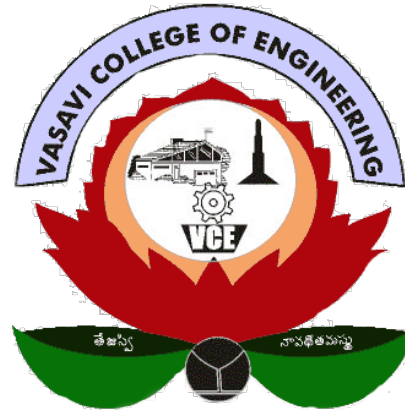


# **SCHEME OF INSTRUCTION AND EXAMINATION**

## **DEPARTMENT OF CIVIL ENGINEERING**



## **VASAVI COLLEGE OF ENGINEERING (A) HYDERABAD**

**SCHEME OF INSTRUCTIONS  
AND EXAMINATION  
FROM I TO VIII SEMESTERS  
(Students Admitted in 2020-21)**

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
DEPARTMENT OF CIVIL ENGINEERING

**SCHEME OF INSTRUCTION AND EXAMINATION (R-20)**  
**B.E. – (CIVIL ENGINEERING) I-SEMESTER ACADEMIC YEAR 2020 - 2021**  
**(Students Admitted in 2020-21)**

B.E (Civil) I Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			
		Hours per Week			Duration in Hrs	Maximum Marks		Credits
		L	T	P/D		SEE	CIE	
<b>THEORY</b>								
U20HS110EH	English Language and Communication-I	2	-	-	3	60	40	2
U20BS110MA	Engineering Mathematics – I	3	-	-	3	60	40	3
U20BS020PH	Applied Physics	3	1	-	3	60	40	4
U20ES110CS	Introduction to Programming	1	-	-	2	40	30	1
U20ES010CE	Basic Engineering Mechanics	3	-	-	3	60	40	3
U20ES120CE	Engineering Graphics – I	1	-	2	3	60	40	2
<b>PRACTICALS</b>								
U20HS111EH	English Language and Communication Skills Lab – I	-	-	2	3	50	30	1
U20BS011PH	Applied Physics Lab	-	-	2	3	50	30	1
U20ES111ME	Engineering Workshop-I	-	-	2	3	50	30	1
<b>Total</b>		<b>13</b>	<b>1</b>	<b>8</b>	<b>-</b>	<b>490</b>	<b>320</b>	<b>18</b>
<b>Grand Total</b>		<b>22</b>				<b>810</b>		
<i>Note: The left over hours are to be allotted to CC / RC / TC / PDC based on the requirement.</i>								
<b>Theory (Common to CSE &amp; IT)</b>								
U20ES030CE	Engineering Drawing	1	-	2	3	60	40	2

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
DEPARTMENT OF CIVIL ENGINEERING

**SCHEME OF INSTRUCTION AND EXAMINATION (R-20)**  
**B.E. – (CIVIL ENGINEERING) II-SEMESTER ACADEMIC YEAR 2020 - 2021**  
**(Students Admitted in 2020-21)**

B.E (Civil) II Semester									
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			Credits	
		Hours per Week			Duration in Hrs	Maximum Marks			
		L	T	P/D		SEE	CIE		
<b>THEORY</b>									
U20HS210EH	English Language and Communication – II	2	-	-	3	60	40	2	
U20BS210MA	Engineering Mathematics – II	3	-	-	3	60	40	3	
U20BS020CH	Applied Chemistry	3	1	-	3	60	40	4	
U20ES210CS	Programming for Engineers	3	-	-	3	60	40	3	
U20ES220CE	Engineering Graphics – II	1	-	2	3	60	40	2	
U20ES210CE	Engineering Mechanics	3	-	-	3	60	40	3	
<b>PRACTICALS</b>									
U20HS211EH	English Language and Communication Skills Lab – II	-	-	2	3	50	30	1	
U20BS011CH	Chemistry Lab	-	-	2	3	50	30	1	
U20ES211CS	Programming Lab	-	-	2	3	50	30	1	
U20ES271ME	Engineering Workshop-II	-	-	2	3	50	30	1	
<b>TOTAL</b>		<b>15</b>	<b>1</b>	<b>10</b>		<b>560</b>	<b>360</b>	<b>21</b>	
<b>GRAND TOTAL</b>		<b>26</b>				<b>920</b>			
<b>THEORY (Common to EEE &amp; ECE)</b>									
U20ES030CE	Engineering Drawing	1	-	2	-	60	40	2	
<i>Note: The left over hours are to be allotted to CC / RC / TC / PDC based on the requirement .</i>									

