

sasi INSTITUTE OF
autonomous TECHNOLOGY &
ENGINEERING

Accredited by NAAC with "A" Grade,
Recognised by UGC under section 2(f) & 12(B)
Approved by AICTE - New Delhi
Permanently Affiliated to JNTUK, SBTET,
Ranked as "A" Grade by Govt. of A.P.,

*Programmes having components of
field projects / research projects /
internships*

Course Structures of SITE 18, 18M, & 21

COURSE STRUCTURE AND DETAILED SYLLABUS

For Civil Engineering

B.Tech.-SITE18 Regulations

With Effective from the Academic Year

2018-2019



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Department of Civil Engineering

B. Tech. (Civil Engineering)
SITE 18 Regulation
Semester I (First Year)

S. No.	Subject Code	Subject title	L	T	P	C
1	18CMEGT1010	Technical English	3	0	0	3
2	18CMMAT1020	Engineering Mathematics-I	3	1	0	4
3	18CMCHT1030	Engineering Chemistry	3	1	0	4
4	18CMEET1040	Basic Electrical Engineering	3	1	0	4
5	18CMEGL1050	English Communication skills lab	0	0	2	1
6	18CMCHL1060	Engineering Chemistry Lab	0	0	3	1.5
7	18CMEEL1070	Basic Electrical Engineering Lab	0	0	3	1.5
8	18CMMSN1080	Constitution of India, professional ethics & human rights (Non - Credit course)	3	0	0	0
Total Credits						19

I B.TECH II SEM COURSE STRUCTURE

S. No.	Subject Code	Subject title	L	T	P	C
1	18CMMAT2010	Engineering Mathematics II	3	1	0	4
2	18CEPHT2020	Engineering Physics	3	1	0	4
3	18CMCST2030	Programming for problem-solving	3	0	0	3
4	18CMMEEL2040	Engineering Graphics	1	0	4	3
5	18CEPHL2050	Engineering Physics Lab	0	0	3	1.5
6	18CMCSL2060	Programming for problem-solving Lab	0	0	4	2
7	18CMMEEL2070	Work Shop/ Manufacturing practice	0	0	3	1.5
8	18CMCHN2080	Environmental Science (Non - Credit course)	3	0	0	0
Total Credits						19

**Course Structure for B.Tech. (Civil
Engineering) Semester III (Second year)**

S. No	Course Code	Course Title	L	T	P	C
1	18CEMAT3010	Engineering Mathematics-III	3	1	0	4
2	18CMCET3020	Engineering Mechanics	3	1	0	4
3	18CECET3030	Engineering Geology	2	0	0	2
4	18CECET3040	Surveying & Geomatics	3	0	0	3
5	18CECET3050	Building Materials & Concrete Technology	3	0	0	3
6	18CECEL3060	Engineering Geology Lab	0	0	3	1.5
7	18CECEL3070	Surveying Field work lab	0	0	3	1.5
8	18CECEL3080	Computer-aided Civil Engineering Drawing Lab	0	0	3	1.5
9	18CEECN3090	Basic Electronics (MC)	3	-	-	-
Total Credits						20.5

**Course Structure for B.Tech. (Civil
Engineering) Semester IV (Second year)**

S. No	Course Code	Course Title	L	T	P	C
1	18CECET4010	Fluid Mechanics	3	0	0	3
2	18CECET4020	Strength of Materials	3	0	0	3
3	18CECET4030	Environmental Engineering	3	0	0	3
4	18CECET4040	Transportation Engineering	3	0	0	3
5	18CMMST4050	Engineering Economics and Financial Management	3	0	0	3
6	18CECEL4060	Strength of Material lab	0	0	3	1.5
7	18CECEL4070	Environmental Engineering Lab	0	0	3	1.5
8	18CECEL4080	Material Testing Lab	0	0	2	1.5
Total Credits						19.5

Course Structure for B.Tech. (Civil Engineering)

Semester V (Third year)

