

**KKR & KSR
INSTITUTE OF TECHNOLOGY AND SCIENCES
(AUTONOMOUS)**

Accredited by NBA & NAAC with Grade "A" and Affiliated to JNTUK-Kakinada
Vinjanampadu, Vatticherukuru Mandal, Guntur, Andhra Pradesh 522017



**BACHELOR OF TECHNOLOGY (B. Tech)
DEPARTMENT OF CIVIL ENGINEERING
COURSE STRUCTURE & SYLLABUS HANDOUT
R-20 REGULATION
(CHOICE BASED CREDIT SYSTEM)**

(Applicable from the batch admitted in AY: 2020-2021)

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SEMESTER-I

S. No.	Course Code	Course Title	L	T	P	C	IM	EM	TM
THEORY									
1	20SH1T05	Engineering Chemistry	3	0	0	3	30	70	100
2	20SH1T06	Differential Equations	3	0	0	3	30	70	100
3	20CS1T01	Problem Solving and Programming Using C	3	0	0	3	30	70	100
4	20ME1T01	Engineering Graphics	1	0	4	3	30	70	100
5	20EE1T02	Basics of Electrical and Electronics Engineering	3	0	0	3	30	70	100
PRACTICAL									
6	20SH1L05	Engineering Chemistry Lab	0	0	3	1.5	15	35	50
7	20CS1L01	Problem Solving and Programming Using C Lab	0	0	3	1.5	15	35	50
8	20CS1L02	IT Workshop	0	0	3	1.5	15	35	50
Total Credits						19.5	195	455	650

Theory: BSC-2, ESC-3 Practical: BSC-1, ESC-2

SEMESTER-II

S. No.	Course Code	Course Title	L	T	P	C	IM	EM	TM
THEORY									
1	20SH2T01	Communicative English	3	0	0	3	30	70	100
2	20SH2T03	Engineering Physics	3	0	0	3	30	70	100
3	20SH2T07	Linear Algebra and Vector Calculus	3	0	0	3	30	70	100
4	20ME2W01	Engineering Workshop	1	0	4	3	30	70	100
5	20ME2T01	Engineering Mechanics	3	0	0	3	30	70	100
6	20GE2M01	Environmental Science	2	0	0	0	---	---	---
PRACTICAL									
7	20SH2L01	Communicative English Skills Lab	0	0	3	1.5	15	35	50
8	20SH2L03	Engineering Physics Lab	0	0	3	1.5	15	35	50
9	20CE2L01	Computer Aided Drawing Lab	0	0	3	1.5	15	35	50
Total Credits						19.5	195	455	650

Theory: BSC-2, HSMC-1, And ESC-2 Practical: BSC-1, HSMC-1, And ESC-1

SEMESTER-III

S.No	Course Code	Course Title	L	T	P	C	IM	EM	TM
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THEORY										
1	20SH3T02	Numerical Methods & Statistics	3	0	0	3	30	70	100	
2	20CE3T01	Strength of Materials-1	3	0	0	3	30	70	100	
3	20CE3T02	Surveying	3	0	0	3	30	70	100	
4	20CE3T03	Building Materials & Construction Planning	3	0	0	3	30	70	100	
5	20CE3T04	Fluid Mechanics	3	0	0	3	30	70	100	
6	20GE3M02	Professional Ethics & Human Values	2	0	0	0	---	---	---	
PRACTICAL										
7	20CE3L01	Strength of Materials Laboratory	0	0	3	1.5	15	35	50	
8	20CE3L02	Surveying Laboratory-I	0	0	3	1.5	15	35	50	
9	20CE3L03	Building Drawing Practice Laboratory	0	0	3	1.5	15	35	50	
10	20CE3S01	Skill Oriented Course	1	0	2	2	---	50	50	
Total Credits							21.5	195	505	700

THEORY: BSC-1, PCC-4 PRACTICAL: PCC LAB-3

SEMESTER-IV

S.No	Course Code	Course Title	L	T	P	C	IM	EM	TM	
THEORY										
1	20CE4T01	Structural Analysis-I	3	0	0	3	30	70	100	
2	20CE4T02	Strength of Materials-II	3	0	0	3	30	70	100	
3	20CE4T03	Concrete Technology	3	0	0	3	30	70	100	
4	20CE4T04	Transportation Engineering-1	3	0	0	3	30	70	100	
5	20CE4T05	Hydraulics & Hydraulic Machinery	3	0	0	3	30	70	100	
PRACTICAL										
6	20CE4L01	Fluid Mechanics & Hydraulic Machinery Laboratory	0	0	3	1.5	15	35	50	
7	20CE4L02	Surveying Laboratory-II	0	0	3	1.5	15	35	50	
8	20CE4L03	Concrete Technology Laboratory	0	0	3	1.5	15	35	50	
9	20CE4S01	Skill Oriented Course	1	0	2	2	---	50	50	
Total Credits							21.5	195	505	700

