



KOLHAPUR INSTITUTE  
OF TECHNOLOGY'S  
**COLLEGE OF  
ENGINEERING  
KOLHAPUR**

**An Autonomous Institute  
"A" Grade by NAAC with CGPA 3.12**

**Structure for**  
**B. Tech Programme**  
**in**  
**Environmental Engineering**

**Kolhapur Institute of Technology's  
College of Engineering (Autonomous), Kolhapur**

Teaching and Evaluation scheme for  
**Second Year B. Tech. Program in Environmental Engineering Semester-III**

Course Code	Course Name	Curriculum Component	Hours/Week				Evaluation Scheme			
			L	T	P	Credits	Component	Marks		
								Max	Min for passing	
UENV0301	Applied Mathematics	BS	3	1	-	4	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
UENV0302	Environmental Chemistry & Microbiology	BS	4	-	-	4	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
UENV0303	Fluid Mechanics	PC	3	-	-	3	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
UENV0304	Structural Mechanics	PC	3	-	-	3	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
UENV0305	Building Construction Technology	PC	3	-	-	3	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
UENV0361	Audit Course I: Environmental Studies	BS	2	-	-	-	ESE	50	20	40
UENV0331	Water Quality Monitoring Laboratory	BS	-	-	2	1	ISE	50	20	
							ESE(OE)	25	10	
UENV0332	Fluid Mechanics Laboratory	PC	-	-	2	1	ISE	50	20	
							ESE(OE)	25	10	
UENV0333	Strength of Materials Laboratory	PC	-	-	2	1	ISE	25	10	
UENV0334	Material Testing Laboratory	PC	-	-	2	1	ISE	50	20	
							ESE(OE)	25	10	
UENV0335	Computer Aided Design Laboratory	ES	-	-	2	1	ISE	50	20	
			<b>18</b>	<b>1</b>	<b>10</b>	<b>22</b>	<b>500 + 300 = 800 + Audit Course</b>			

**Total Credits - 22, Total Contact hours - 29**

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Teaching and Evaluation scheme for  
**Second Year B. Tech. Program in Environmental Engineering Semester - IV**

Course Code	Course Name	Curriculum Component	Hours/Week				Evaluation Scheme			
			L	T	P	Credits	Component	Marks		
								Max	Min for passing	
UENV0401	Surveying and Geomatics	PC	3	-	-	3	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
UENV0402	Water Resources Engineering	PC	3	1	-	4	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
UENV0403	Building Planning and Design*	PC	2	-	-	2	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE*	50		
UENV0404	Environmental Hydraulics	PC	3	-	-	3	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
UENV0421	Professional Elective I	PE	3	1	-	4	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
UENV0462	Audit Course II: Environmental Governance	ES	2	-	-	-	ESE	50	20	40
UENV0431	Surveying Laboratory	PC	-	-	2	1	ISE	50	20	
							ESE (OE)	25	10	
UENV0432	Building Planning and Design Laboratory	PC	-	-	4	2	ISE	50	20	
							ESE (OE)	25	10	
UENV0433	Open Channel Hydraulics Laboratory	PC	-	-	2	1	ISE	50	20	
							ESE (OE)	25	10	
UENV0434	Computational Laboratory	PC	-	-	2	1	ISE	50	20	
UENV0435	Environmental Instrumentation Laboratory	PC	-	-	2	1	ISE	25	10	
			<b>16</b>	<b>2</b>	<b>12</b>	<b>22</b>	<b>500 + 300 = 800 + Audit Course</b>			

**Total Credits - 22, Total Contact hours – 30**

\*End Semester Examination of 4 hours

<b>Professional Elective – I</b>	
1	Ecology and Environmental Sanitation
2	Remote Sensing and GIS
3	Engineering Geology

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Teaching and Evaluation scheme for  
**Third Year B. Tech. Program in Environmental Engineering Semester - V**

Course Code	Course Name	Curriculum Component	Hrs/Week				Evaluation Scheme			
			L	T	P	Credits	Component	Marks		
								Max	Min for passing	
UENV0501	Water Supply Engineering	PC	3	-	-	3	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
UENV0502	Engineering Management and Economics	HS	3	1	-	4	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
UENV0503	Solid and Hazardous Waste Management	PC	3	-	-	3	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
UENV0504	Geotechnical Engineering	PC	3	1	-	4	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
UENV0522	Professional Elective II	PE	3	1	-	4	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
UENV0563	Audit Course III: Transportation Engineering	PC	2	-	-	-	ESE	50	20	40
UENV0531	Water Treatment Laboratory	PC	-	-	2	1	ISE	50	20	
							ESE (OE)	50	20	
UENV0532	Solid Waste Monitoring Laboratory	PC	-	-	2	1	ISE	50	20	
							ESE (OE)	25	10	
UENV0533	Geotechnical Engineering Lab	PC	-	-	2	1	ISE	50	20	
							ESE (OE)	50	20	
UENV0534	Mini Project Lab	MC	-	-	2	1	ISE	25	10	
			<b>17</b>	<b>3</b>	<b>8</b>	<b>22</b>	<b>500 + 300 = 800 + Audit Course</b>			

**Total Credits - 22, Total Contact hours – 28**

<b>Professional Elective – II</b>	
1	Renewable Energy Engineering
2	Green Buildings
3	Noise Pollution and Control

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Teaching and Evaluation scheme for  
**Third Year B. Tech. Program in Environmental Engineering Semester - VI**

