

**1.3.1 Institution Integrates Crosscutting issues relevant to Professional Ethics, Gender, Human Values, environment & Sustainability into the Curriculum**

**1. List of the courses that address the crosscutting issues:**

Sr. No.	Dept	Core Course	Course Title & Course Code
1	Civil Engineering	SY B.Tech	Environmental studies Environmental Engineering-I (PCC-CV503), Environmental Engineering-II (PCC-CV603)
		TY B.Tech	Solid Waste Management(PCE-CV705), Legal Aspect in Civil Engineering(HM-CV706)
2	Computer Science & Engg.	Final Year B.Tech	HM- CS307:Soft Skills
		SY B.Tech	MC-CS408: Environmental Studies
		TY B.Tech	HM- CS508 :Business English
		Final Year B.Tech	HM-CS807 : Professional Skills
3	Electrical Engineering	SY B.Tech	Environmental studies
		Final Year B.Tech	Management & Entrepreneurship Development (PCC-EE407),Electrical Vehicle(OCE-EE401)
4	E & TC Engg	SY B.Tech	Environmental studies(MC-ETC-301)
		FY MBA	Soft Skill Development (CC 107), Managerial Skill for Effectiveness (AECC 207),
5	MBA Dept	SY MBA	Innovation and Entrepreneurship (CC401), Start and New Venture (CC402), Employability Skills (SECC 403)
6	Mechanical Engg.	TY B.Tech	Electrical vehicle(OCE-ME-316), MC-ME209 Environmental studies
		Final Year B.Tech	Energy and power engineering(PCC-ME-410)





**SHIVAJI UNIVERSITY, KOLHAPUR**

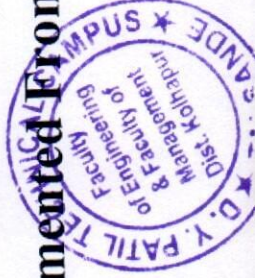
**SYLLABUS**

**Third Year (B. Tech.) CBCS**

**In**

**CIVIL ENGINEERING**

**(To be implemented From JUNE 2020)**



SEMESTER - V					
Sr. No	Code No.	Course (Subject Title)		Semester	Credits
1	PCC-CV501	WRE-I	Water Resource Engineering-I	5	4
2	PCC-CV502	DSS	Design of Steel Structures	5	5
3	PCC-CV503	EE-I	Environmental Engineering-I	5	4
4	PCC-CV504	GTE-I	Geotechnical Engineering-I	5	5
5	PCC-CV505	BPD	Building Planning and Design	5	4
6	OEC-CV506	OE-I	Open Elective-I	5	3
<b>TOTAL</b>					<b>25</b>

SEMESTER -VI					
Sr. No	Code No.	Course (Subject Title)		Semester	Credits
1	PCC-CV601	TOS	Theory of Structures	6	4
2	HM-CV602	EM	Engineering Management	6	5
3	PCC-CV603	EE-II	Environmental Engineering-II	6	4
4	PCC-CV604	GTE-II	Geotechnical Engineering-II	6	5
5	OEC-CV605	OE-II	Open Elective-II	6	4
6	PCC-CV606	SDD-I	Structural Design and Drawing-I	6	2
7	MC-CV607		SEMINAR	6	1
8	*SI-CV707	FT	Field Training	-	-
<b>TOTAL</b>					<b>25</b>



**Third Year B.Tech. (Civil) Semester - V**

**Environmental Engineering – I**

Course	Teaching Scheme				Evaluation Scheme				
	L	T	P	Credit	Scheme	Theory (Marks)		Practical(Marks)	
						Max.	Min. for passing	Max.	Min. for passing
EE-I (PCC-CV503)	03	--	02	04	ISE	--	--	25	10
					CIE	30	12	--	--
					ESE	70	28	--	--

ISE: In Semester Evaluation    CIE: Continuous Internal Evaluation    ESE: End Semester Examination

**Course Objectives:**

1. To understand various sources of water with respect to quality and quantity of water.
2. To describe and design the various water treatment units.
3. To learn the special water treatments and sequencing of treatment for various qualities of surface & ground water.
4. To design the various components related to transmission and distribution of water.
5. To understand various water supply appurtenances.

**Course Outcomes:**

After successful completion of this course students will be able to:

1. Describe the various sources of water with respect to quality and quantity of water.
2. Design the various water treatment units.
3. Illustrate the special water treatments and sequencing of treatment for various qualities of surface & ground water.
4. Describe the various components related to transmission and design of distribution of water.
5. Summarize the different water supply appurtenances.

**SECTION I**

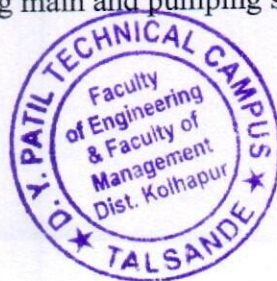
**Unit 1: Introduction to Water Supply Scheme**

**6hrs**

- 1.1 *Introduction to Water Supply Scheme*: Data collection for water supply scheme, Components and layout, Design period, Factors affecting design period.
- 1.2 *Quantity*: Rate of water consumption for various purposes like domestic, industrial, institutional, commercial; Fire demand and water system losses, Factors affecting rate of demand, Population forecasting.
- 1.3 *Quality*: Water quality parameters, Characteristics & significance in water treatment, Drinking water quality standards- BIS, WHO Standards.
- 1.4 *Water Intake Structures*: General design considerations, Types such as river intake, canal intake and reservoir intake, Concept of rising main and pumping station.

**Unit 2: Water Treatment**

**6hrs**



- 2.1 *Water Treatment*: Principles of water treatment processes. Introduction to different types of water treatment flow sheets.
- 2.2 *Aeration*: Principle and concept, Necessity, Methods, Design of cascade aerator.
- 2.3 *Coagulation & Flocculation*: Theory, Factors affecting, Destabilization of colloidal particles, Types of dosing of coagulants, Selection of coagulants, Jar tests, Design of rapid mixer & flocculator, Theory of clariflocculator.
- 2.4 *Sedimentation*: Theory, Types of settling, Types of sedimentation tanks, Principles & design, Concept of tube & plate settler.

### **Unit 3: Water Treatment**

**6hrs**

- 3.1 *Filtration*: Mechanism, Head loss development, Negative head loss, Types of filters- slow sand filter, rapid sand filter & pressure filter, Operation & design of slow sand & rapid sand filter.
- 3.2 *Disinfection*: Theory, Factors affecting disinfection, Types of disinfectants, Types and methods of chlorination break point chlorination
- 3.3 *Water Softening Processes*: Lime-soda process, Ion exchange
- 3.4 *Demineralization*: Reverse osmosis, Electro-dialysis

## **SECTION II**

### **Unit 4: Distribution Reservoirs and Service Storages**

**6hrs**

- 4.1 Necessity, Location, Head requirement, Capacity determination by analytical & graphical method.
- 4.2 Transmission of water, Pumping & gravity mains, Choice of pipe materials, Forces acting on pressure pipes, Leakage & pressure testing of pipes, Corrosion types & control measures, Thrust block concept,

### **Unit 5: Water Distribution Systems**

**6hrs**

- 5.1 Method of distributing water, Layout pattern, Basic system requirements for water distribution system
- 5.2 *Methods of Network Analysis*: Equivalent pipe method, Hardy-Cross method, Design problem.

### **Unit 6: Water Supply Appurtenances**

**6hrs**

- 6.1 *Types of Valve*: Sluice valve, Air relief valve, Gate valve, Non-return valve, Scour valve
- 6.2 Fire hydrants water meter, Service connections, Maintenance & leak detection of water distribution system.
- 6.3 Necessity of water audit, Water audit in domestic sector, Concept of preparation of DPR.

### **Term Work:**

- A. Analysis of any 10 of the following test parameters for water
  - 1. pH
  - 2. Acidity
  - 3. Alkalinity
  - 4. Chlorides content
  - 5. Hardness – Total, temporary and permanent
  - 6. Turbidity
  - 7. Residual Chlorine
  - 8. Total dissolved solids through measurement of electrical conductivity
  - 9. Dissolved Oxygen
  - 10. Most Probable Number
  - 11. Optimum dose of alum by jar test.



12. Fluorides & Nitrogen
13. Iron and Manganese
- B. Design/analysis problems on water treatment unit & distribution system.
- C. Visit to a water treatment plant & visit report.

**Text Books:**

1. "Environmental Engineering"- Peavey, H.S. Rowe, D.R. and Tchobanoglous McGraw Hill Book Company.
2. "Water Supply and Pollution Control"- Viessman W. and Hammer M.J. Harper Collins College Publishers.
3. "Water and Waste Water Technology"- Hammer M.J. Prentice-Hall of India Private Ltd.
4. "Water and Wastewater Technology"- G.S. Birdie and J.S. Birdie
5. "Water Supply"- Duggal K.N.S. Chand and Company.
6. "Water Supply"- Garg S.K., Khanna Publishers.
7. "Water Supply and Waste water Disposal"- Fair and Gayes, John Wiley Publication.
8. "Water Supply Engineering" -B.C. Punmia, Ashok Jain, Arun Jain, Laxmi Publications

**Reference Books:**

1. Manual on Water Supply and Treatment- Government of India Publication, 1993
2. "Water and Waste Water Engineering" - Fair G. M, Geyer J. C, and Okun D. A, Vol. I & II", John Wiley Publication, 1966.
3. "Water and Waste Water Technology", Prentice Hall of India Private Limited, 1996. Hammer Structure of question paper for End Semester Evaluation

**Guidelines Regarding Question Paper Setting:**

1. Section I - Q. No. 1 to 3 and Section II - Q. No. 4 to 6
2. All questions are compulsory.
3. Internal optional questions are allowed, weightage of optional question should not be more than 30% of total marks i.e. 21 marks out of 70 marks.

**End Semester Examination Paper Pattern**

Question No.	Based on Unit No.	Marks
1	1	12
2	2	12
3	3	11
4	4	12
5	5	12
6	6	11



3. Internal optional questions are allowed, weightage of optional question should not be more than 30% of total marks i.e. 21 marks out of 70 marks.

### End Semester Examination Paper Pattern

Question No.	Based on Unit No.	Marks
1	1	11
2	2	12
3	3	12
4	4	12
5	5	12
6	6	11

**Third Year B.Tech. (Civil) Semester - VI**

## **Environmental Engineering – II**

Course	Teaching Scheme				Evaluation Scheme				
	L	T	P	Credit	Scheme	Theory (Marks)		Practical (Marks)	
						Max.	Min. for passing	Max.	Min. for passing
EE - II PCC-CV603	04	--	02	05	ISE	--	--	25	10
					CIE	30	12	--	--
					ESE	70	28	25	10

ISE: In Semester Evaluation    CIE: Continuous Internal Evaluation    ESE: End Semester Examination

#### **Course Objectives:**

1. To describe wastewater, its sources, characteristics and collection systems.
2. To design the various treatment processes for wastewater treatment and low cost treatment methods.
3. To interpret various methods of wastewater disposal.
4. To explain various aspects of solid waste management.
5. To outline the effects of air pollution and its control measures.

