



D. Y. Patil College of Engineering and Technology

**Kasaba Bawada, Kolhapur
(An Autonomous Institute)**

Accredited by NAAC with 'A' Grade

B. Tech Programme Structure



Department of Civil Engineering
(To be implemented from academic year **2020-21**)

D. Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY, KOLHAPUR

Teaching and Evaluation Scheme from Year 2020-21

Second Year B. Tech. Civil Engineering

SEMESTER-III

Sr. No	Course Code	Course Type	Name of the Course	Teaching Scheme Per Week			Credits	Total Marks	Evaluation scheme			
				Lecture Hours	Tutorial Hours	Practical Hours			Type	Max. Marks	Min. Marks for Passing	
1	201CEL201	BSC	Applied Mathematics	3	1	0	4	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
2	201CEL202	PCC	Mechanics of Structures	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
3	201CEL203	PCC	Concrete Technology	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
4	201CEL204	PCC	Fluid Mechanics	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
5	201CEL205	ESC	Building Construction and Material	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
6	201CEP206	PCC-LC	Mechanics of Structures Lab	0	0	2	1	50	ISE	25	10	
									ESE (POE)	25	10	
7	201CEP207	PCC-LC	Concrete Technology Lab	0	0	2	1	50	ISE	25	10	
									ESE (POE)	25	10	
8	201CEP208	PCC-LC	Fluid Mechanics Lab	0	0	2	1	50	ISE	25	10	
									ESE (OE)	25	10	
9	201CEP209	ESC-LC	Building Construction and Material Lab	0	0	2	1	25	ISE	25	10	
10	201CEP210	ESC	Computer Aided Drawing	0	0	2	1	25	ISE	25	10	
Summary		Total		15	1	10	21	700	Minimum Marks		280	
		Total Contact Hrs/week		26			Total Credits		21	Total Marks		700

ISE: In Semester Evaluation MSE: Mid Semester Examination ESE: End Semester Examination OE - Oral Examination POE - Practical Oral Examination

Note 1 : Tutorials and practical shall be conducted in batches with batch strength not exceeding 20 students.

Note 2 : ESE will be conducted for 100 marks and converted to 50 Marks

D. Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY, KOLHAPUR

Teaching and Evaluation Scheme from Year 2020-21

Second Year B. Tech. Civil Engineering

SEMESTER-IV

Sr. No	Course Code	Course Type	Name of the Course	Teaching Scheme Per Week			Credits	Total Marks	Evaluation scheme			
				Lecture Hours	Tutorial Hours	Practical Hours			Type	Max. Marks	Min. Marks for Passing	
1	201CEL211	PCC	Structural Analysis	3	1	0	4	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
2	201CEL212	PCC	Geotechnical Engineering	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
3	201CEL213	ESC	Building Planning and Design	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
4	201CEL214	PCC	Engineering Surveying	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
5	201CEL215	PCC	Open Channel Hydraulic & Hydraulic Machines	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
6	201CEP216	PCC-LC	Geotechnical Engineering Lab	0	0	2	1	50	ISE	25	10	
									ESE (POE)	25	10	
7	201CEP217	ESC-LC	Building Planning and Design Lab	0	0	2	1	50	ISE	25	10	
									ESE (OE)	25	10	
8	201CEP218	PCC-LC	Engineering Surveying Lab	0	0	2	1	50	ISE	25	10	
									ESE (OE)	25	10	
9	201CEP219	PCC-LC	Open Channel Hydraulic & Hydraulic Machines Lab	0	0	2	1	25	ISE	25	10	
10	201CEMC 220	MC	Environmental Studies (Mandatory Course-III)	2	0	0	0	0	-	-	0	
Summary		Total		17	1	8	20	675	Minimum Marks			270
		Total Contact Hrs/week		26			Total Credits		20	Total Marks		675

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* Students have to undergo 4 to 6 weeks internship after IV or VI Semester during Summer vacation (Refer sheet below)