S.No	Subject Code	Subject Title	L	T	P	C
1	18CMBIT5010	Biology for Engineers	2	1	0	3
2	18CECET5020	Theory of Structures-I	3	0	0	3
3	18CECET5030	Geo-Technical Engineering	2	0	0	2
4	18CECET5040	Hydrology and Water Resources Engineering	3	0	0	3
5	18CECET5050	Hydraulic Engineering	3	0	0	3
6	18CE--O506x	OPEN ELECTIVE-I	3	0	0	3
7	18CECEL5070	Survey Field Camp	0	0	3	1.5
8	18CECEL5080	Geo-Technical Engineering Lab	0	0	3	1.5
9	18CECEL5090	Fluid Mechanics & Hydraulic Machinery Lab	0	0	2	1.5
Total Credits						21.5

Open Elective Courses

1	18xxCEOxxxx	Civil Engineering Societal & Global Impact
2	18xxCEOxxxx	Introduction to Civil Engineering
3	18xxCEOxxxx	Disaster Management
4	18xxCEOxxxx	Environmental Pollution and Control
5	18xxCEOxxxx	Building Materials
6	18xxCEOxxxx	Green Buildings and Sustainability

Course Structure for B.Tech. (Civil Engineering)

Semester VI (Third year)

S.No	Subject Code	Subject Title	L	T	P	C
1	18CMEGT6010	Personality Development & professional Communication	2	0	0	2
2	18CECET6020	Theory of Structures-II	3	0	0	3
3	18CECET6030	Reinforced Concrete Structures	3	0	0	3
4	18CE--O604x	OPEN ELECTIVE-II	3	0	0	3
5	18CECET605x	ELECTIVE-I	3	0	0	3
6	18CECEL6060	Irrigation Engineering & Drawing Lab	0	0	3	1.5
7	18CECEL6070	Software Applications in Civil Engineering	0	0	3	1.5
8	18CECEC6080	Term Paper with Seminar	0	2	0	2
9	18CECEN6090	Advanced Methods in Structural Analysis	-	-	-	-
Total Credits						19

B.Tech. (Civil Engineering)**Semester VII (Fourth Year)**

S.No.	Course Code	Course Title	L	T	P	C
1	18CECET7010	Contracts, Specifications & Project Management	3	0	0	3
2	18CECET7020	Design of Steel Structures	3	0	0	3
3	18CE--o703x	Open Elective-III	3	0	0	3
4	18CECEP704x	Elective-II	3	0	0	3
5	18CECEP705x	Elective-III	3	0	0	3
6	18CECEL7060	Structural design and drawing Lab	0	0	3	1.5
7	18CECER7070	Project phase-I	0	0	8	04
8	18CECEC7080	Internship with seminar	0	0	0	2
Total Credits						22.5

Semester VIII (Fourth Year)

S.No.	Course Code	Course Title	L	T	P	C
1	18CECEP8014	Elective-IV	3	0	0	3
2	18CECEP8025	Elective -V	3	0	0	3
3	18CECEP8036	ElectiveVI	3	0	0	3
4	18CECEP8047	ElectiveVII	3	0	0	3
5	18CECER8050	Project phase-II	0	0	12	07
6	18CECER8060	Co Curricular and Extra Curricular Activity (Mandatory Course)	3	0	0	0
Total Credits						19

Open Elective Courses offered by Dept. of CE to Other Depts.