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
DEPARTMENT OF CIVIL ENGINEERING

**SCHEME OF INSTRUCTION AND EXAMINATION (R-20)**  
**B.E. – (CIVIL ENGINEERING) III-SEMESTER ACADEMIC YEAR 2021 - 2022**  
**(Students Admitted in 2020-21)**

B.E (Civil) III Semester									
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination				
		Hours per Week			Duration in Hrs	Maximum Marks		Credits	
		L	T	P/D		SEE	CIE		
<b>THEORY</b>									
U20HS330EH	Skill Development Course-I (Communication Skills-I )	1	-	-	2	40	30	1	
U20BS330MA	Skill Development Course-II (Aptitude-I )	1	-	-	2	40	30	1	
U20HS010EH	Human Values and Professional Ethics-I	1	-	-	2	40	30	1	
U20BS310MA	Partial Differential Equations & Transform Calculus	3	-	-	3	60	40	3	
U20BS310CE	Geology	2	-	-	3	60	40	2	
U20ES310EE	Basic Electrical Engineering for Civil Engineers	2	-	-	3	60	40	2	
U20PC310CE	Strength of Materials – I	3	-	-	3	60	40	3	
U20PC320CE	Surveying-I	3	-	-	3	60	40	3	
U20OEXXXXX	Open Elective-I	2	-	-	3	60	40	2	
U20MC310ME	Introduction to Entrepreneurship	1	-	-	2	40	30	-	
<b>PRACTICALS</b>									
U20BS311CE	Geology Lab	-	-	2	3	50	30	1	
U20ES311EE	Basic Electrical Engineering Lab for Civil Engineers	-	-	2	3	50	30	1	
U20PC321CE	Surveying - I Lab	-	-	2	3	50	30	1	
U20PC331CE	Computer Aided Drafting Lab	-	-	2	3	50	30	1	
Student should acquire one online course certificate equivalent to two credits during III-VII Semester									
<b>TOTAL</b>		<b>19</b>	<b>-</b>	<b>8</b>		<b>720</b>	<b>480</b>	<b>22</b>	
<b>GRAND TOTAL</b>		<b>27</b>				<b>1200</b>			
Note: The left over hours are to be allotted to ECA -I / CCA-I / CC / RC / TC based on the requirement .									

**SERVICE COURSES OFFERED BY CIVIL ENGINEERING TO MECHANICAL ENGINEERING**

B.E (Civil) III Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			Credits
		Hours per Week			Duration in Hrs	Maximum Marks		
		L	T	P/D		SEE	CIE	
<b>THEORY</b>								
U20ES310CE	Mechanics of Materials	3	-	-	3	60	40	3
<b>PRACTICALS</b>								
U20ES311CE	Mechanics of Materials Lab	-	-	2	3	50	30	1

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
DEPARTMENT OF CIVIL ENGINEERING

**SCHEME OF INSTRUCTION AND EXAMINATION (R-20)**  
**B.E. – (CIVIL ENGINEERING) IV-SEMESTER ACADEMIC YEAR 2021 - 2022**  
**(Students Admitted in 2020-21)**

B.E (Civil) IV Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			
		Hours per Week			Duration in Hrs	Maximum Marks		Credits
		L	T	P/D		SEE	CIE	
<b>THEORY</b>								
U20BS430MA	Skill Development Course-III (Aptitude-II)	1	-	-	2	40	30	1
U20PE430XX	Skill Development Course-IV (Technical Skills-I)	1	-	-	2	40	30	1
U20BS410MA	Numerical Methods, Probability and Statistics	3	-	-	3	60	40	3
U20PC410CE	Strength of Materials – II	3	-	-	3	60	40	3
U20PC420CE	Surveying-II	2	-	-	3	60	40	2
U20PC430CE	Fluid Mechanics	3	-	-	3	60	40	3
U20PC440CE	Building Technology	2	-	-	3	60	40	2
U20OEXXXXX	Open Elective-II	3	-	-	3	60	40	3
U20MC010CE	Environmental Science	2	-	-	3	60	40	-
<b>PRACTICALS</b>								
U20PC411CE	Strength of Materials Lab	-	-	2	3	50	30	1
U20PC421CE	Surveying-II Lab	-	-	2	3	50	30	1
U20PC431CE	Fluid Mechanics Lab	-	-	2	3	50	30	1
Student should acquire one online course certificate equivalent to two credits during III-VII Semester								
<b>TOTAL</b>		<b>20</b>	<b>-</b>	<b>6</b>		<b>650</b>	<b>430</b>	<b>21</b>
<b>GRAND TOTAL</b>		<b>26</b>				<b>1080</b>		
Note: The left over hours are to be allotted to ECA-II / CCA-II / CC / RC / TC based on the requirement.								