Internship Guidelines

*	The students are expected to undergo 4 to 6 week internship in the industry and work on the area as specified by the industry. The work should be assigned, monitored and evaluated by the concerned industry expert, based on the report by the students.
*	The department has to assign one faculty mentor who has to communicate with industry and monitor the internship related work, periodically.
*	The weightage of the evaluation will be as under. Industry Expert / Supervisor: 70% Department and faculty: 30%
	The evaluation should include presentations and submission of reports to the department at the beginning of the subsequent semester.
*	The internship can be availed by the students during the summer vacations after completion of Semester IV or Semester VI. The credits of internship will be considered in semester VII.
*	The industry expert / supervisor is expected to assign the work worth minimum of 100 to 120 hrs. for 4 to 6 weeks duration and should monitor and evaluate periodically.
*	At the completion of the internship work the student is expected to prepare a report on the work done and get certified from the industry expert.

D. Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY, KOLHAPUR

Teaching and Evaluation Scheme from Year 2020-21

Third Year B. Tech. Civil Engineering

SEMESTER-V

Sr. No	Course Code	Course Type	Name of the Course	Teaching Scheme Per Week			Credits	Total Marks	Evaluation scheme			
				Lecture Hours	Tutorial Hours	Practical Hours			Type	Max. Marks	Min. Marks for Passing	
1	201CEL301	PCC	Theory of Structures	3	1	0	4	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
2	201CEL302	PCC	Public Health Engineering	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
3	201CEL303	PCC	Transportation Engineering	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
4	201CEL304	PCC	Irrigation Engineering	3	1	0	4	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
5	201CEL305	PEC	Professional Elective -I	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
6	201CEP306	PCC-LC	Public Health Engineering Lab	0	0	2	1	50	ISE	25	10	
									ESE (POE)	25	10	
7	201CEP307	PCC-LC	Transportation Engineering Lab	0	0	2	1	50	ISE	25	10	
									ESE (OE)	25	10	
8	201CEP308	PEC-LC	Professional Elective -I Lab	0	0	2	1	25	ISE	25	10	
9	201CEP309	PROJ	Seminar	0	0	2	1	50	ISE	50	20	
10	201CEMC 310	MC	Indian Vastushastra (Mandatory Course-IV)	2	0	0	0	0	-	-	0	
Summary		Total		17	2	8	21	675	Minimum Marks		270	
		Total Contact Hrs/week		27			Total Credits	21	Total Marks	675		

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Note 2 : ESE will be conducted for 100 marks and converted to 50 Marks

D. Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY, KOLHAPUR

Teaching and Evaluation Scheme from Year 2020-21

Third Year B. Tech. Civil Engineering

SEMESTER-VI

Sr. No	Course Code	Course Type	Name of the Course	Teaching Scheme Per Week			Credits	Total Marks	Evaluation scheme			
				Lecture Hours	Tutorial Hours	Practical Hours			Type	Max. Marks	Min. Marks for Passing	
1	201CEL311	PCC	Design of steel Structures	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
2	201CEL312	HSMC	Management for Civil Engineering	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
3	201CEL313	PCC	Quantity Surveying and Valuation	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
4	201CEL314	PEC	Professional Elective -II	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
5	201CEL315	OEC	Open Elective -I	3	1	0	4	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
6	201CEP316	ESC	Structural Design and Drawing-I	0	0	2	1	50	ISE	25	10	
									ESE (OE)	25	10	
7	201CEP317	HSMC-LC	Management for Civil Engineering Lab	0	0	2	1	50	ISE	25	10	
									ESE (OE)	25	10	
8	201CEP318	PCC-LC	Quantity Surveying and Valuation Lab	0	0	4	2	75	ISE	50	20	
									ESE (OE)	25	10	
9	201CEP319	ESC	Civil Engineering Software	0	0	2	1	50	ISE	50	20	
10	201CEP320	PROJ	Mini Project	0	0	0	1	25	ISE	25	10	
11	201CEMC 321	MC	Ethics in Engineering (Mandatory Course-V)	2	0	0	0	0	-	0	0	
Summary		Total		17	1	10	22	750	Minimum Marks		300	
		Total Contact Hrs/week		28			Total Credits		22	Total Marks		750