#### **Course Outcomes:**

After successful completion of this course students will be able to:

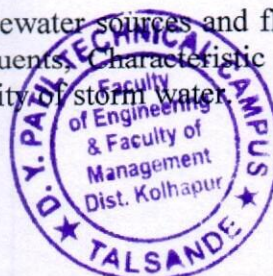
1. Explain sources, characteristics and methods of wastewater collection.
2. Design the primary and secondary wastewater treatment units and describe low cost wastewater treatment units.
3. Understand various methods of wastewater disposal
4. Explain the necessity and importance of solid waste management.
5. Describe air pollution, its effect and controlling techniques.

### SECTION I

#### **Unit 1: Waste Water Treatment**

**8hrs**

- 1.1 Components of wastewater flows, Wastewater sources and flow rate, Variations in flow rates and strength, Wastewater constituents, Characteristic of municipal waste water, Problems on B.O.D. calculations, Quantity of storm water.



- 1.2 Sewerage system, Types, Layout, Types of sewers, Collection system, Appurtenances, Design of sanitary and storm water sewers, Maintenance of sewerage systems, Sewage and sludge pumping.

**Unit 2: Primary and Secondary Treatment** **8hrs**

- 2.1 Screening, Comminuting, Grit removal, Oil and grease trap primary settling tank.  
2.2 Secondary Treatment-Activated sludge process, Process, Design and operating parameters of ASP, Modification of ASP, Operational problems, Concept of trickling filter.

**Unit 3: Sludge Treatment and Disposal** **8hrs**

- 3.1 Concept of anaerobic digestion, Types of reactors.  
3.2 Low cost wastewater treatment methods-Principles of waste stabilization pond. Design and operation of oxidation pond, Operation of aerobic & anaerobic Lagoons, Oxidation ditch, Septic tank.

**SECTION II**

**Unit 4: Stream Pollution** **8hrs**

- 4.1 Self-purification, DO sag curve, Streeter Phelps's Equation, Stream classification  
4.2 Disposal of waste water methods, Effluents standards for stream and land disposal as per MPCB and CPCB standards

**Unit 5: Solid Waste Management** **8hrs**

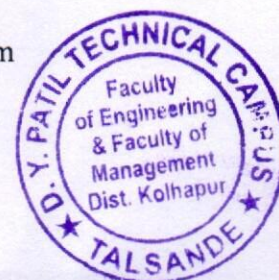
- 5.1 Solid wastes definition, Types, Sources, Characteristics, Functional outlines-storage, Collection, Processing techniques  
5.2 Methods of treatment of solid waste composting, Incineration, Pyrolysis and sanitary land filling.

**Unit 6: Air Pollution Noise Pollution and EIA** **8hrs**

- 6.1 *Air Pollution*: Definition, Sources and classification of pollutants, Effects. Control of industrial air pollution- Settling chamber, Bag filter, Cyclone separator, Scrubbers, Electrostatic precipitators. Air quality standards  
6.2 *Noise Pollution*: Noise characteristics and measurements, Levels of noise and standards, Control.  
6.3 *Environmental Impact Assessment*: Concept, Outline and details of EIA, Report preparation.

**Term Work:**

- A. Characterization of municipal waste water (Any five of the following):
1. pH
  2. Alkalinity
  3. Solids
  4. Chlorides
  5. DO
  6. BOD
  7. COD
  8. Sulphates
  9. Oil & grease
  10. Volatile acids
- B. Design/analysis problems on sewerage system and treatment system  
C. Visit to sewage treatment plant & visit report.





**Text Books:**

1. "Environmental Engineering"- H. S.Peavey, D.R.Rowe and Thobanoglous, McGraw Hill Book Company
2. "Water Supply and Pollution Control" - Viessman W. and Hammer M.J., Harper Collins College Publishers.
3. "Waste Water Engineering Treatment & Disposal" - MERTCALF & EDDY, Tata McGraw Hill
4. "Sewage Disposal and Air Pollution Engineering" - Garg S.K., Khanna Publishers
5. "Waste Water Supply Engineering"- B. C. Punmia, Laxmi Publication
6. "Solid Waste Management in Developing Countries" - Bhide A.D. and Sundersen B.B., Indian National Scientific Documentation Centre, New Delhi
7. "Air Pollution" - Rao M.N. and Rao H.V.N., Tata McGraw Hill

**Reference Books:**

1. "Manual on Sewerage & Sewage Treatment" Ministry of Urban Development Govt. of India Msy-2000. 35 PDOP-4-59-85-97, Ministry of Urban development
2. "Water and Waste Water Technology" - Hammer M.J, Prentice-Hall of India Private Ltd.
3. "Manual on Municipal Solid Waste Management" - Ministry of Urban Development Govt. of India.

**Guidelines Regarding Question Paper Setting:**

1. Section I - Q. No. 1 to 3 and Section II - Q. No. 4 to 6
2. All questions are compulsory.
3. Internal optional questions are allowed, weightage of optional question should not be more than 30% of total marks i.e. 21 marks out of 70 marks.

**End Semester Examination Paper Pattern**

Question No.	Based on Unit No.	Marks
1	1	11
2	2	12
3	3	12
4	4	12
5	5	12
6	6	11



SEMESTER-VII					
Sr. No	CodeNo.	Course(SubjectTitle)		Semester	Credits
1	PCC-CV701	DCS-I	Design of Concrete Structures-I	7	5
2	PCC-CV702	EQ	Earthquake Engineering	7	4
3	PCC-CV703	QSV	Quantity Survey and Valuation	7	4
4	PCC-CV704	TR-I	TransportationEngineering-I	7	4
5	PCE-CV705	EL-I	Professional Elective-I	7	4
6	HM-CV706	LACE	Legal Aspect in Civil Engineering	7	3
7	SI-CV707	FT	Field Training	7	-
8	PW-CV708	PP-I	Project Phase-I	7	1
<b>TOTAL</b>					<b>25</b>

SEMESTER-VIII					
Sr. No	CodeNo.	Course(SubjectTitle)		Semester	Credits
1	PCC-CV801	DCS-II	Design of Concrete Structures-II	8	5
2	PCC-CV802	WRE-II	WaterResourceEngineering-II	8	4
3	PCC-CV803	TR-II	TransportationEngineering-II	8	4
4	PCE-CV804	EL-II	Professional Elective-II	8	4
5	PCE-CV805	EL-III	Professional Elective-III	8	4
6	PCC-CV806	SDD-II	StructuralDesignandDrawing-II	8	2
7	PW-CV708	PP-II	Project Phase-II	8	2
<b>TOTAL</b>					<b>25</b>





SHIVAJI UNIVERSITY, KOLHAPUR

FINAL YEAR (B.Tech.) CBCS

In

CIVIL ENGINEERING

(To be implemented from JUNE 2021)



SEMESTER-VII					
Sr. No	CodeNo.	Course(SubjectTitle)		Semester	Credits
1	PCC-CV701	DCS-I	Design of Concrete Structures-I	7	5
2	PCC-CV702	EQ	Earthquake Engineering	7	4
3	PCC-CV703	QSV	Quantity Survey and Valuation	7	4
4	PCC-CV704	TR-I	TransportationEngineering-I	7	4
5	PCE-CV705	EL-I	Professional Elective-I	7	4
6	HM-CV706	LACE	Legal Aspect in Civil Engineering	7	3
7	SI-CV707	FT	Field Training	7	-
8	PW-CV708	PP-I	Project Phase-I	7	1
<b>TOTAL</b>					<b>25</b>

SEMESTER-VIII					
Sr. No	CodeNo.	Course(SubjectTitle)		Semester	Credits
1	PCC-CV801	DCS-II	Design of Concrete Structures-II	8	5
2	PCC-CV802	WRE-II	WaterResourceEngineering-II	8	4
3	PCC-CV803	TR-II	TransportationEngineering-II	8	4
4	PCE-CV804	EL-II	Professional Elective-II	8	4
5	PCE-CV805	EL-III	Professional Elective-III	8	4
6	PCC-CV806	SDD-II	StructuralDesignandDrawing-II	8	2
7	PW-CV708	PP-II	Project Phase-II	8	2
<b>TOTAL</b>					<b>25</b>





# SHIVAJI UNIVERSITY KOLHAPUR

REVISED SYLLABUS AND STRUCTURE

SECOND YEAR (B. Tech) CBCS

## Computer Science and Engineering

To be introduced from the academic year 2019-20

(i.e. from June 2019) onwards

(Subject to the modifications will be made from time to time)



**SECOND YEAR COMPUTER SCIENCE AND ENGINEERING - CBCS  
PATTERN**

**SEMESTER - III**

Sr. No.	Course / Subject / Title	TEACHING SCHEME						EXAMINATION SCHEME													
		THEORY			TUTORIAL			PRACTICAL			THEORY			PRACTICAL			TERMWORK				
		Credits	No. Of Lectures	Hours	Credits	No. of Hours	Hours	Credits	No. of Hours	Hours	Hours	mode	marks	Total Marks	MIN.	MAX	Hours	MIN.	MAX	Hours	
1	BSC - CS301 Applied Mathematics	3	3	3	1	1	1					CIE	30	100	40	25	10				
												ESE	70								
2	PCC-CS302 Discrete Mathematics & Structures	3	3	3	1	1	1					CIE	30	100	40	25	10				
												ESE	70								
3	PCC- CS303 Data Structures	3	3	3								CIE	30	100	40						
												ESE	70								
4	PCC- CS304 Computer Networks - I	3	3	3				1	2	2		CIE	30	100	40	50	20				25
												ESE	70								10
5	PCC- CS305 Microprocessors	3	3	3				1	2	2		CIE	30	100	40						
												ESE	70								25
6	PCC- CS306 C programming	3	3	3				2	4	4						50	20				50
7	HM- CS307 Soft Skills							1	2	2						25	10				25
	<b>Total (SEM -III)</b>	<b>18</b>	<b>18</b>	<b>18</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>10</b>	<b>10</b>				<b>500</b>		<b>125</b>					<b>175</b>