THEORY: ESC-1, BSC-1, PCC-2, HSC-1 PRACTICAL: PCC LAB-3

SEMESTER-V

S.No	Course Code	Course Title	L	T	P	C	IM	EM	TM
THEORY									
1	20CE5T01	Design of Reinforced concrete structures	3	0	0	3	30	70	100
2	20CE5T02	Hydrology & Irrigation Engineering	3	0	0	3	30	70	100
3	20CE5T03	Engineering Geology & GIS	3	0	0	3	30	70	100
4	20CE5T04	Advanced Structural Analysis	3	0	0	3	30	70	100
5	20OE5T01	CSE/ECE	2	0	2	3	30	70	100
6	20GE5M03	Constitution of India	2	0	0	0	---	---	---
PRACTICAL									
7	20CE5L01	Transportation Engineering Lab	0	0	3	1.5	15	35	50

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8	20CE5L02	Engineering Geology Lab	0	0	3	1.5	15	35	50	
9	20CE3S03	Skill Advanced Course –RIVET Architecture	1	0	2	2	--	50	50	
10	20CE5I01	Summer Internship	0	0	0	1.5	--	50	50	
Total Credits							21.5	180	520	700

THEORY: PCC-3, PEC-1, OEC-1, MC-1, PRACTICAL: PCC LAB-2

Professional Elective Course - 1

Subject Code	Subject
	Advanced Structural Analysis
	Bridge Engineering
	Introduction to FEM

Open Elective Course – 1

Subject Code	Offered by Dept.	Subject	Offered for Dept.
	BS&H	Entrepreneurship Development	All
	EEE	Electrical safety Management	CE
	ME	Optimization techniques	CE
	ECE	Principles of communication	CE
	CSE	Computer Graphics	CE
	IT	Database Management	CE

SEMESTER-VI

S.No	Course Code	Course Title	L	T	P	C	IM	EM	TM
THEORY									
1	20CE6T01	Design of Steel structures	3	0	0	3	30	70	100
2	20CE6T02	Geo Technical Engineering	3	0	0	3	30	70	100
3	20CE6T03	Environmental Engineering	3	0	0	3	30	70	100
4	20CE6T04	Pre fabricated structures	3	0	0	3	30	70	100
5	20OE6T02	IT/CSE	2	0	2	3	30	70	100
6	20GE6M04	Essence of Indian traditional knowledge	2	0	0	0	---	---	---
PRACTICAL									
6	20CE6L01	Geo Technical Engineering Lab	0	0	3	1.5	15	35	50
7	20CE6L02	STAAD Lab	0	0	3	1.5	15	35	50

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8	20CE6L03	Environmental Engineering Lab	0	0	3	1.5	15	35	50
9	20CE6S04	Skill Advanced Course-TE Software	1	0	2	2	---	50	50
Total Credits						21.5	195	505	700

THEORY: PCC-3, PEC-1, OEC-1, MC-1 PRACTICAL: PCC LAB-3

Professional Elective Course - 2

Subject Code	Subject
	Pre fabricated structures
	Advanced reinforced concrete design
	Earthquake Resistant Design

Open Elective Course – 2

Subject Code	Offered by Dept.	Subject	Offered for Dept.
	BS&H	Business Environment	All
	EEE	Green Engineering systems	CE
	ME	Robotics	CE
	ECE	Embedded systems/4G and 5G wireless system	CE
	CSE	Block chain Technology	CE
	IT	JAVA programming	CE

SEMESTER-VII

S.No	Course Code	Course Title	L	T	P	C	IM	EM	TM
THEORY									
1	20CE7T01	Traffic Engineering & Management	3	0	0	3	30	70	100
2	20CE7T02	Foundation Engineering	3	0	0	3	30	70	100
3	20CE7T03	Construction Management & Cost Analysis	3	0	0	3	30	70	100
4	20OE7T01	ME/EEE	2	0	2	3	30	70	100
5	20OE7T02	ECE/CSE	2	0	2	3	30	70	100
6	20HSE7T01	Project Management & Finance	3	0	0	3	30	70	100
PRACTICAL									
7	20CE7S05	Skill Advanced course-Primaveera	1	0	2	2	---	50	50
8	20CE7I02	Summer Internship	0	0	0	3	---	100	100
Total Credits						23	180	570	750

THEORY: PEC-3, OEC-2, HSE-1

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Professional Elective Course - 3

Subject Code	Subject
	Traffic Engineering & Management
	Urban Transportation Planning
	Intelligent Transportation System

Professional Elective Course - 4

Subject Code	Subject
	Foundation Engineering
	Environmental Geo-technology
	Offshore Engineering

Professional Elective Course - 5

Subject Code	Subject
	Construction Management & Cost Analysis
	Building Construction Practice
	Construction Equipment and Automation

Open Elective Course – 3

Subject Code	Offered by Dept.	Subject	Offered for Dept.
	MBA	Digital Marketing	All
	ME	Industrial Management sciences	CE
	ECE	Design of IOT systems	CE
	CSE	AI & Techniques	CE
	IT	Principle of software Engineering	CE

Open Elective Course – 4

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Subject Code	Offered by Dept.	Subject	Offered for Dept.
	MBA	Human Resource development and OB	All
	EEE	Electrical Energy conservation and auditing	CE
	ME	Automation in Manufacturing	CE
	ECE	Mechtronics/MEMS	CE
	CSE	Bib data Analysis/Computer Networks	CE
	IT	Machine learning	CE

SEMESTER-VIII

S.No	Course Code	Course Title	L	T	P	C	IM	EM	TM
THEORY									
1	20CE8P01	Project-Project work, seminar and internship in Industry	0	0	0	12	--	300	300