1	18xxCEOxxxx	Civil Engineering Societal & Global Impact
2	18xxCEOxxxx	Introduction to Civil Engineering
3	18xxCEOxxxx	Disaster Management
4	18xxCEOxxxx	Environmental Pollution and Control
5	18xxCEOxxxx	Building Materials
6	18xxCEOxxxx	Green Buildings and Sustainability

Program Elective Course:

Elective	Title of the Subject
PEC-I	Foundation Engineering
	Architecture & Town Planning
	Structural Analysis by Matrix Methods
	Remote Sensing & GIS Applications
PEC-II	Transport of water and Waste Water
	Advanced Concrete Technology
	Surface Hydrology
	Offshore Engineering
PEC-III	Advanced Structural Analysis
	Advanced Transportation Engineering
	Earth Retaining Structures
	Rural Water Supply and Onsite Sanitation Systems
PEC-IV	Intelligent Transportation System
	Ground Improvement Techniques
	Environmental Impact Assessment And Environment Management Planning
	Engineering with Geo-Synthetics
PEC-V	Pre-Stressed Concrete
	Advanced Foundation Engineering
	Groundwater Development & Management
	Solid and hazardous waste management
PEC-VI	Air and Noise pollution and control
	Soil Dynamics and Machine Foundations
	Bridge Engineering
	Contracts management
PEC-VII	Repairs and Rehabilitation of Structures
	Wood Structures
	Transportation Economics
	Sustainable Construction Methods

Mr Rama Rao
HoD

Head of the Dept - Civil
Sasi Institute of Technology & Engineering
TADEPALLIGUDEM - 534 101
* W.G. Dist. A.P.



I-B. Tech I- Semester Approved Course structure for the Academic Year 2018-2019
Common for ME/CE/EEE

SN	Subject Code	Subject title	L	T	P	C
1	18CMF:GT1010	Technical English	3	1		4
2	18CMMAT1020	Engineering Mathematics-I	3	1		4
3	18CMCHT1030	Engineering Chemistry	2			2
4	18CMEET1040	Basic Electrical Engineering	3	1		4
5	18CM:GL1050	English Communication Lab			2	1
6	18CMCHL1060	Engineering Chemistry Lab			3	1.5
7	18CMEEL1070	Basic Electrical Engineering Lab			2	1
8	18CMMSM1080	Constitution of India, Professional Ethics & Human Rights (MC)				
Total			11	3	7	17.5

I B.Tech II Semester Approved Course structure for the Academic Year 2018-2019
Common for ME/CE/EEE

SN	Subject Code	Subject title	L	T	P	C
1	18CMMAT2010	Engineering Mathematics II	3	1		4
2	18EEPHT2020	Engineering Physics	3	1		4
3	18CMCST2030	Programming for Problem solving	3	0		3
4	18CMMEL2040	Engineering Graphics	1		4	3
5	18EEPHL2050	Engineering Physics Lab			3	1.5
6	18CMCSL2060	Programming for Problem solving Lab			4	2
7	18CMMEL2070	Work Shop/Manufacturing practice	1		4	3
8	18CMCHN2080	Environmental Science (MC)				
Total			11	2	15	20.5

II -B. Tech EEE I- Semester Approved Course structure for the Academic Year 2019-2020

SN	Subject Code	Subject title	L	T	P	C
1	18CMMAT3010	Engineering Mathematics III	3	1		4
2	18EEEEET3020	Analog Electronics	3			3
3	18EEEEET3030	Electromagnetic fields	3	1		4
4	18EEEEET3040	Electrical Circuit Analysis	3	1		4
5	18EEEEET3050	Electrical Machines I	3			3
6	18EEEEEL3060	Analog Electronics Lab			3	1.5
7	18EEEEEL3070	Electrical Circuit Analysis Lab			3	1.5
8	18EEEEEL3080	Electrical Machines I Lab			3	1.5
Total			15	3	9	22.5

II B. Tech EEE II Semester Approved Course structure for the Academic Year 2019-2020

SN	Subject Code	Subject title	L	T	P	C
1	18EEEEET4010	Signals & Systems	3			3
2	18CMMET4020	Engineering Mechanics	3	1		4
3	18EEEEET4030	Digital Electronics	3			3
4	18EEEEET4040	Control Systems	3			3
5	18EEEEET4050	Electrical Machines II	3			3
6	18EEEEEL4060	Digital Electronics Lab			3	1.5
7	18EEEEEL4070	Control Systems Lab			3	1.5
8	18EEEEEL4080	Electrical Machines II Lab			3	1.5
Total			14	1	9	20.5