**SECOND YEAR COMPUTER SCIENCE AND ENGINEERING - CBCS PATTERN**

**SEMESTER - IV**

Sr. No.	Course / Subject Title	TEACHING SCHEME						EXAMINATION SCHEME													
		THEORY			TUTORIAL			PRACTICAL			THEORY			PRACTICAL			TERMWORK				
		Credits	No. Of Lectures	Hours	Credits	No. of Hours	Hours	Credits	No. of Hours	Hours	Hours	mode	marks	Total Marks	MIN.	MAX	Hours	MIN.	MAX	Hours	
1	PCC-CS401 Automata Theory	3	3	3								CIE 30 ESE 70	100	40							
2	PCC- CS402 Computer Networks - II	3	3	3	1	2	2					CIE 30 ESE 70	100	40	50	20			25	10	
3	PCC- CS403 Computer Organization and Architecture	3	3	3								CIE 30 ESE 70	100	40							
4	PCC- CS404 Operating Systems - I	3	3	3	1	2	2					CIE 30 ESE 70	100	40					25	10	
5	PCC- CS405 Software Engineering	3	3	3								CIE 30 ESE 70	100	40							
6	PCC- CS406 Object Oriented Programming	2	2	2	2	4	4								50	20			50	20	
7	PW- CS407 Mini Project				1	2	2								50	20			50	20	
8	MC-CS408 Environmental Studies	2	2	2	1	1	1					CIE 30 ESE 70	100	40							
	<b>Total (SEM -IV)</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>10</b>		<b>600</b>		<b>150</b>				<b>150</b>		
	<b>Total</b>	<b>37</b>	<b>37</b>	<b>37</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>10</b>	<b>20</b>		<b>1100</b>		<b>275</b>				<b>325</b>		

AS PER BOS GUIDELINES



CIE- Continuous Internal Evaluation

ESE – End Semester Examination



# SHIVAJI UNIVERSITY, KOLHAPUR

REVISED SYLLABUS AND STRUCTURE  
THIRD YEAR (C.B.C.S.) BACHELOR OF TECHNOLOGY

IN

## Computer Science and Engineering

To be introduced from the academic year 2020-21

(w. e. f. June 2020) onwards





**THIRD YEAR COMPUTER SCIENCE AND ENGINEERING - CBCS PATTERN**

**SEMESTER - V**

Sr. No.	Course / Subject Title	TEACHING SCHEME						EXAMINATION SCHEME								
		THEORY			TUTORIAL / PRACTICAL			THEORY			ORAL / PRACTICAL					
		Credits	NO. OF Lectures	Hours	Credits	No. of Hours	No. of Hours	mode	marks	Total Marks	MIN.	MAX	MIN.	MAX		
1	<b>PCC-CS501</b> Information Security	3	3	3			1	2		CIE ESE	30 70	100	40		50	20
2	<b>PCC- CS502</b> System Programming	3	3	3			1	2		CIE ESE	30 70	100	40	10	50	20
3	<b>PCC- CS503</b> Object-Oriented Modeling & Design	3	3	3						CIE ESE	30 70	100	40			
4	<b>PCC- CS504</b> Computer Algorithms	4	4	4	1	1				CIE ESE	30 70	100	40		25	10
5	<b>OEC- CS505</b> Computer Graphics & Multimedia <b>OEC-CS506</b> Internet of Things	3	3	3						CIE ESE	30 70	100	40			
6	<b>PCC- CS507</b> Java Programming	3	3	3			2	4						50	20	50
7	<b>HM- CS508</b> Business English				1	2								25	10	25
	<b>Total (SEM - V)</b>	<b>19</b>	<b>19</b>	<b>19</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>8</b>				<b>500</b>		<b>100</b>	<b>200</b>	





# SHIVAJI UNIVERSITY KOLHAPUR

REVISED SYLLABUS AND STRUCTURE  
FINAL YEAR (FINAL YEAR B. Tech) BACHELOR OF  
TECHNOLOGY

IN

## Computer Science and Engineering

To be introduced from the academic year 2021-22

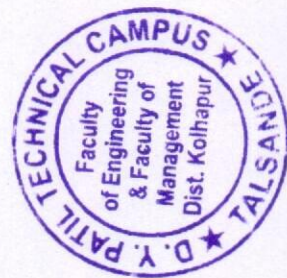
(w.e.f. June 2021) onwards



**FINAL YEAR COMPUTER SCIENCE AND ENGINEERING - CBCS PATTERN**

**SEMESTER - VIII**

Sr. No.	Course / Subject Title	TEACHING SCHEME						EXAMINATION SCHEME										
		THEORY			TUTORIAL			PRACTICAL			THEORY			ORAL / PRACTICAL			TERMWORK	
		Credits	NO. OF Lectures	No. of Hours	Credits	No. of Hours	No. of Hours	Credits	No. of Hours	No. of Hours	marks	Total Marks	MIN.	MAX	MIN	MAX	MIN	MAX
1	PCC- CS801 Big Data Analytics	4	4	4	1	2	1	2	2	30	100	40	50	20	25	10	10	10
2	PCC- CS802 Deep Learning	3	3	3	1	1	1	1	1	30	100	40			25	10	10	10
3	PCE- CS803 Elective-II	3	3	3	1	1	1	1	1	30	100	40			25	10	10	10
4	PCE- CS804 Elective-III	3	3	3	1	1	1	1	1	30	100	40			25	10	10	10
5	PCC- CS805 Mobile Application Development	3	3	3		4	2	4					50	20	50	20	20	20
6	PW- CS806 Project - II					4	2	4					50	20	50	20	20	20
7	HM-CS807 Professional Skills	16	16	16	4	4	5	10			400		150		250			
<b>Total (SEM - VIII)</b>		<b>32</b>	<b>32</b>	<b>32</b>	<b>6</b>	<b>6</b>	<b>12</b>	<b>22</b>			<b>800</b>		<b>300</b>		<b>500</b>			



CIE- Continuous Internal Evaluation

ESE - End Semester Examination



# **SHIVAJI UNIVERSITY, KOLHAPUR**

## **REVISED STRUCTURE AND SYLLABUS**

SECOND YEAR (B. Tech) CBCS

## **ELECTRICAL ENGINEERING**

To be introduced from the academic year 2019-20

(i.e. from June 2019) onwards



### Semester IV

Sr. No	Code No.	Subject	Credits
1.	PCC-EE	DCMT	5
2.	PCC-EE	PE	4
3.	PCC-EE	PS-I	5
4.	PCC-EE	EME	4
5.	PCC-EE	CS-I	4
6.	PCC-EE	ENV	3
<b>Total=</b>			<b>25</b>





# **SHIVAJI UNIVERSITY, KOLHAPUR**

## **REVISED SYLLABUS AND STRUCTURE**

SECOND YEAR (B. Tech)

## **Electronics and Telecommunication Engineering**

To be introduced from the academic year 2019-20  
(i.e. from June 2019) onwards



### Semester III

Sr. No	Code No.	Subject	Semester	Credits
1	BSC-ETC301	Engineering Mathematics-III	3	4
2	PCC-ETC-301	Electronic Circuit Design-I	3	5
3	PCC-ETC302	Network Analysis	3	5
4	PCC-ETC303	Transducers and Measurement	3	4
5	PCC-ETC304	Analog Communication	3	4
6	PCC-ETC305	Programming Lab-I	3	3
7	MC-ETC-301	Environmental studies	3	3**
<b>Total</b>				<b>25</b>

\*\*over and above credit

### Semester IV

Sr. No.	Code No.	Subject	Semester	Credits
1	PCC-ETC401	Electronic Circuit Design-II	4	5
2	PCC-ETC402	Linear integrated Circuits	4	5
3	PCC-ETC403	Control System Engineering	4	4
4	PCC-ETC404	Digital Communication	4	4
5	PCC-ETC405	Data Structures	4	4
6	PCC-ETC406	Programming Lab-II	4	3
<b>Total</b>				<b>25</b>

\*\*\*For Theory CIE 30 Marks,

Two tests of 30 marks at college should be conducted and best of two marks should be communicated to university.

\*\*\*Guidelines to paper setter:

**In theory ESE examination of 70 marks following pointes should be considered,**

1. First question of 10 marks should be allotted to Objective type questions.
2. In Remaining 60 marks, four questions of 15 marks should be considered.





# Shivaji University, Kolhapur

NAAC "A" Grade

Revised Syllabus For

**Master of Business Administration (MBA) (CBCS)**

**Part – I (Sem I & II)**

**Under the Faculty of Commerce and Management**

**(To be implemented from June 2019)**





**MBA Part -I Semester-I**

Paper No.	Course Code	Subjects	Weekly	Internal Marks	Uni. Exam		Total Marks
					Written	Online /Written MCQ	
1	CC 101	Indian Ethos & Management Concepts	4	20	60	20	100
2	CC102	Management Accounting	4	20	60	20	100
3	CC 103	Managerial Economics	4	20	60	20	100
4	CC 104	Information Technology for Management	4	20	60	20	100
5	CC 105	Legal and Business Environment	4	100	-	-	100
6	CC 106	Organizational Behaviour	4	20	60	20	100
7	SECC 107	Soft Skill Development (Internal)	4	20	60	20	100
8	SECC 108	Optional – A* (Internal)	2	50	--	--	50
<b>Total</b>			<b>30</b>	<b>280</b>	<b>300</b>	<b>120</b>	<b>700</b>

**MBA Part-I Semester-II**

Paper No.	Course Code	Subjects	Weekly	Internal Marks	Uni. Exam		Total Marks
					Written	Online/ Written MCQ	
9	CC 201	Marketing Management	4	20	60	20	100
10	CC 202	Financial Management	4	20	60	20	100
11	CC 203	Human Resource Management	4	20	60	20	100
12	CC 204	Operations Management	4	20	60	20	100
13	CC 205	Management Information System	4	20	60	20	100
14	CC 206	Research Methodology	4	20	60	20	100
15	AECC 207	Managerial Skills for Effectiveness (Internal)	4	100	-	-	100
16	SECC 208	Optional – B* (Internal)	2	50	--	--	50
<b>Total</b>			<b>30</b>	<b>280</b>	<b>300</b>	<b>120</b>	<b>700</b>

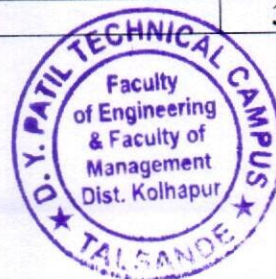


**MBA. Part-II Semester-III**

Paper No.	Course Code	Subjects	Weekly	Internal Marks	Uni. Exam		Total Marks
					Written	Online /Written MCQ	
17	CC 301	Strategic and Change Management	4	20	60	20	100
18	CC 302	Business Intelligence and Analytics	4	20	60	20	100
19	AECC 303	Project Report & Viva-Voce	4	50	50	--	100
20	DSC 304	Elective I- Paper-I	4	20	60	20	100
21	DSC 305	Elective-I Paper-II	4	20	60	20	100
22	DSC 306	Elective-II Paper-I	4	20	60	20	100
23	DSC 307	Elective-II Paper-II	4	20	60	20	100
24	SECC 308	Optional – C* (Internal)	2	50	--	--	50
		<b>Total</b>	<b>30</b>	<b>230</b>	<b>350</b>	<b>120</b>	<b>700</b>

