

SRI KRISHNA COLLEGE OF ENGINEERING AND TECHNOLOGY An Autonomous Institution, Affiliated to Anna University Kuniamuthur, Coimbatore - 641 008

DEPARTMENT OF CIVIL ENGINEERING



BE CIVIL ENGINEERING
CURRICULUM AND SYLLABI
REGULATION 2020
(2021-2025 BATCH)



SRI KRISHNA COLLEGE OF ENGINEERING AND TECHNOLOGY

An Autonomous Institution affiliated to Anna University, Chennai

Kuniamuthur, Coimbatore - 641 008

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BE CIVIL ENGINEERING
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CHOICE BASED CREDIT SYSTEM

SRI KRISHNA COLLEGE OF ENGNEERING AND TECHNOLOGY

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VISION AND MISSION OF THE DEPARTMENT

Our Vision

To be a center of excellence in Civil Engineering Education through full-fledged learning experience along with research.

Our Mission

To accomplish our vision, we are committed to

- M1: Faculty experts from all specialization of Civil Engineering to facilitate teaching learning process
- M2: Excellent infrastructure facilities to apply Civil Engineering knowledge and perform societal based research
- M3: Exposure to latest technologies in Civil Engineering through industry-institute interaction and professional bodies
- M4: Environs to develop their innovative thoughts, ethics, communication, inter- and intrapersonal skills
- M5: Enthusiasm towards self-learning, social responsibility and entrepreneurship

Program Outcomes (POs):-

At the time of their graduation students of Civil Engineering Program should be in possession of the following Program Outcomes

- PO 1. **Engineering knowledge:** Apply the knowledge of mathematics, science and engineering fundamentals for the solution of complex Civil Engineering problems.
- PO 2. **Problem analysis:** Identify, formulate and analyse complex Civil Engineering problems reaching substantiated conclusions using first principles of mathematics and engineering sciences.
- PO 3. **Design/development of solutions:** Design solutions for complex Civil Engineering problems and design system components with appropriate consideration for public health & safety, cultural, societal and environmental considerations.
- PO 4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis &

- interpretation of data and synthesis of the information to provide valid conclusions.
- PO 5. **Modern tool usage:** Create, select & apply appropriate techniques, resources, modern engineering and IT tools, including prediction and modeling to complex Civil Engineering activities, with an understanding of the limitations.
- PO 6. **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal & cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- PO 7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO 8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities as well as norms of the engineering practice.
- PO 9. **Individual and team work:** Function effectively as an individual, a member or leader in diverse teams and in multidisciplinary settings.
- PO 10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with the society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- PO 11. **Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- PO 12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Educational Objectives (PEOs):-

The following Program Educational Objectives are designed based on the department mission

- To apply knowledge of mathematics, science and engineering to solve existing problems in the area of Structural, Geotechnical, Water Resources, Environmental, Transportation, Urban Planning, Construction Materials and Management in Civil Engineering
- 2. To analyze, design, construct Civil Engineering traditional and modern structures
- 3. To perform investigation on any complicated Civil Engineering problems by conducting research using modern equipment's and software tools

- 4. To communicate and develop strong inter- and intra- personal skills to prepare them for placement and higher studies
- 5. To be self-motivated towards lifelong learning and entrepreneurship

Mapping of POs to PEOs

Program					Pr	ogram	Outco	omes				
Educational Objectives	1	2	3	4	5	6	7	8	9	10	11	12
PEO 1	3	2	3	2	2	3	2	2	3	3	3	2
PEO 2	3	3	2	2	3	2	2	2	2	2	2	3
PEO 3	3	3	3	2	3	3	2	2	2	3	2	3
PEO 4	3	3	2	2	3	2	2	2	2	2	2	3
PEO 5	3	3	3	2	3	3	2	2	2	3	2	3

1	Reasonably agreed	2	Moderately agreed	3	Strongly agreed
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Program Specific Outcomes (PSOs):-

At the end of the Program, Graduate shall have

PSO 1	Analytical Knowledge	The ability to analyse, design and interpret by							
	and Practical Skills	applying the concepts of mathematics and physical							
		sciences in the core areas of Civil Engineering.							
PSO 2	Civil Engineer and	The propensity to excel in portfolio of waste							
	Sustainability	management, sanitation, housing and construction							
		management for the sustainable environment.							
PSO 3	Environment and	The ability to acquire and update knowledge							
	Social Commitment	continuously and offer engineering solutions to meet							
		the environmental and societal needs.							