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
DEPARTMENT OF CIVIL ENGINEERING

**SCHEME OF INSTRUCTION AND EXAMINATION (R-20)**  
**B.E. – (CIVIL ENGINEERING) V-SEMESTER ACADEMIC YEAR 2022 - 2023**  
**(Students Admitted in 2020-21)**

B.E (Civil) V Semester									
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination				
		Hours per Week			Duration in Hrs	Maximum Marks		Credits	
		L	T	P/D		SEE	CIE		
<b>THEORY</b>									
U20HS510EH	Skill Development Course-V (Communication Skills-II)	1	-	-	2	40	30	1	
U20PE510XX	Skill Development Course-VI(Technical Skills-II)	1	-	-	2	40	30	1	
U20HS040EH	Economics & Finance for Engineers	2	-	-	3	60	40	2	
U20HS 020EH	Human Values and Professional Ethics-II	1	-	-	2	40	30	1	
U20PC510CE	Structural Analysis	3	-	-	3	60	40	3	
U20PC520CE	Hydraulics and Hydraulic Machinery	3	-	-	3	60	40	3	
U20PC530CE	Soil Mechanics	3	-	-	3	60	40	3	
U20PC540CE	Reinforced Concrete Design	3	-	-	3	60	40	3	
U20OEXXXX	Open Elective-III	3	-	-	3	60	40	3	
<b>PRACTICALS</b>									
U20PC521CE	Hydraulics and Hydraulic Machinery Lab	-	-	2	3	50	30	1	
U20PC531CE	Soil Mechanics Lab	-	-	2	3	50	30	1	
U20PC541CE	Geographical Information System Lab	-	-	2	3	50	30	1	
U20PW519CE	Mini Project : Surveying Camp	-	-	-	-	-	30	1	
Student should acquire one online course certificate equivalent to two credits during III-VII Semester									
<b>TOTAL</b>		<b>20</b>	<b>-</b>	<b>6</b>	<b>-</b>	<b>630</b>	<b>450</b>	<b>24</b>	
<b>GRAND TOTAL</b>		<b>26</b>				<b>1080</b>			

*Note: The left over hours are to be allotted to ECA-III / CCA-III / CC / RC / TC based on the requirement .*



VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
DEPARTMENT OF CIVIL ENGINEERING

**SCHEME OF INSTRUCTION AND EXAMINATION (R-20)**  
**B.E. – (CIVIL ENGINEERING) VI-SEMESTER ACADEMIC YEAR 2022 - 2023**  
**(Students Admitted in 2020-21)**

B.E (Civil) VI Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			
		Hours per Week			Duration in Hrs	Maximum Marks		Credits
		L	T	P/D		SEE	CIE	
<b>THEORY</b>								
U20BS610MA	Skill Development Course-VII (Aptitude-III)	1	-	-	2	40	30	1
U20PE610XX	Skill Development Course-VIII (Technical Skills-III)	1	-	-	2	40	30	1
U20PC610CE	Design of Steel Structures	3	-	-	3	60	40	3
U20PC620CE	Environmental Engineering	3	-	-	3	60	40	3
U20PC630CE	Advanced Structural Analysis	3	-	-	3	60	40	3
U20PC640CE	Transportation Engineering	3	-	-	3	60	40	3
U20PEXXXCE	Professional Elective-I	3	-	-	3	60	40	3
U20OEXXXXX	Open Elective-IV	3	-	-	3	60	40	3
<b>PRACTICALS</b>								
U20PC621CE	Environmental Engineering Lab	-	-	2	3	50	30	1
U20PC631CE	Computer Applications Lab	-	-	2	3	50	30	1
U20PC641CE	Transportation Engineering Lab	-	-	2	3	50	30	1
U20PW619CE	Theme Based Project	-	-	2	-	-	30	1
Student should acquire one online course certificate equivalent to two credits during III-VII Semester								
<b>TOTAL</b>		<b>20</b>	<b>-</b>	<b>8</b>		<b>590</b>	<b>420</b>	<b>24</b>
<b>GRAND TOTAL</b>		<b>28</b>				<b>1010</b>		
<i>Note: The left over hours are to be allotted to CCA-IV/ CC / RC / TC based on the requirement .</i>								