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D. Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY, KOLHAPUR

Teaching and Evaluation Scheme from Year 2020-21

Final Year B. Tech. Civil Engineering

SEMESTER-VII

Sr. No	Course Code	Course Type	Name of the Course	Teaching Scheme Per Week			Credits	Total Marks	Evaluation scheme			
				Lecture Hours	Tutorial Hours	Practical Hours			Type	Max. Marks	Min. Marks for Passing	
1	201CEL401	PCC	Design of Concrete Structures	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
2	201CEL402	PCC	Earthquake Engineering	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
3	201CEL403	PEC	Professional Elective -III	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
4	201CEL404	PEC	Professional Elective -IV	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
5	201CEL405	OEC	Open Elective -II	3	1	0	4	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
6	201CEP406	ESC	Structural Design and Drawing-II	0	0	2	1	50	ISE	25	10	
									ESE (OE)	25	10	
7	201CEP407	PEC-LC	Professional Elective -III Lab	0	0	2	1	25	ISE	25	10	
8	201CEP408	PROJ	Project Phase-I	0	0	4	2	100	ISE	50	20	
									ESE (OE)	50	20	
9	201CEP409	PROJ	* Internship (4-Weeks)	0	0	0	4	50	ISE	50	20	
Summary		Total		15	1	8	24	725	Minimum Marks			290
		Total Contact Hrs/week		24			Total Credits	24	Total Marks	725		

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Note 1 : Tutorials and practical shall be conducted in batches with batch strength not exceeding 20 students.

Note 2 : ESE will be conducted for 100 marks and converted to 50 Marks

* Evaluation will be based on Internship completed during Summer vacation in IV or VI Semester (as per guidelines)

D. Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY, KOLHAPUR

Teaching and Evaluation Scheme from Year 2020-21

Final Year B. Tech. Civil Engineering

SEMESTER-VIII

Sr. No	Course Code	Course Type	Name of the Course	Teaching Scheme Per Week			Credits	Total Marks	Evaluation scheme			
				Lecture Hours	Tutorial Hours	Practical Hours			Type	Max. Marks	Min. Marks for Passing	
1	201CEL410	HSMC	Professional Practice	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
2	201CEL411	PEC	Professional Elective -V	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
3	201CEL412	PEC	Professional Elective -VI	3	0	0	3	100	ISE	20	20	40
									MSE	30		
									ESE	50	20	
4	201CEP413	PEC-LC	Professional Elective -V Lab	0	0	2	1	25	ISE	25	10	
5	201CEP414	PROJ	Project Phase-II	0	0	8	4	200	ISE	100	40	
									ESE (OE)	100	40	
Summary		Total		9	0	10	14	525	Minimum Marks		210	
		Total Contact Hrs/week		19			Total Credits	14	Total Marks	525		

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D. Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY, KOLHAPUR.
Civil Engineering Department
List of Professional Electives