B.E. CIVIL ENGINEERING REGULATION 2020 CHOICE BASED CREDIT SYSTEM I – VIII SEMESTER CURRICULUM AND SYLLABI

SEM	SEMESTER I										
SL. No.	Course Code	Course	L/T/P	Contact hrs./wk.	С	Ext./Int.	Cat.				
THE	ORY										
1.	21CE101	Introduction to Civil Engineering	3/0/0	3	3	60/40	ESC				
THE	THEORY CUM PRACTICAL										
2.	21MA101	Engineering Mathematics I	2/1/2	5	4	50/50	BSC				
3.	21CH101	Engineering Chemistry	3/0/3 6		4.5	50/50	BSC				
4.	21CS111	Problem Solving Using C Programming	3/0/2	5	4	50/50	ESC				
5	21EN101	Technical Communication Skills	2/0/2	4	3	50/50	HSMC				
PRA	CTICAL										
6	21ME111	Engineering Graphics	1/0/3	4	2.5	40/60	ESC				
MAN	MANDATORY COURSE										
7.	21MC101	Mandatory Course I	3 WI	EEKS	0	0/100	MC				
		Total	14/1/12	27	21	700					

SEME	STER II								
SL. No.	Course Code	Course	L/T/P	Contact hrs./wk.	С	Ext./Int.	Cat.		
THE	ORY CUM P	RACTICAL							
1.	21CE201	Architectural Planning and Building Drawing	3/0/2	5	4	50/50	ESC		
2.	21MA201	Engineering Mathematics II	2/1/2	5	4	50/50	BSC		
3.	21PH201	Applied Physics	3/0/3	6	4.5	50/50	BSC		
4.	21EE111	Basics of Electrical and Electronics Engineering	3/0/2	5	4	50/50	ESC		
PRA	CTICAL								
5.	21CS211	Python for Engineers Laboratory	1/0/3	4	2.5	40/60	ESC		
6.	21ME103	Engineering Practices Laboratory	0/0/3	3	1.5	40/60	ESC		
MAN	MANDATORY COURSE								
7.	21MC102	Mandatory Course II	2/0/0	2	0	0/100	MC		
		Total	14/1/15	30	20.5	700			

SEM	ESTER III									
SL. No.	Course Code	Course	L/T/P	Contact hrs./wk.	С	Ext./Int.	Cat.			
THE	ORY									
1.	21ME201	Engineering Mechanics	3/1/0	4	4	60 /40	ESC			
2.	21GE201	Universal Human Values	3/0/0	3	3	60/40	HSMC			
3.	21MA301	Engineering Mathematics III	3/1/0	4	4	60/40	BSC			
THE	THEORY CUM PRACTICAL									
4.	21CE301	Construction Materials and Techniques	3/0/2	5	4	50/50	PCC			
5.	21CE302	Fluid Mechanics and Hydraulic Machinery	3/0/2	5	4	50/50	PCC			
6.	21CE303	Surveying and Geomatics	3/0/2	5	4	50/50	PCC			
MAN	MANDATORY COURSE									
7.	21MC104	Mandatory Course III	2/0/0	2	0	0/100	MC			
		Total	20/2/6	28	23	700				

SEM	ESTER IV									
SL. No.	Course Code	Course	L/T/P	Contact hrs./wk.	С	Ext./Int.	Cat.			
THE	ORY									
1.	21CE401	Mechanics of Solids	3/0/0	3	3	60/40	PCC			
2.	21MA401	Probability and Numerical Methods	3/1/0	4	4	60/40	BSC			
THE	THEORY CUM PRACTICAL									
3.	21CE402	Engineering Geology and Concrete Technology	3/0/2	5	4	50/50	PCC			
4.	21CE403	Environmental Engineering	3/0/2	5	4	50/50	PCC			
5.	21CE404	Geotechnical Engineering	3/0/2	5	4	50/50	PCC			
6.	21CE405	Transportation Engineering	3/0/2	5	4	50/50	PCC			
MAN	MANDATORY COURSE									
7.	21MC103	Mandatory Course IV	2/0/0	2	-	0/100	MC			
		Total	29/1/8	29	23	700				