**PROFESSIONAL ELECTIVE – I**

1	U20PE611CE	Design of Concrete Structures
2	U20PE612CE	Sustainable Materials & Construction
3	U20PE613CE	Ground Water Hydrology
4	U20PE614CE	Modelling & Analysis of Uncertainty.

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
DEPARTMENT OF CIVIL ENGINEERING

**SCHEME OF INSTRUCTION AND EXAMINATION (R-20)**  
**B.E. – (CIVIL ENGINEERING) VII-SEMESTER ACADEMIC YEAR 2023 - 2024**  
**(Students Admitted in 2020-21)**

B.E (Civil) VII Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			
		Hours per Week			Duration in Hrs	Maximum Marks		Credits
		L	T	D / P		SEE	CIE	
<b>THEORY</b>								
U20PC710CE	Foundation Engineering	3	-	-	3	60	40	3
U20PC720CE	Estimation & Specifications	2	-	-	3	60	40	2
U20PC730CE	Concrete Technology	2	-	-	3	60	40	2
U20PE7XXCE	Professional Elective – II	3	-	-	3	60	40	3
U20PE7XXCE	Professional Elective – III	3	-	-	3	60	40	3
U20PE7XXCE	Professional Elective – IV	3	-	-	3	60	40	3
<b>PRACTICALS</b>								
U20PC711CE	Concrete Lab	-	-	2	3	50	30	1
U20PW719CE	Project Seminar	-	-	2	-	-	30	1
Student should acquire one online course certificate equivalent to two credits during III-VII Semester								
<b>TOTAL</b>		<b>16</b>	<b>-</b>	<b>4</b>		<b>410</b>	<b>300</b>	<b>18</b>
<b>GRAND TOTAL</b>		<b>20</b>				<b>710</b>		
<i>Note: The left over hours are to be allotted to CC / RC / TC based on the requirement .</i>								

<b>PROFESSIONAL ELECTIVE – II</b>		
1	U20PE721CE	Finite Element Method
2	U20PE722CE	Rock Mechanics
3	U20PE723CE	Solid & Hazardous Waste Management
4	U20PE724CE	Optimization Techniques
<b>PROFESSIONAL ELECTIVE – III</b>		
1	U20PE731CE	Advanced Design of Steel Structures
2	U20PE732CE	Geoinformatics
3	U20PE733CE	Health Monitoring & Retrofitting of Structures
4	U20PE734CE	Transportation Infrastructure Planning & Management
<b>PROFESSIONAL ELECTIVE – IV</b>		
1	U20PE741CE	Pre-Stressed concrete
2	U20PE742CE	Railway & Airport Engineering
3	U20PE743CE	Hydrology and Irrigation Engineering
4	U20PE744CE	Disaster Mitigation and Management

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)  
DEPARTMENT OF CIVIL ENGINEERING

**SCHEME OF INSTRUCTION AND EXAMINATION (R-20)**  
**B.E. – (CIVIL ENGINEERING) VIII-SEMESTER ACADEMIC YEAR 2023 - 2024**  
**(Students Admitted in 2020-21)**

B.E (Civil) VIII Semester								
Course Code	Name of the Course	Scheme of Instruction			Scheme of Examination			Credits
		Hours per Week			Duration in Hrs	Maximum Marks		
		L	T	D / P		SEE	CIE	
<b>THEORY</b>								
U20PE8XXCE	Professional Elective – V	3	-	-	3	60	40	3
U20PE8XXCE	Professional Elective - VI	3	-	-	3	60	40	3
<b>PRACTICALS</b>								
U20PW819CE	Project / Internship	-	-	12	Viva-Voce	50	50	6
<b>TOTAL</b>		<b>6</b>	<b>-</b>	<b>12</b>		<b>170</b>	<b>130</b>	<b>12</b>
<b>GRAND TOTAL</b>		<b>18</b>				<b>300</b>		
<i>Note:</i> 1. Student are awarded with two credits for completion of online course certificate 2. The left over hours are to be allotted to CC / RC / TC based on the requirement.								