Track	Specialisation	Professional Elective- I (SEM V)	Professional Elective- II (SEM VI)	Professional Elective- III (SEM VII)	Professional Elective- IV (SEM VII)	Professional Elective-V (SEM VIII)	Professional Elective-VI (SEM VIII)
I	Structures and Geotechnical Engineering	Foundation Engineering	Geotechnical Design	Advanced Foundation Engineering	Advance Design of Steel Structure	Structural Dynamics	Design of RCC Bridges
		Soil and Site Improvement	Reinforced Earth & Geotextiles	Advanced Structural Analysis	Pre-stressed Engineering	Advanced Concrete Design	Infrastructure Planning and Design
II	Environment, Hydraulics and Water Resource Engineering	Municipal Solid Waste Management	Environmental Impact Assessment	Air Pollution & Noise Pollution	Advanced Water & Wastewater Treatment	Sustainable Water & Sanitation System	Industrial Waste Management
		Irrigation System & Watershed Management	Water Power Engineering	Design & Planning of Pipe Network	Design of Hydraulic Structures	Ground Water Hydrology	River Engineering
III	Transportation and Construction Management	Advance Surveying	Intelligent Transportation Systems	Transportation Economics	Tunnel Engineering	Airport Engineering	Railway Engineering
		Rural Development Planning	Onshore and Offshore Engineering	Construction Equipment and Methods	Total Quality Management and Management Information System	Intellectual Management and International Contract	Repairs & Rehabilitation of Structures

List of Open Electives

Open Elective- I (SEM-VI)	Human Resource Development and Organizational Behavior	Disaster Management	Green Building Design
Open Elective- II (SEM-VII)	Smart Cities	GPS and Remote Sensing	Technolegal Aspects for Property Documents

Theory Course Assessment:

The Theory course assessment is to be done on the basis of ISE (In Semester Evaluation), MSE (Mid Semester

ISE	MSE	ESE
20%	30%	50%

***ISE (Theory) 20 marks**

ISE1 and ISE2 can be conducted by using following parameters

- | | |
|--|-------------------|
| 1) Online test (on moodle) | 6) Case study |
| 2) Surprise test | 7) Demonstrations |
| 3) Open book exam | 8) Seminars |
| 4) Active learning method as per OBE requirement | 9) Assignments |
| 5) Self learning topic | 10) Self Study |

* ISE (Lab) 25 marks: Lab assessment is continuous assessment method in which faculty has to Evaluate student's

*ESE (End Semester Examinations) 50 marks :-ESE will be conducted on entire syllabus for 100 marks 3 hours duration

**** Environmental Studies, Indian Vastushastra, Ethics in Engineering (Mandatory Course) :**

- 1 Self study course
- 2 Course will be assessed by conducting objective type examination for 50 marks for which criteria for passing is
- 3 **Result of student will be declared only if student passes these courses**

D. Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY, KOLHAPUR.
Civil Engineering Department
Subject wise Distribution of Credits

Course Code	Subjects	Credits
HSMC	Professional Practice (VIII-3), Mgmt. for Civil Engg (VI-4), FCE (FY-4)	4 (FY) + 7 = 11
BSC	Applied Mathematics (III-4), FY (16)	16 (FY) + 4 = 20
ESC	CAD (III-1), BCM (III-4), BPD (IV-4), SDD-I (VI-1), SDD-II (VII-1), Civil Engg. Software (VI-1), FY (18)	18 (FY) + 12 = 30
PCC-CE	MOS (III-4), CT (IV-4), Hyd-I (III-4), Struc. Analysis (IV-4), Soil Mech. (IV-4), SUR (IV-4), Hyd-II (IV-4), TOS (V-4), Public Health Engg. (V-4), TRE (V-4), Irrigation (V-4), DSS (VI-3), QSV (VI-5), DCS (VII-3), EQ (VII-3)	58
PEC-CE	Professional Elective-I (V-4), Professional Elective-II (VI-3), Professional Elective-III (VII-4), Professional Elective-IV (VII-3), Professional Elective-V (VIII-4), Professional Elective-VI (VIII-3)	21
OEC-CE	Open Elective-I (VI-4), Open Elective-II (VII-4)	8
PROJ	Seminar (V-1), Mini Project (VI-1), Project Phase-I (VII-2), Internship (VII-4), Project Phase-II (VIII-4)	12
MC	Environmental Studies (IV-0), Indian Vastushastra (V-0), Ethics in Engg. (VI-0)	0
	Total	160
Total Credits 38 (First Year) + 122 (Civil Dept.)		