SEM	ESTER V									
SL. No.	Course Code	Course	L/T/P	Contact hrs./wk.	С	Ext./Int.	Cat.			
THE	ORY									
1.	21xxxxx	Open Elective I	3/0/0	3	3	60/40	OEC			
2.	21CE0xx	Emerging Elective I	3/0/0	3	3	60/40	EEC			
3.	21CE9xx	Professional Elective I	3/0/0	3	3	60/40	PEC			
THE	ORY CUM PI	RACTICAL								
3.	21CE501	Construction Planning and Management	3/0/3	6	4.5	50/50	HSMC			
5.	21CE502	Design of Reinforced Concrete Structures	3/0/3	6	4.5	50/50	PCC			
6.	21CE503	Mechanics of Materials	3/0/3	6	4.5	50/50	PCC			
MAN	MANDATORY COURSE									
7.	21MC105	Mandatory Course V	2/0/0	2	-	0/100	MC			
		Total	20/0/9	29	22.5	700				

SEME	ESTER VI									
SL. No.	Course Code	Course	L/T/P	Contact hrs./wk.	С	Ext./Int.	Cat.			
THEC	RY									
1.	21xxxxx	Open Elective II	3/0/0	3	3	60/40	OEC			
2.	21CE0xx	Emerging Elective II	3/0/0	3	3	60/40	EEC			
3.	21CE9xx	Professional Elective II	3/0/0	3	3	60/40	PEC			
THE	THEORY CUM PRACTICAL									
4.	21CE601	Construction Cost Estimation and Valuation	3/0/3	6	4.5	50/50	PCC			
5.	21CE602	Design of Steel Structures	3/0/3	6	4.5	50/50	PCC			
6.	21CE603	Structural Analysis	3/0/2	5	4	50/50	PCC			
EMP	LOYABILIT	Y ENHANCEMENT SKILLS								
7.	7. 21EES01 Employability Enhancement Skills (Industry Internship / Training - 4 weeks) 2 40/60 EES									
		Total	18/0/8	26	24	700				

SEMEST	TER VII						
SL. No.	Course Code	Course	L/T/P	Contact hrs./wk.	С	Ext./Int.	Cat.
THEORY	1						
1.	21CE0xx	Emerging Elective III	3/0/0	3	3	60/40	EEC
2.	21CE0xx	Emerging Elective IV	3/0/0	3	3	60/40	EEC
3.	21CE9xx	Professional Elective III	3/0/0	3	3	60/40	PEC
4.	21CE9xx	Professional Elective IV	3/0/0	3	3	60/40	PEC
5.	21CE9xx	Professional Elective V	3/0/0	3	3	60/40	PEC
6.	21CE9xx	Professional Elective VI	3/0/0	3	3	60/40	PEC
PROJE	CT WORK						
6.	21CE701	Design Comprehensive Project	0/0/2	2	1	40/60	PROJ
		Total	18/0/2	20	19	700	

SEN	SEMESTER VIII											
SL. Course No. Code Course L/T/P Contact hrs./wk. C Ext./Int. Cat.												
PRO	DJECT WO	RK										
1.	21CE801	Project Work	0/0/24	24	12	40/60	PROJ					
		Total	0/0/24	24	12	100						

COURSES DISTRIBUTION - SPECIALIZATION

SL.	Stroom				Co	ourses				Total
No.	Stream	I	Ш	Ш	IV	V	VI	VII	VIII	Total
1.	Structural Engineering	-	-	-	1	2+2	1+2	0+6	-	4+10
2.	Environmental and Water Resource Engineering	-	-	1	1	0+2	0+2	0+6	-	2+10
3.	Construction Engineering and Management	-	1	1	-	1+2	2+2	0+6	-	5+10
4.	Geotechnical and Transportation Engineering	-	-	1	2	0+2	0+2	0+6	1	3+10
5.	Basic Civil Engineering Courses	2	1	1	1	-	-	-	-	5
6.	Science and Humanities	4	4	2	1	-	-	-	-	11
7.	Open Elective / Mandatory Courses	1	1	1	1	2	1	-	-	7
8.	Project / Internship	-	-	-	-	-	1	1	1	3
	Total	7	7	7	7	5+2	5+2	1+6	1	40+10