III -B. Tech EEE I- Semester Approved Course structure for the Academic Year 2020-2021

SN	Subject Code	Subject title	L	T	P	C
1	18EEEEET5010	Microprocessors	3			3
2	18EEEEET5020	Power Systems – I (Apparatus and Modeling)	3			3
3	18CMMST5030	Management Science	3			3
4	18EEEEET5040	Power Electronics	3			3
5	18EEXXO5051	Open Elective – I	3			3
6	18EEEEEL5060	Microprocessors Lab			3	1.5
7	18EEEEEL5070	Power Systems-I Lab			3	1.5
8	18EEEEEL5080	Power Electronics Lab			3	1.5
Total			15		9	19.5

III B. Tech EEE II Semester Approved Course structure for the Academic Year 2020-2021

SN	Subject Code	Subject title	L	T	P	C
1	18CMBIT6010	Biology for Engineers	3			3
2	18CMEGT6020	Personality Development & Professional Communication	2			2
3	18EEEEET6030	Power Systems – II (Operation and Control)	3			3
4	18EEEEET6040	Electrical Measurements & Instrumentation	3			3
5	18CMMST6050	Engineering Economics and Financial management	3			3
6	18EEEEEP606X	Program Elective - I	3			3
7	18EEEEEL6070	Power Systems – II Lab			3	1.5
8	18EEEEEL6080	Measurements and Instrumentation Lab			3	1.5
9	18EEEEEC6090	Term Paper with Seminar				2
Total			16		6	21

Program Elective – I

18EEEEEP6061	Line Commutated and Active Rectifiers
18EEEEEP6062	HVDC Transmission Systems
18EEEEEP6063	Control Systems Design

IV B. Tech EEE I Semester Approved Course structure for the Academic Year 2021-2022

SN	Subject Code	Subject title	L	T	P	C
1	18EEEEET7010	Power System Protection	3			3
2	18EEEEEP702X	Program Elective -2	3			3
3	18EEEEEP703X	Program Elective -3	3			3
4	18EEEEEO7042	Open Elective-2	3			3
5	18EEEEEO7053	Open Elective-3	3			3
6	18EEEEEL7060	Electronics Design Lab			3	1.5
7	18EEEEER7070	Project Phase-I			8	4
8	18EEEEEC7080	Industry Internship (During summer vacation)				2
Total			15		11	22.5

Program Elective – 2

18EEEEEP7021	Electrical Drives
18EEEEEP7022	Smart Grid
18EEEEEP7023	Optimization Techniques

Program Elective – 3

18EEEEEP7031	Electrical and Hybrid Vehicles
18EEEEEP7032	Power System Dynamics and Stability
18EEEEEP7033	Digital signal Processing

IV B. Tech EEE I Semester Approved Course structure for the Academic Year 2021-2022

SN	Subject Code	Subject title	L	T	P	C
1	18EEEEEP801X	Program Elective -4	3			3
2	18EEEEEP802X	Program Elective -5	3			3
3	18EEEEEO8034	Open Elective-4	3			3
4	18EEEEER8040	Project Phase-II			14	7
Total			9		14	16

Program Elective – 4

18EEEEEP8011	Advanced Electric Drives
18EEEEEP8012	Electrical Energy Conservation And Auditing
18EEEEEP8013	Intelligent Control & Its Applications

Program Elective – 5

18EEEEEP8021	FACTS
18EEEEEP8022	Power Quality
18EEEEEP8023	Digital Control Systems

Open Electives offered by EEE department

SN	Subject Code	Subject title	L	T	P	C
1	18XXEEOM0XA	Control system design	3			3
2	18XXEEOM0XB	Optimization techniques	3			3
3	18XXEEOM0XC	Wind and Solar Energy Systems	3			3
4	18XXEEOM0XD	Electrical and Hybrid Vehicles	3			3
5	18XXEEOM0XE	Intelligent control & its applications	3			3
6	18XXEEOM0XF	Digital Signal Processing	3			3
7	18XXEEOM0XG	Electrical materials	3			3
8	18XXEEOM0XH	Digital Control Systems	3			3
9	18XXEEOM0XI	Industrial Electrical Systems	3			3
10	18XXEEOM0XJ	Advanced Control Systems	3			3
Total			12			12