**MBA. Part-II Semester-IV**

Paper No.	Course Code	Subjects	Weekly	Internal Marks	Uni. Exam		Total Marks
					Written	Online /Written MCQ	
25	CC 401	Innovation and Entrepreneurship	4	20	60	20	100
26	CC 402	Startups and New Venture (Internal)	4	100	-	-	100
27	SECC 403	Employability Skill (Internal)	4	100	-	-	100
28	DSE 404	Elective I- Paper-III	4	20	60	20	100
29	DSE 405	Elective-I Paper-IV	4	20	60	20	100
30	DSE 406	Elective II- Paper-III	4	20	60	20	100
31	DSE 407	Elective-II Paper-IV	4	20	60	20	100
32	SECC 408	Optional – D* (Internal)	2	50	--	--	50
		<b>Total</b>	<b>30</b>	<b>280</b>	<b>300</b>	<b>120</b>	<b>700</b>



28 Heads, Total Marks – 2800 One theory lecture duration is 60 minutes. 112 credits program.

7 full time faculties as per revised AICTE directions

Sr.	Existing Electives**	Sr.	Additional Electives Offered**
1	Marketing Management	8	Hospitality Management
2	Human Resource Management	9	Entrepreneurship Development
3	Financial Management	10	International Business
4	Production Management		
5	IT & System Management		
6	Agriculture Business Management		
7	Textile Management		

Sr.	Optional A Paper - VIII	Sr.	Optional B Paper - XVI
I	Chh. Shivaji Maharaj -The Management Guru	I	Total Quality Management
II	Computerized Accounting	II	Negotiation Skills
III	Personality Development	III	Taxation
IV	Business Models	IV	E-Business
V	Constitution of India	V	Computer Applications for Business
VI	Creativity and Innovation	VI	Behavioural Finance
Sr.	Optional C Paper - XXIV	Sr.	Optional D Paper - XXXII
I	Corporate Social Responsibility	I	Corporate Finance
II	ERP/SAP	II	B2B Marketing
III	Business Analytics	III	Econometrics
IV	Labour Laws	IV	Organizational Development
V	Marketing Research	V	Sports Management
VI	Customer Relationship Management	VI	Logistic and Supply Chain Management

\* Optional papers are **TWO** unit credit courses which are assessed internally by respective institute. Optional courses are to be imparted by industrial experts, practitioners, consultants and professionals from business. Student has to opt for any one optional course offered per internal course and no university examination would be held for the same. **THIRTY** (30) hours of pedagogy excluding tutorials and examination would be the duration of one optional course. The evaluation of optional course is to be done by institute. Optional course is natured as internal course and no university examination would be held for the same. Institute has to design the examination of optional papers. The performance of student in optional course out of 50 marks has to be send to university with rest internal marks.

\*\*The electives selected by minimum 15 students will be taught by a faculty in a class. Rest of the students will prepare themselves for their selected module. However faculty will counsel them and complete their internal work as per module requirement. In case of electives selected less than 15 students, it is at the discretion of Head of the Institution to decide on the teaching and practical instructions.



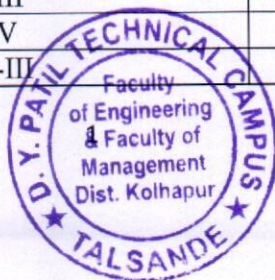
**Shivaji University, Kolhapur**  
 Revised Syllabus For  
**Master of Business Administration (MBA)**  
 (Subject to the modifications will be made from time to time)  
**New structure for the Master of Business Administration (MBA) (CBCS)**  
**Program to be implemented from June, 2019.**  
**MBA-II Sem-III and IV to be implemented from June 2020**

**MBA. Part-II Semester-III**

Paper No.	Course Code	Subjects	Weekly	Internal Marks	Uni. Exam		Total Marks
					Written	Online/Written MCQ	
17	CC 301	Strategic and Change Management	4	20	60	20	100
18	CC 302	Business Intelligence and Analytics	4	20	60	20	100
19	AECC 303	Project Report & Viva-Voce	4	50	50	--	100
20	DSC 304	Elective I- Paper-I	4	20	60	20	100
21	DSC 305	Elective-I Paper-II	4	20	60	20	100
22	DSC 306	Elective-II Paper-I	4	20	60	20	100
23	DSC 307	Elective-II Paper-II	4	20	60	20	100
24	SECC 308	Optional – C* (Internal)	2	50	--	--	50
<b>Total</b>			<b>30</b>	<b>230</b>	<b>350</b>	<b>120</b>	<b>700</b>

**MBA. Part-II Semester-IV**

Paper No.	Course Code	Subjects	Weekly	Internal Marks	Uni. Exam		Total Marks
					Written	Online/Written MCQ	
25	CC 401	Innovation and Entrepreneurship	4	20	60	20	100
26	CC 402	Startups and New Venture (Internal)	4	100	-	-	100
27	SECC 403	Employability Skill (Internal)	4	100	-	-	100
28	DSE 404	Elective I- Paper-III	4	20	60	20	100
29	DSE 405	Elective-I Paper-IV	4	20	60	20	100
30	DSE 406	Elective II- Paper-III	4	20	60	20	100



31	DSE 407	Elective-II Paper-IV	4	20	60	20	100
32	SECC 408	Optional – D* (Internal)	2	50	--	--	50
		<b>Total</b>	<b>30</b>	<b>280</b>	<b>300</b>	<b>120</b>	<b>700</b>

**Electives:**

Sr.	Existing Electives**	Sr.	Additional Electives Offered**
1	Marketing Management	8	Hospitality Management
2	Human Resource Management	9	Entrepreneurship Development
3	Financial Management	10	International Business
4	Production Management	11	Business Analytics
5	IT & System Management		
6	Agriculture Business Management		
7	Textile Management		

**Optional Papers:**

Sr.	Optional A Paper - VIII	Sr.	Optional B Paper - XVI
I	Chh. Shivaji Maharaj -The Management Guru	I	Total Quality Management
II	Computerized Accounting	II	Negotiation Skills
III	Personality Development	III	Taxation
IV	Business Models	IV	E-Business
V	Constitution of India	V	Computer Applications for Business
VI	Creativity and Innovation	VI	Behavioural Finance
Sr.	Optional C Paper - XXIV	Sr.	Optional D Paper - XXXII
I	Corporate Social Responsibility	I	Corporate Finance
II	ERP/SAP	II	B2B Marketing
III	Business Analytics	III	Econometrics
IV	Labour Laws	IV	Organizational Development
V	Marketing Research	V	Sports Management
VI	Customer Relationship Management	VI	Logistic and Supply Chain Management





# **SHIVAJI UNIVERSITY, KOLHAPUR**

## **REVISED STRUCTURE AND SYLLABUS**

SECOND YEAR (B. Tech) CBCS

## **MECHANICAL ENGINEERING**

To be introduced from the academic year 2019-20

(i.e. from June 2019) onwards

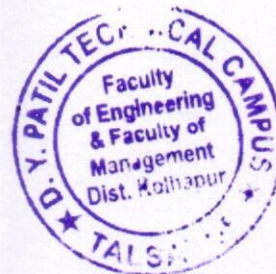


1. Basic Science Courses -Mechanical Engineering(BSC-ME) are compulsory.
2. Professional Core Course-MechanicalEngineering (PCC-ME) are compulsory.
3. Mandatory Course (MC-ME)Environmental Studies which is compulsory for theory 70 marks and project work 30 marks.

### COURSE CODE AND DEFINITION

#### Semester III

Sr. No	Code No.	Subject	Credits
1.	BSC-ME201	Engineering Mathematics - III	4
2.	PCC-ME202	*Electrical Technology	4
3.	PCC-ME203	Applied Thermodynamics	4
4.	PCC-ME204	Metallurgy	4
5.	PCC-ME205	Fluid Mechanics	4
6.	PCC-ME206	Machine Drawing	1
7.	PCC-ME207	*Computer Programming Using C++	1
8.	PCC-ME208	Workshop Practice – III	1
9.	MC-ME209	Environmental studies	3
		Total	26





# SHIVAJI UNIVERSITY KOLHAPUR

REVISED SYLLABUS AND STRUCTURE

THIRD YEAR (B. Tech.)

## MECHANICAL ENGINEERING



To be introduced from the academic year 2020-21 (i.e. from June 2020) onwards



**COURSE CODE AND DEFINITION**

**Semester III**

Sr. No	Code No.	Subject	Credits
1.	BSC-ME201	Engineering Mathematics - III	4
2.	PCC-ME202	*Electrical Technology	4
3.	PCC-ME203	Applied Thermodynamics	4
4.	PCC-ME204	Metallurgy	4
5.	PCC-ME205	Fluid Mechanics	4
6.	PCC-ME206	Machine Drawing	1
7.	PCC-ME207	*Computer Programming Using C++	1
8.	PCC-ME208	Workshop Practice – III	1
9.	MC-ME209	Environmental studies	3
		Total	26

**Semester IV**

Sr. No	Code No.	Subject	Credits
1.	BSC-ME210	Applied Numerical Methods	4
2.	PCC-ME211	Analysis of Mechanical Elements	4
3.	PCC-ME212	Fluid and Turbo Machinery	4
4.	PCC-ME213	Theory of Machines – I @	4
5.	PCC-ME214	Machine Tools and Processes	4
6.	PCC-ME215	Testing and Measurement	1
7.	PCC-ME216	Computer Aided Drafting	1
8.	PCC-ME217	Computer Graphics	1
9.	PCC-ME218	Workshop Practice – IV	1
		Total	24



Semester VI

Sr. No	Code No.	Subject	Credits
1.	PCC-ME 311	Industrial Management and Operations Research	4
2.	PCC-ME 312	Industrial Fluid Power	4
3.	PCC-ME 313	Metrology and Quality Control	4
4.	PCC-ME 314	Machine Design – II	4
5.	PCC-ME 315	Internal Combustion Engines	4
6.	OEC-ME 316	Open Elective-II	3
7.	PCC-ME 317	Computer Integrated Manufacturing Lab	1
8.	PCC-ME318	Workshop Practice –VI	1
9.	PCC-ME319** (Audit Course)	Professional Skill Development**	--
<b>Total</b>			<b>25</b>





# SHIVAJI UNIVERSITY, KOLHAPUR

REVISED SYLLABUS AND STRUCTURE  
FINAL YEAR (B. Tech.)