COURSES DISTRIBUTION - SUMMARY

SL.	Stroom			Co	urses	/Semes	ter			Tatal	%
No.	Stream	I	II	III	IV	V	VI	VII	VIII	Total	%
1.	Theory	1	-	3	2	3	3	6	-	16	32
2.	Practical	1	2	-	-	-	-	-	-	3	6
3.	Theory cum Practical	4	4	3	4	3	3	-	-	23	46
4.	Project Work / EES	ı	-	-	-	-	1	1	1	3	6
5.	Mandatory Course	1	1	1	1	1	-	-	-	5	10
	Total		7	7	7	7	7	7	1	50	100

SCHEME OF CREDIT DISTRIBUTION – SUMMARY

SL.	Stream			Cr	edits/S	Semes	ter			С	%
No.	Stream	ı	II	=	IV	٧	VI	VII	VIII		
1.	Humanities & Social Sciences Including Management (HSMC)	3	-	3	-	4.5		-	-	10.5	6.4
2.	Basic Sciences (BSC)	8.5	8.5	4	4	-	•	-	-	25	15.1
3.	Engg. Sciences (ESC)	9.5	12	4	-	-	ı	-	ı	25.5	15.5
4.	Professional Core (PCC)	-	-	12	19	9	13	-	-	53	32.1
5.	Professional Electives (PEC)	-	1	-	-	3	3	12	-	18	10.9
6.	Open Electives (OEC) / Emerging Elective Courses (EEC)	-	-	-	-	6	6	6	-	18	10.9
7.	Project Work (PROJ)/(EES)	-	-	ı	ı	-	2	1	12	15	9.1
8.	Mandatory Course (MC)		Non-credit							0	0
	Total	21	20.5	23	23	22.5	24	19	12	165	100

STRUCTURE FOR UNDERGRADUATE ENGINEERING PROGRAMME

SL. No.	Course Work - Subject Area	AICTE Suggested Breakdown of Credits	SKCET Credits
1.	Humanities and Social Sciences including Management courses	12*	10.5
2.	Basic Science courses	25*	25
3.	Engineering Science courses including Workshop, Drawing, Basics of Electrical / Mechanical / Computer etc.	24*	25.5
4.	Professional core courses	48*	53
5.	Professional Electives courses relevant to the chosen specialization / branch	18*	18
6.	Open Subjects - Electives from other technical and / or emerging subjects	18*	18
7.	Project Work, Seminar and / or Internship in Industry or elsewhere.	15*	15
8.	Mandatory Courses	Non-credit	Non-credit
	Total	160*	165
*Minor	Variations is allowed as per need of the respect	ive disciplines	

HUMANITIES & SOCIAL SCIENCES INCLUDING MANAGEMENT (10.5 Credits)

SL. No.	Course Code	Course Title	L/T/P	Contact hrs./Wk.	С	Cat.
1.	21EN101	Technical Communication skills	2/0/2	4	3	HSMC
2.	21GE201	Universal Human Values	3/0/0	3	3	HSMC
3	21CE501	Construction Planning and Management	3/0/3	6	4.5	HSMC

BASIC SCIENCE COURSES (25 Credits)

SL. No.	Course Code	Course Title	L/T/P	Contact hrs./Wk.	С	Cat.
1.	21MA101	Engineering Mathematics I	2/1/2	5	4	BSC
2.	21CH101	Engineering Chemistry	3/0/3	6	4.5	BSC
3.	21MA201	Engineering Mathematics II	2/1/2	5	4	BSC
4.	21PH201	Applied Physics	3/0/3	6	4.5	BSC
5.	21MA301	Engineering Mathematics III	3/1/0	4	4	BSC
6.	21MA401	Probability and Numerical Methods	3/1/0	4	4	BSC

ENGINEERING SCIENCE COURSES (25.5 Credits)

SL. No.	Course Code	Course Title	L/T/P	Contact hrs./Wk.	С	Cat.
1.	21CE101	Introduction to Civil Engineering	3/0/0	3	3	ESC
2.	21CS111	Problem Solving using C Programming	3/0/2	5	4	ESC
3.	21ME111	Engineering Graphics	1/0/3	4	2.5	ESC
4.	21EE111	Basics of Electrical and Electronics Engineering	3/0/2	5	4	ESC
5.	21CS211	Python for Engineers Laboratory	1/0/3	4	2.5	ESC
6.	21ME103	Engineering Practices Laboratory	0/0/3	3	1.5	ESC
7.	21ME201	Engineering Mechanics	3/1/0	4	4	ESC
8.	21CE201	Architectural Planning and Building Drawing	3/0/2	5	4	ESC