A. P. ...

Head of the department

**HEAD OF THE DEPARTMENT OF
ELECTRICAL & ELECTRONICS ENGG
SASI INSTITUTE OF TECH & ENGG
TADEPALLIGUDEM - 534 101**

M. Tech. COURSE STRUCTURE (SITE-18)

Power Electronics Course Structure

I SEMESTER

S. No	Course Code	Name of the Subject	L	P	C
1	18EEPE101	Modelling and Analysis of Electrical Machines	4	-	3
2	18EEPE102	Analysis of Power Electronic Converters	4	-	3
3	18EEPE103	Power Semiconductor Devices and Modelling	4	-	3
4	18EEPE104	Power Electronic Control of DC Drives	4	-	3
5	18EEPE105A	Special Electrical Machines	4		
6	18EEPE105B	HVDC Transmission	4		
7	18EEPE106A	Hybrid and Electrical Vehicles	4		
8	18EEPE106B	Static VAR Controllers and Harmonic Filtering	4		
9	18EEPE151	Systems Simulation Laboratory	4	3	1.5
Total Credits			19.5		

II SEMESTER

S. N	Course Code	Name of the Subject	L	P	C
1	18EEPE201	Power Electronic Control of AC Drives	4	-	3
2	18EEPE202	Power Converters for Renewable Energy Systems	4	-	3
3	18EEPE203	Custom Power Devices	4	-	3
4	18EEPE204A	Artificial Intelligence Techniques	4		3
5	18EEPE204B	Digital Controllers	4		3
6	18EEPE205A	Modelling & Simulation of Power Electronics and Drive Systems	4		3
7	18EEPE205B	Smart Grid Technologies	4		3
8	18EEPE206A	Switch Mode and Resonant Converters	4		3
9	18EEPE206B	Optimization Techniques	4		3
10	18EEPE251	Electrical Drives Laboratory		3	1.5
11	18EEPE252	Term Paper with seminar			3
Total Credits			22.5		

III SEMESTER

S.N	Course Code	Name of the Subject	L	P	C
1	18EEPE301	Self-Learning Course: Design of Photovoltaic Systems	-	-	3
2	18EEPE351	Project Work Phase – I	-	-	5
3	18EEPE352	Internship with seminar			4
Total Credits			12		

IV SEMESTER

S.No	Course Code	Name of the Subject	L	P	C
1	18EEPE451	Project Phase-II	-	-	10
Total Credits			10		


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**COURSE STRUCTURE
AND SYLLABUS
SITE-18
REGULATIONS**

**For
B. Tech.
Mechanical Engineering**

**With effective from the Academic
Year
2018-19**



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Department of Mechanical Engineering
Course structure for the Academic Year 2018-19

B. Tech. (Mechanical Engineering)
Semester I (First Year)

Sl. No.	Course Code	Course Title	L	T	P	C
1.	18CMEGT1010	Technical English	2			3
2.	18CMMAT1020	Engineering Mathematics-I	3	1		4
3.	18CMCHT1030	Engineering Chemistry	3	1		4
4.	18CMEET1040	Basic Electrical Engineering	3	1		4
5.	18CMEGL1050	English Communication skills lab			2	1
6.	18CMCHL1060	Engineering Chemistry Lab			3	1.5
7.	18CMEEL1070	Basic Electrical Engineering Lab			2	1.5
8.	18CMMSN1080	Constitution of India, Professional Ethics & Human Rights				
Total			11	03	07	19

B.Tech. (Mechanical Engineering)
Semester II (First Year)