## MECHANICAL ENGINEERING

To be introduced from the academic year 2021-22  
(i.e. from June 2021) onwards

(Subject to the modifications will be made from time to time)



### Semester VII

Sr. No	Code No.	Subject	Credits
1.	PCC ME 401	Refrigeration and Air Conditioning	4
2.	PCC ME 402	Mechanical System Design	4
3.	PCC ME 403	Finite Element Analysis	4
4.	PCE ME 404	Elective I	4
5.	PCE ME 405	Elective II	4
6.	PCC ME 406	Seminar	1
7.	SI ME 407	Summer Internship @	1
8.	PW ME 408	Project Phase -I	3
		Total	25

### Semester VIII

Sr. No	Code No.	Subject	Credits
1.	PCC ME 409	Mechatronics	4
2.	PCC ME 410	Energy and Power Engineering	4
3.	PCC ME 411	Noise and Vibration	4
4.	PCE ME 412	Elective III	4
5.	PCE ME 413	Elective IV	4
6.	<b>PCE ME414***</b>	<b>Online Certificate Course</b>	<b>2</b>
7.	PW ME 415	Project Phase -II	3
		Total	25



# **Environment and Sustainability**

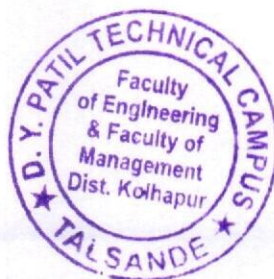
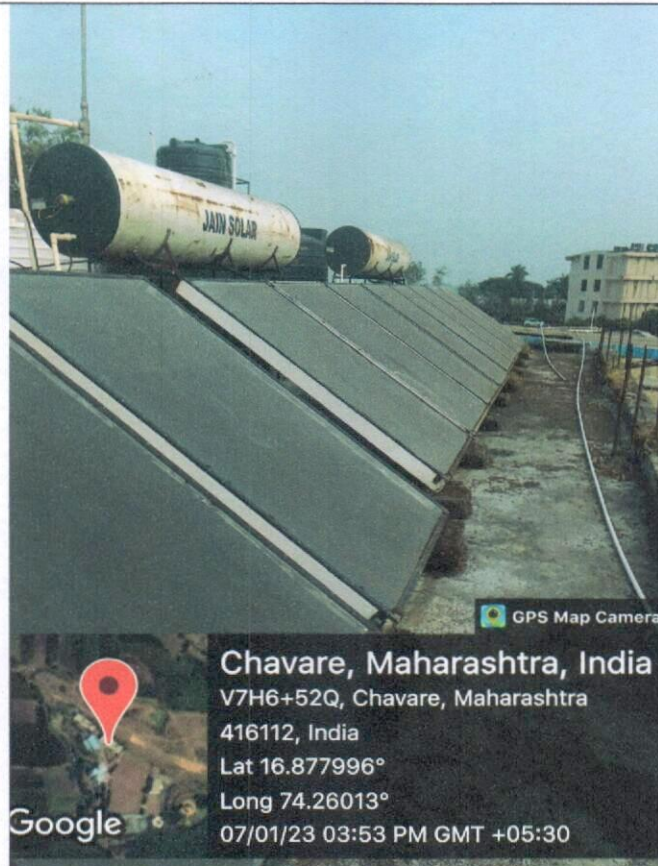
## Green Campus

- Environmental Consciousness and Sustainability and Divyangjan friendly initiatives

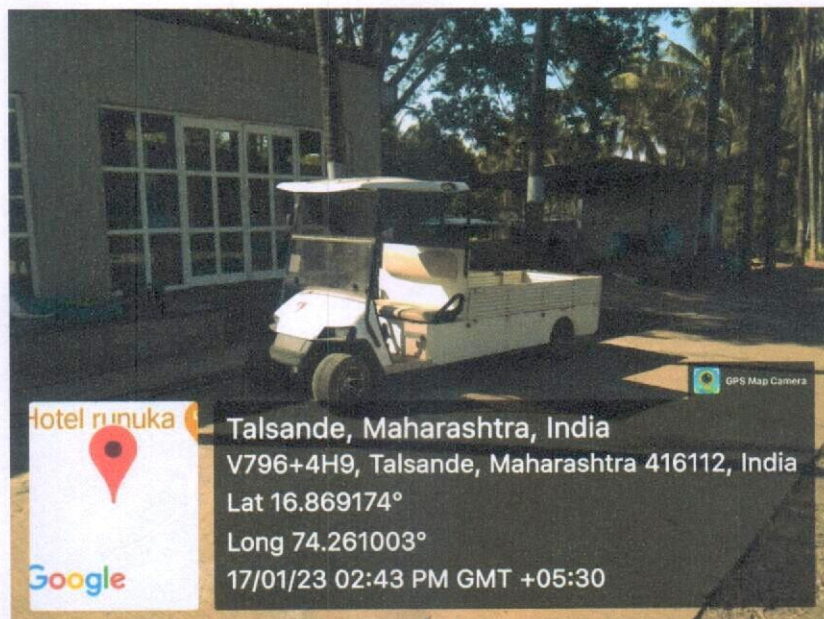
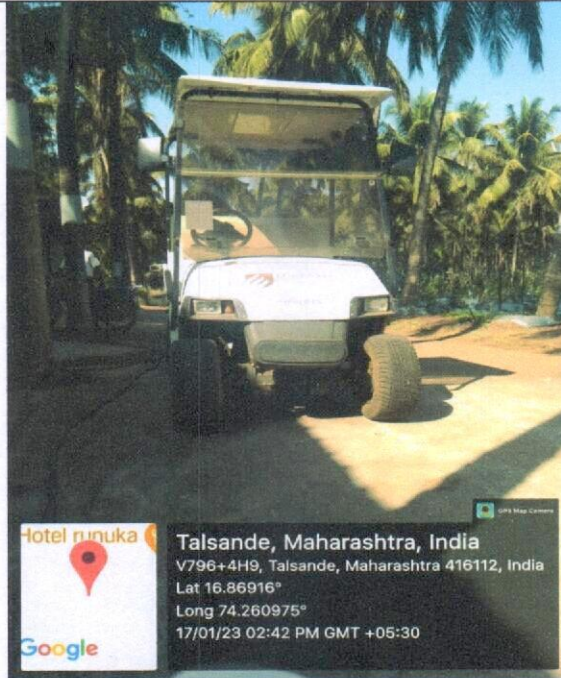
### 1. Alternate sources of energy and energy conservation measures

#### Renewable energy source

#### 1. Solar water Heater at Boys Hostel



## 2. Rechargeable bike and vehicle



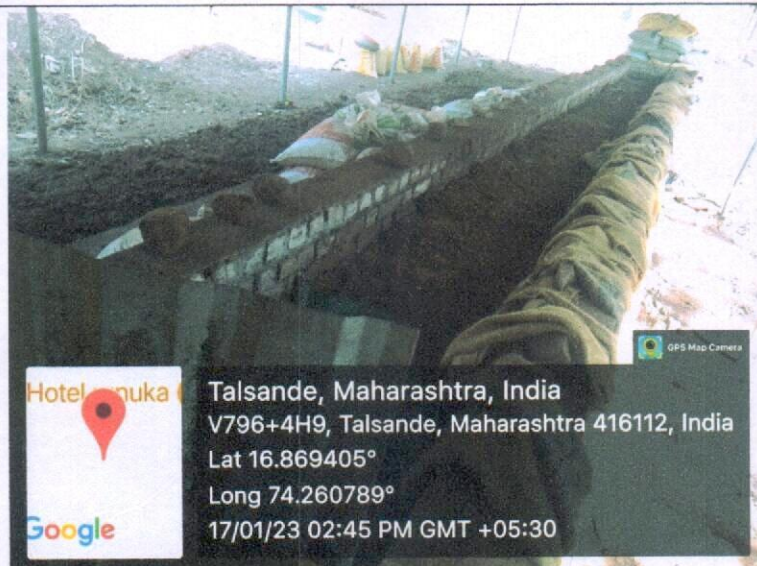
## 2. Management of the various types of degradable and non degradable waste

### Type of facilities

#### 1. Waste Bins are placed for Dry and Wet Collection



#### 2. Vermi composting from Agricultural Waste





### 3. Water conservation

#### Type of facilities

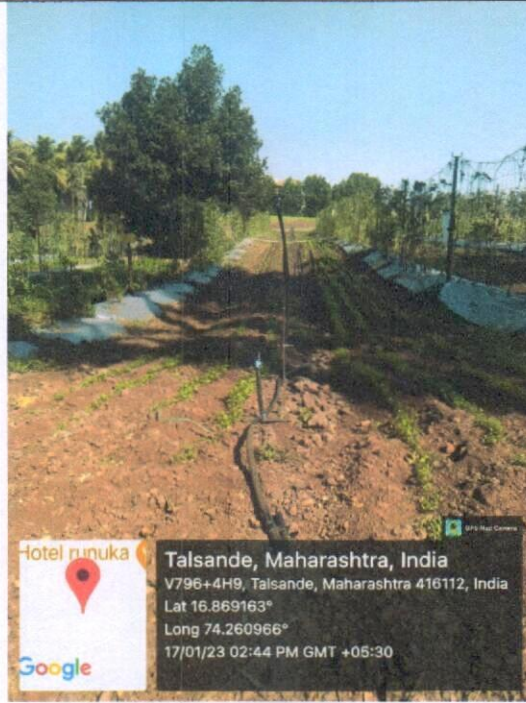
##### 1. Roof Water collection and recharging ground water table



##### 2. Surface water collected in Water Pond



**3. Drip and sprinkler irrigation for plants and garden**



**Drip and sprinkler irrigation for plants and garden**



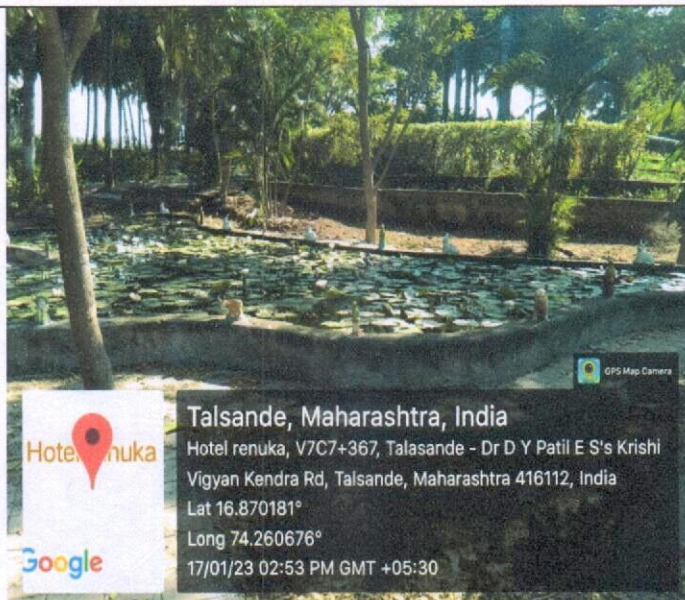
**Drip and sprinkler irrigation for plants and garden**