PROFESSIONAL CORE COURSES (53 Credits)

SL. No.	Course Code	Course Title	L/T/P	Contact hrs./Wk.	С	Cat.
1.	21CE301	Construction Materials and Techniques	3/0/2	5	4	PCC
2.	21CE302	Fluid Mechanics and Hydraulic Machinery	3/0/2	5	4	PCC
3.	21CE303	Surveying and Geomatics	3/0/2	5	4	PCC
4.	21CE401	Mechanics of Solids	3/0/0	3	3	PCC
5.	21CE402	Engineering Geology and Concrete Technology	3/0/2	5	4	PCC
6.	21CE403	Environmental Engineering	3/0/2	5	4	PCC

7.	21CE404	Geotechnical Engineering	3/0/2	5	4	PCC
8.	21CE405	Transportation Engineering	3/0/2	5	4	PCC
9.	21CE502	Design of Reinforced Concrete Structures	3/0/3	6	4.5	PCC
10.	21CE503	Mechanics of Materials	3/0/3	6	4.5	PCC
11.	21CE601	Construction Cost Estimation and Valuation	3/0/3	6	4.5	PCC
12.	21CE602	Design of Steel Structures	3/0/3	6	4.5	PCC
13.	21CE603	Structural Analysis	3/0/2	5	4	PCC

PROFESSIONAL ELECTIVE COURSES (18 Credits)

SL. No.	Course Code	Course Title	L/T/P	Contact hrs./Wk.	С	Cat.
		Elective Stream I: Structural and Foundation	Engin	eering		
1.	21CE901	Damage Detection and Rehabilitation of Concrete Structures	3/0/0	3	3	PEC
2.	21CE902	Design of Substructures	3/0/0	3	3	PEC
3.	21CE903	Disaster Resistant Structures	3/0/0	3	3	PEC
4.	21CE904	Green Building Technology	3/0/0	3	3	PEC
5.	21CE905	Ground Improvement and Land Reclamation Methods	3/0/0	3	3	PEC
6.	21CE906	Prefabricated Structures	3/0/0	3	3	PEC
7.	21CE907	Prestressed Concrete Structures	3/0/0	3	3	PEC
8.	21CE908	Tall Structures	3/0/0	3	3	PEC
9.	21CE909	Valuation of Civil Engineering Structures	3/0/0	3	3	PEC
	Electi	ive Stream II: Environmental and Water Res	ource E	Engineerir	ng	
1.	21CE910	Air and Noise Pollution Management	3/0/0	3	3	PEC
2.	21CE911	Ecological Engineering	3/0/0	3	3	PEC
3.	21CE912	Environmental Hazard, Risk Assessment and Management	3/0/0	3	3	PEC
4.	21CE913	GIS for Environmental Engineering	3/0/0	3	3	PEC
5.	21CE914	Industrial Waste Treatment and Disposal	3/0/0	3	3	PEC
6.	21CE915	Irrigation Engineering	3/0/0	3	3	PEC
7.	21CE916	Occupational Hazards and Industrial Safety	3/0/0	3	3	PEC
8.	21CE917	Renewable and Sustainable Energy	3/0/0	3	3	PEC
9.	21CE918	Surface Water Hydrology	3/0/0	3	3	PEC
	Elec	ctive Stream III: Infrastructural Engineering a	and Ma	nagemen	t	
1.	21CE919	Intelligent Transportation Systems	3/0/0	3	3	PEC
2.	21CE920	Construction Methods and Equipment Management	3/0/0	3	3	PEC
3.	21CE921	Disaster Management Planning and Mitigation	3/0/0	3	3	PEC

4.	21CE922	Infrastructure Asset Management and Financing	3/0/0	3	3	PEC
5.	21CE923	Pavement construction and management	3/0/0	3	3	PEC
6.	21CE924	Project Safety Management	3/0/0	3	3	PEC
7.	21CE925	Sustainable Building Materials	3/0/0	3	3	PEC
8.	21CE926	Traffic Engineering and Management	3/0/0	3	3	PEC
9.	21CE927	Transport and Environment	3/0/0	3	3	PEC