Course Code	Course Name	Curriculum Component	Teaching Scheme				Evaluation Scheme			
			L	T	P	Credits	Components	Marks		Min for passing
							Max			
UENV0601	Waste Water Engineering	PC	3	-	-	3	ISE-I	10	20	40
							ISE-II	10		
							MSE	30		
							ESE	50		
UENV0602	Air Pollution and Control	PC	3	-	-	3	ISE-I	10	20	40
							ISE-II	10		
							MSE	30		
							ESE	50		
UENV0603	Design of Concrete Structures	PC	4	-	-	4	ISE-I	10	20	40
							ISE-II	10		
							MSE	30		
							ESE	50		
UENV0623	Professional Elective III	PE	3	1	-	4	ISE-I	10	20	40
							ISE-II	10		
							MSE	30		
							ESE	50		
OEL01	Open Elective I	OE	2	1	-	3	ISE-I	10	20	40
							ISE-II	10		
							MSE	30		
							ESE	50		
UENV0664	Audit Course IV: Research Methodology	PC	2	-	-	-	ESE	50	20	40
UENV0631	Waste Water Engineering Laboratory	PC	-	-	2	1	ISE	50	20	
							ESE (OE)	50	20	
UENV0632	Air Pollution and Control Laboratory	PC	-	-	2	1	ISE	50	20	
							ESE (OE)	25	10	
UENV0633	Design of Concrete Structures Laboratory	PC	-	-	2	1	ISE	50	20	
UENV0634	Design & Drawing of Environmental Systems Laboratory	PC	-	-	4	2	ISE	50	20	
							ESE (OE)	25	10	
			<b>17</b>	<b>2</b>	<b>10</b>	<b>22</b>	<b>500 + 300 = 800 + Audit Course</b>			

**Total Credits - 22, Total Contact hours - 29**

Professional Elective – III		Open Elective I
1	Environmental Geotechnology	Environmental Laws and Policies
2	Optimization Techniques	Occupational Health and Safety
3	Operation and Maintenance of Environmental Facilities	Water Conservation and Management

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Teaching and Evaluation scheme for  
**Final Year B. Tech. Program in Environmental Engineering Semester-VII**

Course Code	Course Name	Curriculum Component	Teaching Scheme				Evaluation Scheme			
			L	T	P	Credits	Components	Marks		Min for passing
								Max		
UENV0701	Industrial Waste Treatment	PC	3	-	-	3	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
UENV0702	Advance Water and Wastewater Treatment	PC	3	-	-	3	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
UENV0703	Quantity Surveying and Valuation *	PC	3	-	-	3	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE *	50		
UENV0704	EIA and Environmental Legislation	PC	3	1	-	4	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
OEL02	Open Elective II	OE	2	1	-	3	ISE I	10	20	40
							MSE	30		
							ISE II	10		
							ESE	50		
UENV0765	Audit Course V: Environmental Management	PC	2	-	-	-	ESE	50	20	40
UENV0731	Treatability Studies Laboratory	PC	-	-	2	1	ISE	50	20	
							ESE (OE)	25	10	
UENV0732	Quantity Surveying and Valuation Laboratory	PC	-	-	2	1	ISE	50	20	
							ESE (OE)	50	20	
UENV0741	Seminar and Vocational Training Laboratory	MC	-	-	2	1	ISE	50	20	
UENV0751	Project Phase I Laboratory	MC	-	-	2	1	ISE	50	20	
			<b>16</b>	<b>2</b>	<b>08</b>	<b>20</b>	<b>500 + 300 = 800 + Audit Course</b>			

**Total Credits – 20, Total Contact hours – 26**

\*End Semester Examination of 4 hours

Sr. No.	Open Elective II
1	Renewable Energy Resources
2	Disaster Management and Risk Analysis
3	Waste Management

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Teaching and Evaluation scheme for  
**Final Year B. Tech. Program in Environmental Engineering Semester-VIII**

Course Code	Course Name	Curriculum Component	Teaching Scheme				Evaluation Scheme		
			L	T	P	Credits	Components	Marks	
								Max	Min for passing
UENV0852	Project Phase II	MC	-	-	12	6	ISE I	75	30
							ISE II	75	30
							ESE (OE)	150	60
UENV0824	Professional Elective IV	PE	3	-	-	3	ISE-I	10	
							ISE-II	10	
							MSE	30	
							ESE	50	20
UENV0825	Professional Elective V	PE	3	-	-	3	ISE-I	10	
							ISE-II	10	
							MSE	30	
							ESE	50	20
			<b>6</b>	<b>-</b>	<b>12</b>	<b>12</b>	<b>300 + 100 + 100 = 500</b>		

**Total Credits - 12, Total Contact hours – 18**

Professional Elective – IV		Professional Elective – V
1	Industrial Health and Safety	Environmental Management System
2	Environmental Modeling and Simulation	Project Management
3	Design of Environmental Structures	Clean Development Mechanism

## Kolhapur Institute of Technology's College of Engineering (Autonomous), Kolhapur

Total Credits from S.Y. B. Tech to Final Year B. Tech										
Component	F.Y. B.Tech		S.Y. B.Tech		T.Y. B.Tech		Final Year B.Tech		Total	% age
	Sem I	Sem II	Sem III	Sem IV	Sem V	Sem VI	Sem VII	Sem VIII		
Basic Sciences (BS)	9	9	9	-	-	-	-	-	27	15.88
Engineering Sciences	13	13	1	-	-	-	-	-	27	15.88
Program Core (PC)	-	-	12	18	13	15	15	-	73	42.94
Professional Elective (PE)	-	-	-	4	4	4	-	6	18	10.59
Open Elective (OE)	-	-	-	-	-	3	3	-	6	3.53
Mandatory Course (MC)	-	-	-	-	1	-	2	6	9	5.29
Humanities (HS)	3	3	-	-	4	-	-	-	10	5.88
<b>Total</b>	<b>25</b>	<b>25</b>	<b>22</b>	<b>22</b>	<b>22</b>	<b>22</b>	<b>20</b>	<b>12</b>	<b>170</b>	<b>100</b>