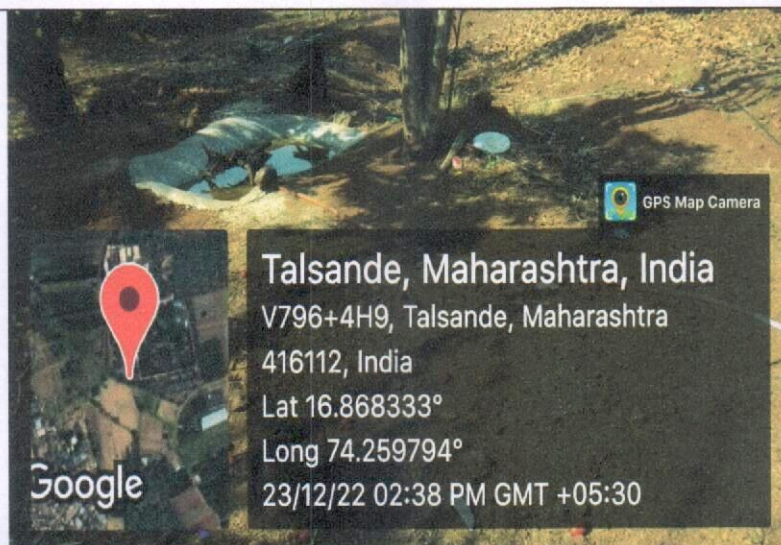
#### 4. Green campus initiatives

##### Type of facilities

#### 1. Tree Plantation and maintaining flora and fauna in college campus



#### 2. Small water ponds for birds



### 3. Tree Plantation under NSS

#### Plantation at Parkhandale



Tree Plantation by NSS Volunteers

### 4. Use of ERP (GEMS)



5. Paperless- Use of email, Whatsapp, ERP



SY B.Tech **Civil** 2022-23

yesterday

DY Farhat: Today is the ONLY day to check submissions of S...



DY **Civil** Staff 22-23 ODD

Friday

Dy Rahul Gurav Civil: Submit the marks & attendance of SY...

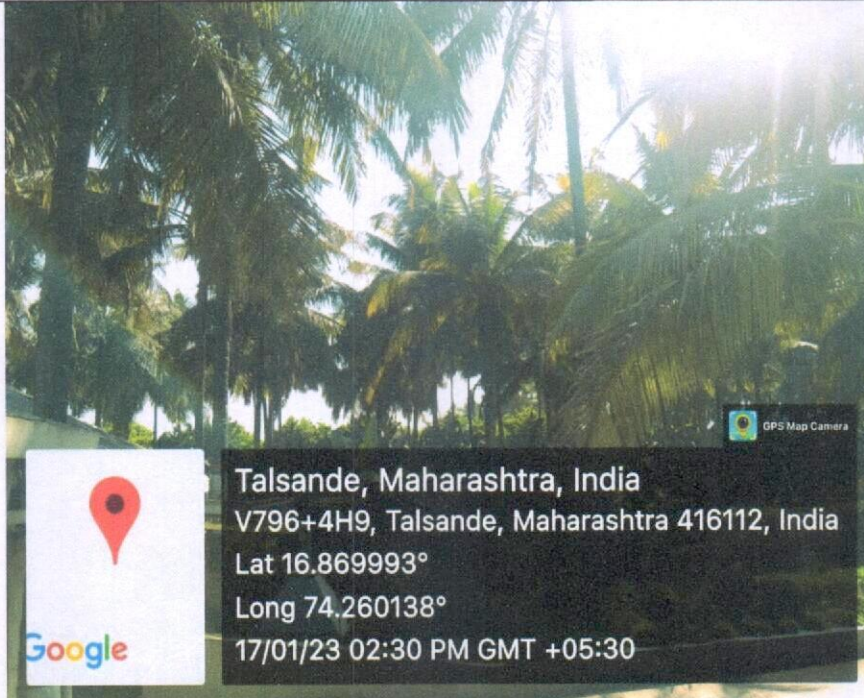


TY B.Tech **Civil** 22-23

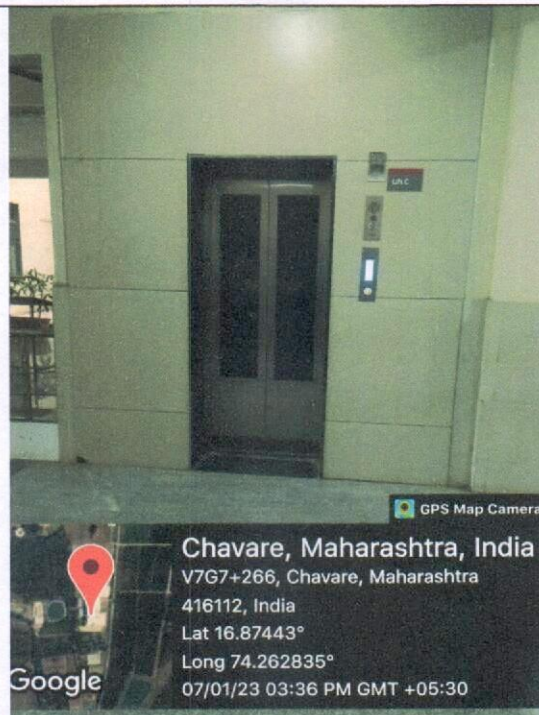
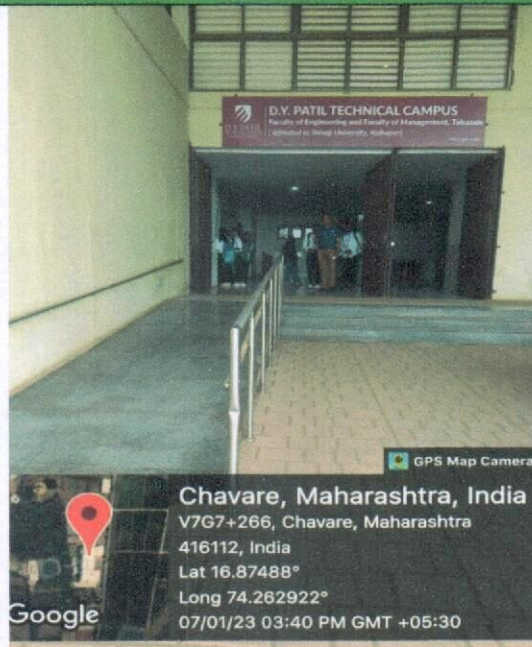
Wednesday

✓ You: Kindly check roll no. in all above sheets and if any c...

6. Cleaning Activity in college campus

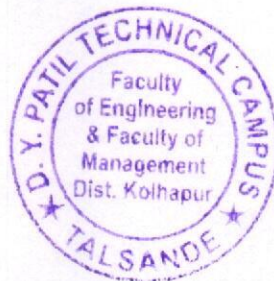


## 5. Disabled-friendly, barrier free environment





**Disabled-friendly, barrier free environment**

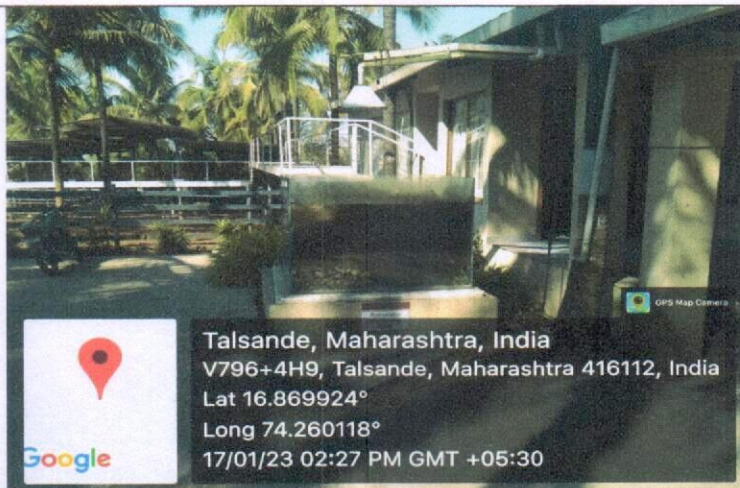


- **Environmental Consciousness and Sustainability and Divyangjan friendly initiatives**

**1. Clean and green campus initiatives**

**Type of facilities**

**1. Roof Water collection and recharging ground water table**

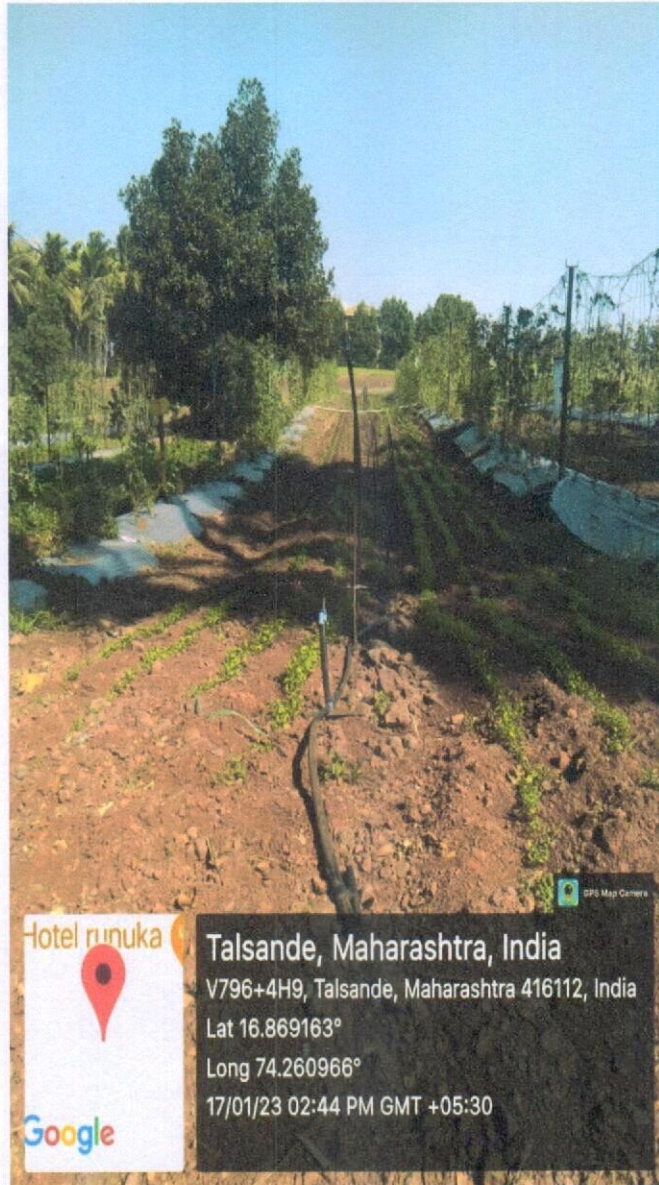


**2. Surface water collected in Water Pond**

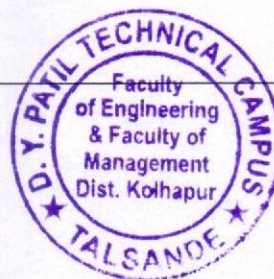




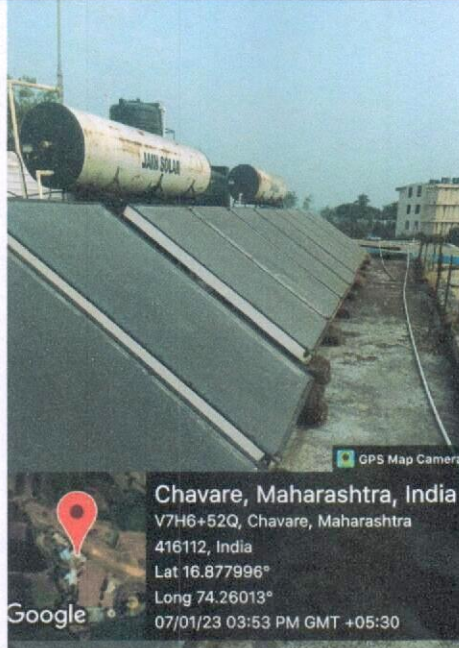
### 3. Drip and sprinkler irrigation for plants and garden