EMERGING ELECTIVE COURSES (12 Credits)

SL. No.	Course Code	Course Title	L/T/P	Contact hrs./Wk.	С	Cat.
1.	21CE007	Building Services and Management	3/0/0	3	3	EEC
2.	21CE008	Clean Energy Production	3/0/0	3	3	EEC
3.	21CE009	Financing and Costing Management for Civil Engineers	3/0/0	3	3	EEC
4.	21CE010	Instrumentation and Sensor Technologies for Civil Engineering Applications	3/0/0	3	3	EEC
5.	21CE011	Lean startup Management	3/0/0	3	3	EEC
6.	21CE012	Metro Rail Engineering	3/0/0	3	3	EEC
7.	21CE013	Pre-Engineered Industrial Structures	3/0/0	3	3	EEC
8.	21CE014	Risk and Reliability Analysis of Civil Infrastructure Systems	3/0/0	3	3	EEC
9.	21CE015	Rural water supply and Onsite Sanitation Systems	3/0/0	3	3	EEC
10.	21CE016	Contaminated site assessment and Remediation	3/0/0	3	3	EEC
11.	21CE017	Smart City Planning and Development	3/0/0	3	3	EEC
12.	21CE018	Smart Materials and Structures	3/0/0	3	3	EEC

OPEN ELECTIVE COURSES (6 Credits) [Offered to Other Branches]

SL. No.	Course Code	Course Title	L/T/P	Contact hrs./Wk.	С	Cat.
1.	21CE001	Disaster Management	3/0/0	3	3	OEC
2.	21CE002	Engineering Risk and Uncertainty	3/0/0	3	3	OEC
3.	21CE003	Environmental Impact Assessment and Life Cycle Analysis	3/0/0	3	3	OEC
4.	21CE004	Geographical Information System	3/0/0	3	3	OEC
5.	21CE005	Industrial Pollution control and Prevention Techniques	3/0/0	3	3	OEC
6.	21CE006	Sustainability and Infrastructure	3/0/0	3	3	OEC

PROJECT WORK (13 Credits)

SL. No.	Course Code	Course Title	L/T/P	Contact hrs./Wk.	С	Cat.
1.	21CE701	Design Comprehensive Project	0/0/2	2	1	PROJ
2.	21CE801	Project Work	0/0/24	24	12	PROJ

EMPLOYABILITY ENHANCEMENT SKILLS (2 Credits)

SL. No.	Course Code	Course Title	Duration	С	Cat.
1.	21EES01	Employability Enhancement Skills (Industry Internship / Training)	4 Weeks	2	EES

MANDATORY COURSES (Non-credit)

SL. No.	Course Code	Course Title	L/T/P	Contact hrs./Wk.		Cat.
1.	21MC101	Induction Programme	3 W	0	MC	
2.	21MC102	Environmental Sciences	2/0/0	2	0	MC
3.	21MC103	Soft Skills	2/0/0	2	0	MC
4.	21MC104	Management Organizational Behaviour	2/0/0	2	0	MC
5.	21MC105	General Aptitude	2/0/0	2	0	MC

VALUE ADDED COURSES

SL. No.	Course Code	Course Title
1.	21VA101	Arc GIS
2.	21VA102	Auto CAD- 2D for Civil Engineers
3.	21VA103	Construction Planning and Management Using Primavera
4.	21VA104	3D Design and Drafting Using Revit Architecture
5.	21VA105	Structural Analysis and Design Using STAAD.Pro
6.	21VA106	Total Station and GPS Surveying

SEMESTER WISE CREDIT DISTRIBUTION: -

Semester	ı	II	III	IV	V	VI	VII	VIII	Total
Credits	21	20.5	23	23	22.5	24	19	12	165

Total Credits: 165

L: LectureT: TutorialP: PracticalC: Credit

HSMC: Humanities and Social Sciences including Management

Cat. : Category MC : Mandatory Course

BSC : Basic Science Courses

ESC : Engineering Science Courses

OEC : Open Elective Courses

EEC : Emerging Elective Courses

PCC : Professional Core Courses PEC : Professional Elective Courses