Sl. No.	Course Code	Course Title	L	T	P	C
1.	18CMMAT2010	Engineering Mathematics-II	3	1		4
2.	18MEPHT2020	Engineering Physics	3	1		4
3.	18CMCST2030	Programming for Problem Solving	3	0		3
4.	18CMMEL2040	Engineering Graphics	1		4	3
5.	18MEPHL2050	Engineering Physics Lab			3	1.5
6.	18CMCSL2060	Programming for Problem Solving lab			4	2
7.	18CMMEL2070	Work Shop/Manufacturing Practice	1		4	1.5
8.	18CMCHN2080	Environmental Science				
Total			11	02	15	19



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Department of Mechanical Engineering

B.Tech. (Mechanical Engineering)

Semester III (Second Year)

Sl. No.	Course Code	Course Title	L	T	P	C
1.	18CMMAT3010	Engineering Mathematics-III	3	1		4
2.	18MEMET3020	Engineering Mechanics	3	1		4
3.	18MEECT3030	Basic Electronics Engg.	3	0		3
4.	18MEMET3040	Manufacturing Processes	3	0		3
5.	18MEMET3050	Thermodynamics	3			3
6.	18MEMET3060	Materials Engineering	3			3
7.	18MEMEL3070	Manufacturing Processes Lab			3	1.5
8.	18MEMEL3080	CAEDP Lab			3	1.5
Total			15	2	06	23

B.Tech. (Mechanical Engineering)

Semester IV (Second year)

Sl. No.	Course Code	Course Title	L	T	P	C
1.	18MEMET4010	Strength of Materials	3			3
2.	18MEMET4020	Fluid Mechanics & Fluid Machines	3			3
3.	18MEMET4030	Theory of Machines-I	3			3
4.	18MEMET4040	Applied Thermodynamics	3			3
5.	18CMMST4050	Engg. Economics & Financial Management	3			3
6.	18MEMEL4060	Fluid Mechanics & Fluid Machines Lab			3	1.5
7.	18MEMEL4070	Mechanics of Solids & Materials Lab			3	1.5
8.	18MEMEN4080	Machine Drawing Lab				
Total			14	01	06	18



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Department of Mechanical Engineering

B.Tech. (Mechanical Engineering)

Semester V (Third year)

Sl. No.	Course Code	Course Title	L	T	P	C
1.	18CMBIT5010	Biology for Engineers	2	1		3
2.	18MEMET5020	Manufacturing Technology	3			3
3.	18MEMET5030	Design of Machine Elements	3			3
4.	18MEMET5040	Heat Transfer	3			3
5.	18MEXXO505X	Open Elective-I	3			3
6.	18MEMEL5060	Heat Transfer Lab			3	1.5
7.	18MEMEL5070	Manufacturing Technology & Metrology Lab			4	2
8.	18MEMEC5080	Term Paper with Seminar			4	2
Total			15		10	20.5

B.Tech. (Mechanical Engineering)

Semester VI (Third year)

Sl. No.	Course Code	Course Title	L	T	P	C
1.	18MEMET6010	Theory of Machines-II	3			3
2.	18CMEGT6020	Personality Development & Professional Communication	2			2
3.	18MEMEP603X	Elective-I	3			3
4.	18MEMEP604X	Elective-II	3			3
5.	18MEXXO605X	Open Elective-II	3			3
6.	18MEMEL6060	Theory of Machines Lab			3	1.5
7.	18MEMEL6070	Thermal Engineering Lab			3	1.5
8.	18MEMEL6080	Modelling & Simulation Lab			4	2
9.	18MEMEN6090	Design of Transmission Systems				
Total			14		10	19



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Department of Mechanical Engineering

B.Tech. (Mechanical Engineering)

Semester VII (Fourth Year)