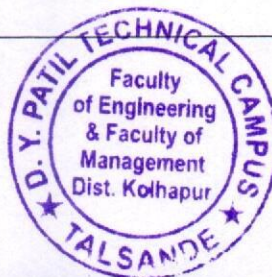
Drip and sprinkler irrigation for plants and garden



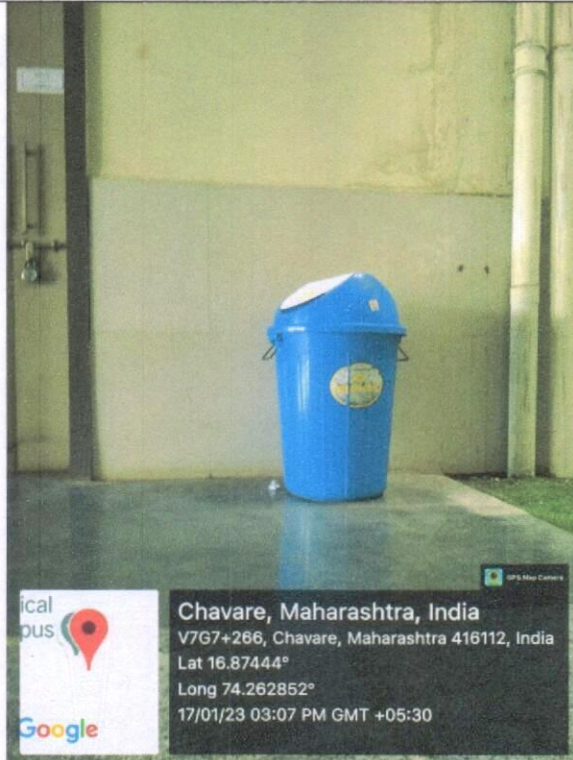
#### 4. Solar water Heater at Boys Hostel



#### 6. Rechargeable bike and vehicle



**7. Waste Bins are placed for Dry and Wet Collection**



**8. Vermi Composting from Agricultural Waste**



**Vermi Composting from Agricultural Waste**



**Students Project on Water  
conservation**

D. Y. Patil Technical Campus , Faculty of Engineering ,Talsande .

**CERTIFICATE**



This is to certify that the dissertation report entitled "**LOW COST WASTE WATER TREATMENT BY USING AEROBIC FILTERMEDIA**" which is being submitted here with for the award of the degree of Bachelor in Civil Engineering of Shivaji University, Kolhapur, is the result of work completed by,

- 1) Mr. CHAVAN SUHAS YASHAVANT (2014009262)
- 2) Mr. BELANEKAR SANJAY BHIKAJI (2015010451)
- 3) Mr. PATIL SUYASH SUDHIR (1212400735)
- 4) Mr. DHAMDHERE ALKESH ANIL (1212400704)

Under our supervision and guidance and the best of our knowledge and belief. The work embodied in this report has not done earlier for the basis of any degree or similar title of this or any other university or examination body.


Date-

Place-kolhapur

**PROF. K.S.REDEKAR**

**GUIDE & COORDINATOR**

  
**EXTERNAL EXAMINAR**

  
HOD



**D. Y. PATIL TECHNICAL CAMPUS, FACULTY OF  
ENGINEERING, TALSANDE**

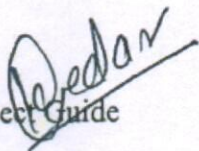
**DEPARTMENT OF CIVIL ENGINEERING**

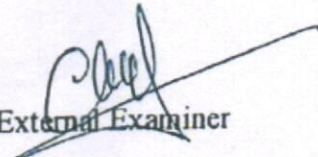



**DY PATIL**  
TECHNICAL CAMPUS  
FACULTY OF ENGINEERING  
TALSANDE

**CERTIFICATE**

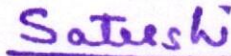
This is to certify that this project group has successfully completed the project entitled “**DESIGN OF SEWAGE TREATMENT PLANT**” under my supervision, in the partial fulfillment of Bachelor of Engineering in Civil Engineering of Shivaji University, Kolhapur.

  
Project Guide

  
External Examiner

  
Mr. K. S. Redekar

HOD CIVIL DEPT.

  
Dr. S. R. Pawaskar

Director

D. Y. Patil Technical Campus, Talsande



**D. Y. PATIL TECHNICAL CAMPUS, FACULTY OF ENGINEERING,  
TALSANDE**

**DEPARTMENT OF CIVIL ENGINEERING**



**CERTIFICATE**

This is to certify that this project group has successfully completed the project entitled "USE OF VERTICAL FLOW AND HORIZONTAL FLOW CONSTRUCTED WETLAND IN SERIES TO TREAT WATER" under my supervision, in the partial fulfilment of Bachelor of Engineering in Civil Engineering of Shivaji University, Kolhapur.

MR. ABHISHEK RANGRAO KADAM	4002
MR. PARTH SUBHASH BHANDARE	4053
MR. RAHUL VISHWAS DAWARE	4064
MR. ROHIT SANJAY BHOSALE	4067
MR. AETHISHAM SAJID GADIWAN	4095
MR. VIRKUMAR KIRAN PATIL	4102

Date:

Place:

Prof. K. S. REDEKAR

Guide

External examiner



Prof. K. S. REDEKAR

H.O.D. Civil department

Dr. S.R. Pawaskar

Director

# **Students Project on Waste Management**




**D. Y. Patil Education Society's**  
**"D. Y. PATIL TECHNICAL CAMPUS"**  
**Faculty of Engineering and Faculty of Management, Talsande**

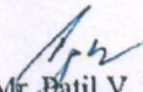


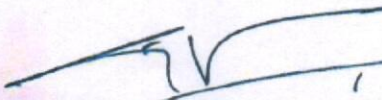
**CERTIFICATE**

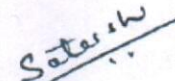
This is certify that, the following students have successfully completed the project entitled "USE OF PLASTIC TO PARTIAL REPLACE OF BITUMEN IN CONSTRUCTION OF BITUMINOUS ROAD" in the partial fulfillment of Bachelor of Engineering in Civil Engineering of Shivaji University, Kolhapur during the academic year 2017-2018.

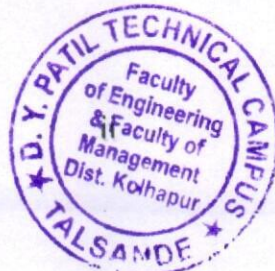
- |                                      |            |
|--------------------------------------|------------|
| 1) Mr. Padule Balaji Shrihari        | 1312437304 |
| 2) Mr. Patil Avinash Shamrao         | 1312437308 |
| 3) Mr. Ratate Omkar Subhash          | 1412691225 |
| 4) Mr. Halnure Khandeshwar Madhavrao | 1412698575 |
| 5) Miss. Jadhav Shital Bhimrao       | 1112355244 |

  
Prof. Mr. Rabade M. M.  
**Guide**

  
Prof. Mr. Patil V. P.  
**Head of Department**

  
Externed Examiner

  
Dr. Pawaskar S. R.  
**Director**



**D Y PAUL TECHNICAL CAMPUS, TALSANDE,  
DEPARTMENT OF CIVIL ENGINEERING**

**APRIL, 2020**



**CERTIFICATE**

This is to certify that Mr. Dipak Rade, Satyavijay Bhosale, Aaditya Jadhav, Yogesh Kapse, Abhishek Akkiwate, Akshay Patil has satisfactorily Completed the scheduled project work **"USE OF PLASTIC IN ROAD CONSTRUCTION"** a Noted to them for for fulfillment of curriculum of Shivaji University, Kolhapurin subject of **"CIVIL ENGINEERING PROJECT"** in Civil Engineering in Year 2019-2020.

PLACE-KOLHAPUR

GUIDE

MR. A. MEHENDALE

HOD

MR. K. S. REDEKAR

DIRECTOR

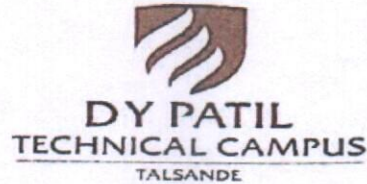
DR. S. R. PAWASKAR



Shivaji University 2019-2020

**D. Y. PATIL TECHNICAL CAMPUS, TALSANDE**

**(SHIVAJI UNIVERSITY)**



**CERTIFICATE**

This is to certify that following students has satisfactory carried out the BE project work entitled "ENGINEERING LANDFILL OF SOLID WASTE" at Department of Civil Engineering, D. Y. PATIL TECHNICAL CAMUS, TALSANDE KOLHAPUR

This work is being submitted for the award of degree of Bachelor of Civil Engineering. It is submitted in the partial fulfilment of the prescribed syllabus of Shivaji University, in academic year 2019-2020

**Examination Seat No.**

**Name of the Student**

Mr. GANESH RAVINDRA MISAL

Mr. DATTATRAY HINDURAO ADAV

Mr. BASHIR CHANDULAL ATAR2015

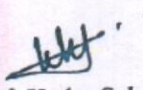
Mrs. POOJA SHIVAJI PATIL


Mr. SUSHANT SUKUMAR PATIL

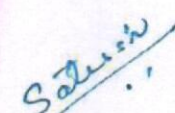
Mr. NIKHIL JAYSING MOHITE

Mr. NAMDEV BABRUWAHAN

KALBANDE

  
Prof. Kedar Sahasrabudhe  
(Guide)

  
Prof. K.S. Redekar.  
(H.O.D.)

