports for sample web-site
5. Use e-mail marketing tool

5. SUGGESTED PRACTICALS/ EXERCISES

The practical's in this section are PrOs (i.e. sub-components of the COs) to be developed and assessed in the student for the attainment of the competency:

Sr. No	PRO	Practical Exercises (Outcomes in Psychomotor Domain)	Relevant CO	Approximate Hours Required.
1	Study a sample web-site	Study and prepare a report of a sample web-site with strategic flow for e-commerce/publication etc. with the use of: HTML, CSS, JavaScript	CO1, CO2	2
2	Install Google Analytics for a sample web-site	Set up and create account on Google Analytics and install it on a web-site. Study of Google Analytics GUI/IDE for: <ul style="list-style-type: none"> • Inbound and outbound marketing • Content marketing • Website Content optimization 	CO2	2
3	Use 'Monster Insight' plug-in for sample web-site	(A) Demonstrate and install Google Analytics plug-in 'Monster Insight' for the web-site (B) Study of Search Engine Optimization (SEO) using Digital marketing platform	CO2	2
4	Track links for sample web-site	(A) Create the tracking id for web-site and track links (B) Analyze website traffic and leads using DM platform/tool	CO2	2
5	Use Google analytics for reading analytics data.	Read Analytics data. Read audience acquisition and behavior	CO3	2
6		Analyze data using Google Analytics	CO3	2
7	Generate reports for sample web-site	Generate different types of reports through Google Analytics	CO4	2
8	Use e-mail marketing tool for sample web-site	Study of any email marketing tool (Freeware)	CO5	2
		Total Hrs		16

S.No.	Performance Indicators	Weightage in %
a.	Study of web pages and web site	30
b.	Installing and setting up the tool for web site	30
c.	Observations and Recording	10
d.	Interpretation of reports, result and Conclusion	10
e.	Answer to sample questions	10
f.	Submission of term work journal in time	10
Total		100

6. MAJOR EQUIPMENT/ INSTRUMENTS REQUIRED

The major tools with broad specification mentioned here will usher in uniformity in conduct of practical, as well as aid to procure equipment by authorities concerned.

Sr.No.	Major tools Required	PrO.No.
1	Web browser	1,2
2	Any Web Server (e.g. Glassfish, Tomcat)	3,4,7
3	Google Analytics	5,6

**7. THEORY COMPONENTS
(Not Applicable)****8. SUGGESTED SPECIFICATION TABLE FOR QUESTION PAPER DESIGN
(Not Applicable)****9. SUGGESTED STUDENT ACTIVITIES**

Other than the laboratory learning, following are the suggested student-related *co-curricular* activities which can be undertaken to accelerate the attainment of the various outcomes in this course: Students should conduct following activities in group and prepare reports of each activity.

- Prepare journals based on practical performed in laboratory.
- Study of different types of web-sites (ecommerce/ publication/ social media) and advertisements on these web-sites.

10. SUGGESTED SPECIAL INSTRUCTIONAL STRATEGIES (if any)

These are sample strategies, which the teacher can use to accelerate the attainment of the various outcomes in this course:

- Self-learning through Online tutorials to more analyze business data
- Use of freeware marketing tools to check for the effectiveness for particular type of websites

11. SUGGESTED MICRO-PROJECTS

NA

(Only for Class Declaration Courses)

12. SUGGESTED LEARNING RESOURCES

	Title	Author, Publisher, Edition and Year of publication	ISBN Number
1	Fundamental of digital Marketing	Punneet Singh Bhatia, Pearson India, 2 nd Edition (2019)	9789353434141
2	The Art of SEO	Eric Enge, Stephan Spencer, Jessie Stricchiola, O'Reilly: 3 Edition (August 2015)	1491948965 978- 1491948965

13. SOFTWARE/LEARNING WEBSITES

1. www.nptel.com
2. <https://youtu.be/mXcQ7rVn3ro>
3. <https://youtu.be/gQe7gGGuzeQ>
4. https://www.tutorialspoint.com/digital_marketing/

14. PO - COMPETENCY- CO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	-	1	3	2	-	1	-
CO2	-	2	1	2	-	-	1
CO3	1	2	3	3	-	1	1
CO4	-	1	2	3	-	1	1
CO5	-	3	3	3	1	1	1
<u>Summery</u>	1	2	2	3	1	1	1

	PSO1	PSO2
CO1	1	2
CO2	1	3
CO3		3
CO4		3
CO5	1	3

Sign: Name: 1) SmtM.G.Yawalkar 2) Smt.A.S. Paik 3) Smt. K.S.Gaikwad (Course Expert /s)	Sign: Name: (Mr.U.V.Kokate) Signature of Head of the Department (Computer Engineering)
Sign: Name: (Mrs.M.U.Kokate) Signature of Head of the Department (Information Technology)	Sign: Name: Shri A.S.Zanpure (CDC In-charge)