<b>PROFESSIONAL ELECTIVE – V</b>		
1	U20PE851CE	Elements of Earthquake Engineering
2	U20PE852CE	Construction Management & Administration.
3	U20PE853CE	Advanced Environmental Engineering
4	U20PE854CE	Ground Improvement Techniques
<b>PROFESSIONAL ELECTIVE – VI</b>		
1	U20PE861CE	Advanced Reinforced Concrete Design
2	U20PE862CE	Advanced Transportation Engineering
3	U20PE863CE	Environmental Impact Assessment
4	U20PE864CE	Repairs and Rehabilitation of structures

**OPEN ELECTIVES OFFERED TO CIVIL ENGINEERING DEPARTMENT**

	III- Semester (2 Credits)	IV- Semester (3 Credits)	V- Semester (3 Credits)	VI- Semester (3 Credits)
ECE	Basics of Communication Engineering	Programming for Engineers	Sensors for Engineering Applications	INTERNET OF THINGS
EEE	Non Conventional Energy Sources	-	Solar Power and applications	Electrical Installation and Safety
Mechanical Engineering	Geometric Modelling	Optimization Methods	Introduction to Robotics and Applications Introduction to Automobile Engineering	Additive Manufacturing and its applications
IT	Introduction to Data Structures Introduction to Linux	Introduction to object oriented Programming Introduction to scripting languages	Introduction to Database Management Systems Introduction to statistical programming	Introduction to Web Application development Introduction to Machine Learning
CSE	Introduction to Python Programming	Data Structures	Introduction to Java Programming	Introduction to DBMS
Physics	Smart Materials and Applications	Introduction to Opto Electronic Devices Thin film technology and Applications	Vaccum technology and Applications	Fundamentals of nano materials and Applications
Chemistry	Battery Science and Technology Corrosion Science and its Applications	-	-	-
Mathematics	Basics of Cryptology	Linear Algebra and Applications	Discrete Mathematics	-
H&SS	-	Basics of Entrepreneurship	Advances in Entrepreneurship	Technical Writing and Professional Presentation
	-	-	Technical Writing and Professional Presentation	English for competitive Exams

**OPEN ELECTIVES OFFERED BY CIVIL ENGINEERING DEPARTMENT****B.E. III SEMESTER**

<b>S.No.</b>	<b>Elective</b>	<b>Code</b>	<b>Title</b>	<b>credits</b>
1	<b>OE – I</b>	U200EXXXXX	Green Building	2

**B.E. IV SEMESTER**

2	<b>OE – II</b>	U200EXXXXX	Disaster Management	3
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**B.E. V SEMESTER**

3	<b>OE – III</b>	U200EXXXXX	Spatial Information Technology	3
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**B.E. VI SEMESTER**

4	<b>OE – IV</b>	U200EXXXXX	Project Management	3
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Break up of Credits distribution for 2020-2024 Batch		
	AICTE Suggested Break up of Credits	Proposed Scheme
HS	12	12
BS	25	28
ES	24	20
PC	48	59
PE	18	21
OE	18	11
MC	Non-Credit	Non-Credit
Project	15	9
Online Certificate Course	-	2
<b>Total Credits</b>	<b>160</b>	<b>162</b>

Semester wise break up of Credits									
	I-Sem.	II-Sem.	III-Sem.	IV-Sem.	V-Sem.	VI-Sem.	VII-Sem.	VIII-Sem.	Total
HS	3	3	2	0	4	0	0	0	12
BS	8	8	7	4	0	1	0	0	28
ES	7	10	3	0	0	0	0	0	20
PC	0	0	8	13	15	15	8	0	59
PE	0	0	0	1	1	4	9	6	21
OE	0	0	2	3	3	3	0	0	11
MC	0	0	√	√	0	0	0	0	0
PW	0	0	0	0	1	1	1	6	9
Online Certificate Course	-	-	-	-	-	-	-	2	2
<b>Total</b>	<b>18</b>	<b>21</b>	<b>22</b>	<b>21</b>	<b>24</b>	<b>24</b>	<b>18</b>	<b>14</b>	<b>162</b>