  
Dr. S.R. Pawaskar  
(PRINCIPAL)






**DEPARTMENT OF CIVIL ENGINEERING**  
**D. Y. Patil Technical Campus Engineering and Management**  
**Talsande , Kolhapur**  
**2020-2021**


## CERTIFICATE

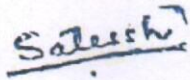
This is to certify that the Project report entitled **RESTORATION OF RANKALALAKE, KOLHAPUR** submitted by

Roll No.	Seat No.	Name Of Student
4027	11987	Ingawale Kavita Arun
4058	11993	Kale Pratik Ananda
4068	11980	Dhere Sangram Dattatray
4075	11939	Fatate Shivanand Dagdu
4101	11928	Kanekar Utkarsha Vishnu

is the partial fulfillment of prescribed syllabus of Shivaji University, Kolhapur for the academic year 2020-2021

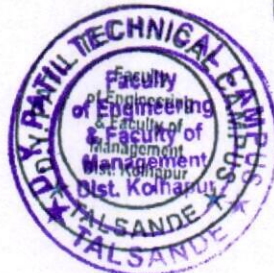
  
Prof. P. D. Sutar  
(Project Guide)

  
Prof. Vishwanath Patil  
(H.O. D. of Civil Dept)

  
Prof. Dr. S.R. Pawaskar  
(Principal)

**D.Y. Patil Technical Campus**  
Faculty of Engineering & Faculty of Management  
Talsande, Tal. Hatkanangale, Dist. Kolhapur

Date : 30 OCT 2021





**DEPARTMENT OF CIVIL ENGINEERING**  
**D. Y. Patil Technical Campus Engineering and Management**  
**Talsande, Kolhapur.**  
**2020-2021**




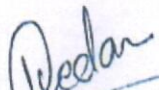
**CERTIFICATE**

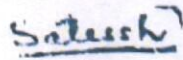
This is to certify that Project report entitled **Environment Management of Pachgaon Village**, submitted by

Roll No.	Seat No.	Name of Student
4013	11946	Anuja Dharmprakash Lakhane
4022	11950	Ishaq Mehboob Mukri
4039	12012	Mahima Uday Patil
4074	11951	Shahrukh Yunus Mulla
4098	11957	Tejasvini Suresh Patil

is the partial fulfilment of prescribed syllabus of Shivaji university,  
Kolhapur for the academic year 2020-2021

  
Prof. K. K. Sahasrabudhe  
(Project Guide)

  
Prof. K. S. Redekar  
(H.O.D. of Civil Dept)

  
Dr. S. R. Pawaskar  
(Principal)




## CERTIFICATE

This is to certify that the project report entailed,  
“To study of Exploiting Waste Material As Alternative for  
conventional Paver Block”

Submitted By,

NAME OF STUDENTS	PRN.NO.
Mr. Akshay Chandrakant Khamkar	2016067898
Mr. Mahesh Vitthal Patil	2016107220
Mr. Prafulla Namdev Dhekale	2017092911
Mr. Shubham Mahavir Murchite	2016107200
Mr. Yuvraj Dattatray Patil	2017092984

In the fulfillment of Bachelor's degree in B.E.(Civil) of “Shivaji University,  
Kolhapur” during academic year 2020-2021.

  
PROJECT GUIDE

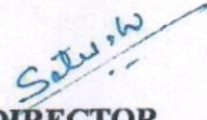
(Asst. Prof. Lokhande M. A.)

  
DEAN

(Prof. PAWAR R. S.)

  
HEAD OF DEPARTMENT

(Asst. Prof. Redekar K. S.)

  
DIRECTOR

(Dr. PAWASKAR S. R.)



**"Stabilization of soil by using plastic waste material"**

DEPARTMENT OF CIVIL ENGINEERING

**CERTIFICATE**

This is to clarify that,

RUTUJA DATTATRAY JADHAV. ROLL NO-4066

VRUSHALI VASUDEV DANDAVATE. ROLL NO-4109

PRAJAKTA GAUTAM GAIKWAD. ROLL NO-4051

LAXMIKANT SARJERAO PATIL. ROLL NO-4033

Student of BE Civil engineering has successfully completed the project report entitled,

**STABILIZATION OF SOIL BY USING PLASTIC WASTE MATERIAL.**

in partial fulfillment in civil engineering ,during academic year 2020-2021.

*Wosir*  
Mr. RABADE  
GUIDE

*Reekar*  
Mr. KEDAR REDEKAR  
HEAD OF CIVIL DEPT

*Sateen*  
Prof. SATISH PAWASKAR.  
PRINCIPAL



**D. Y. PATIL TECHNICAL CAMPUS, FACULTY OF ENGINEERING,  
TALSANDE**

**DEPARTMENT OF CIVIL ENGINEERING**



## **CERTIFICATE**

This is to certify that this group has successfully completed the project entitled "Use Of Plastic Waste, Rubber Waste, Foundry Sand Waste To Manufacturing Parking Tiles" under my supervision, in the partial fulfillment of Bachelor of Technology in Civil Engineering of Shivaji University, Kolhapur.

Prof. S. R. Mangolikar

**Project Guide**

External Examiner

Prof. K. S. Redekar

**H.O.D**

**Department of Civil Engg.**

Dr. S. R. Pawaskar

**Director**





D. Y.PATIL TECHNICAL CAMPUS, FACULTY OF  
ENGINEERING, TALSANDE  
DEPARTMENT OF CIVIL ENGINEERING



**CERTIFICATE**

This is to certify that this project group has successfully completed the project entitled "ENVIRONMENTAL FRIENDLY PAVING BLOCK" under my supervision, in the partial fulfillment of Bachelor of Engineering in Civil Engineering of Shivaji University, Kolhapur.

SHEMBALE VEDANT D	8740
BHOSALE ASHUTOSH A	8696
CHOUGALE VIJAY D	10942
JHADHAV AMAR H	8708
INGAWALE ADITYA A	10930
DHAVLE RITESH G	10944

Prof.R.A.Powar

project guide

External Examiner

Prof.K.S.Redekar

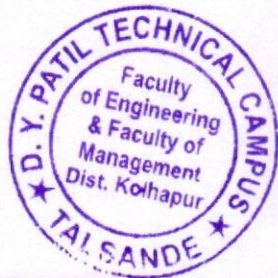
Head Civil.Engg Dept

D.Y Patil technical Campus Talsande

Prof.Dr.S.R.Pawaskar

Director

D.Y.Patil TechnicalCampus Talsande



**D. Y. PATIL TECHNICAL CAMPUS, FACULTY OF ENGINEERING,  
TALSANDE**


**DEPARTMENT OF CIVIL ENGINEERING**

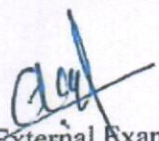


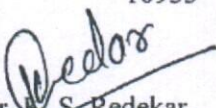
**CERTIFICATE**


This is to certify that this project group has successfully completed the project entitled "EXPERIMENTAL STUDY OF WASTE PLASTIC & CRUSH SAND USED IN FLOOR TILE" under my supervision, in the partial fulfillment of Bachelor of Engineering in Civil Engineering of Shivaji University, Kolhapur.

MR. MAHESHKUMAR DILIP CHAVAN	08697
MR. CHINMAY HARIDAS LOHAR	08721
MR. RUSHIKESH RAGHUNATH PATIL	10957
MR. AVADHUT BALASAHEB SHINDE	10935

  
Prof. S. R. Mangolikar  
(Guide)

  
External Examiner

  
Mr. V. S. Redekar  
Head, Civil Engg. Dept.  
D. Y. Patil Technical Campus, Talsande

  
Dr. S. R. Pawaskar  
Director,  
D. Y. Patil Technical Campus, Talsande



D. Y. PATIL TECHNICAL CAMPUS, FACULTY OF ENGINEERING,  
TALSANDE


DEPARTMENT OF CIVIL ENGINEERING

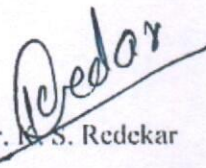



## CERTIFICATE

This is to certify that this project group has successfully completed the project entitled 'Energy Generation from Kitchen Waste' under my supervision, in the partial fulfillment of Bachelor of Engineering in Civil Engineering of Shivaji University, Kolhapur.

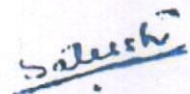
Mr. AKSHAY MANOHAR PACHORE,	08726
Mr. SOURABH GANESH POL.,	08735
Mr. PRUTHIVIRAJ MAHADEV REGADE	08737
Mr. GANESH SADASHIV PATIL.,	10956
Mr. SAURABH RAMESH PATIL.,	10959

  
Mr. N. S. Redekar  
Project Guide

  
Mr. N. S. Redekar  
Head, Civil Engg. Dept.  
D. Y. Patil Technical Campus, Talsande

  
External Examiner



  
Dr. S. R. Pawaskar  
Director,  
D. Y. Patil Technical Campus, Talsande

**D. Y. PATIL TECHNICAL CAMPUS, FACULTY OF ENGINEERING,  
TALSANDE**

**DEPARTMENT OF CIVIL ENGINEERING**



**CERTIFICATE**

This is to certify that group has successfully completed the project entitled "**Reuse and Recycle of Construction and Demolition Waste**" under my supervision, in the partial fulfillment of Bachelor of Technology in Civil Engineering of Shivaji University, Kolhapur.

MR. AJIT SHAMRAO KAMBLE	4008
MR. CHETAN CHANDRAKANT MASAL	4030
MR. GAURAV SANJAY MAGADUM	4037
MR. ROHAN RAVINDRA DABHOLE	4066

Date: 19/07/2022

Place: Talsande

Prof. S. S. Jamadagni

**Project Guide**

[Signature]  
**External Examiner**



Prof. [Signature] S. Redekar

**H.O.D**  
**Department of Civil Engg.**

[Signature]  
Dr. S. R. Pawaskar  
**Director**

**D. Y. PATIL TECHNICAL CAMPUS, FACULTY OF ENGINEERING,  
TALSANDE**

**DEPARTMENT OF CIVIL ENGINEERING**



## **CERTIFICATE**

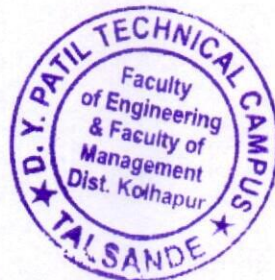
This is to certify that project group has successfully completed the project entitled "UTILIZATION OF WASTE PLASTIC IN MANUFACTURING OF PLASTIC BRICK ALONG WITH FLY ASH" under my supervision, in the partial fulfillment of Bachelor of Engineering in Civil Engineering of Shivaji University, Kolhapur.

*R. P. Pawar*

**Project Guide**

*C. V. Patil*

**External Examiner**



*P. D. D.*

**Department of Civil Engg.**

*S. K. S.*

**Director**