Sl. No.	Course Code	Course Title	L	T	P	C
1.	18MEMET7010	Operation Research	3			3
2.	18MEMET7020	Instrumentation & Control Systems	3			3
3.	18MEMEP703X	Elective-III	3			3
4.	18MEMEP704X	Elective-IV	3			3
5.	18MEXXO705X	Open Elective-III	3			3
6.	18MEMEL7060	Instrumentation Lab			3	1.5
7.	18MEMEC7070	Internship with Seminar			4	2
8.	18MEMER7080	Project Phase-I			8	4
Total			15		15	22.5

B.Tech. (Mechanical Engineering)

Semester VIII (Fourth Year)

Sl. No.	Course Code	Course Title	L	T	P	C
1.	18MEMET8010	Automation in Manufacturing	3			3
2.	18MEMEP802X	Elective-V	3			3
3.	18MEMEP803X	Elective-VI	3			3
4.	18MEMEO804X	Open Elective-IV	3			3
5.	18MEMER805X	Project Phase-II			14	7
6.	18MEMCN8060	Co Curricular and Extra Curricular Activity (Mandatory Course)	3			
Total			12		14	19

Program Elective Courses:

	Course Code	Course Title
Elective -I	18MEMEP603A	1. Composite Materials
	18MEMEP603B	2.Un-Conventional Machining Processes
	18MEMEP603C	3. Internal Combustion Engines
Elective -II	18MEMEP604A	1. Power Plant Engineering
	18MEMEP604B	2. CAD/CAM
	18MEMEP604C	3. Design for Manufacture
Elective -III	18MEMEP703A	1.Gas Dynamics & Jet Propulsion
	18MEMEP703B	2. Finite Element Methods
	18MEMEP703C	3 Flexible Manufacturing Systems
Elective -IV	18MEMEP704A	1. Automobile Engineering
	18MEMEP704B	2.Mechatronics
	18MEMEP704C	3.Additive Manufacturing
Elective -V	18MEMEP802A	1.Energy Conservation & Management
	18MEMEP802B	2.Non Destructive Evaluation
	18MEMEP802C	3. Solid Mechanics
Elective -VI	18MEMEP803A	1. Refrigeration and Air Conditioning
	18MEMEP803B	2. Computational Fluid Dynamics
	18MEMEP803C	3.Quality & Reliability Engineering

Open Elective Courses offered by Dept. of ME to Other Depts.

S. No.	Course Title	
1	Operations Research (except ME)	
2	Robotics	
3	Advanced Optimization Techniques	
4	Green Engineering Systems	
5	Production Planning and Control	
6	Nano Technology	

Course Structure

SITE18 Regulations

For

B.Tech.

in

Electronics and Communication Engineering

**With effective from the academic year
2018-19**





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Department of Electronics & Communication Engineering

Course structure for SITE18 Regulations

B.Tech. (Electronics & Communication Engineering)

Semester I (First year)

S.No	Course Code	Course Title	L	T	P	C
1	18CMMAT1010	Engineering Mathematics-I	3	1	0	4
2	18ECPHT1020	Engineering Physics	3	1	0	4
3	18CMCST1030	Programming for problem solving	3	0	0	3
4	18CMMEL1040	Engineering Graphics	1	0	4	3
5	18ECPHL1050	Engineering Physics Lab	0	0	3	1.5
6	18CMCSL1060	Programming for problem solving lab	0	0	4	2
7	18CMMEL1070	Work Shop/Manufacturing practice	0	0	3	1.5
8	18CMMEL1080	Environmental Science (Non -Credit course)	0	0	0	0
Total Credits						19

Semester II (First year)

S.No	Course Code	Course Title	L	T	P	C
1	18CMEGT2010	Technical English	3	0	0	3
2	18CMMAT2020	Engineering Mathematics II	3	1	0	4
3	18CMCHT2030	Engineering Chemistry	3	1	0	4
4	18CMEET2040	Basic Electrical Engineering	3	1	0	4
5	18CMEGL2050	English Communication skills lab	0	0	2	1
6	18CMCHL2060	Engineering Chemistry Lab	0	0	3	1.5
7	18CMEEL2070	Basic Electrical Engineering Lab	0	0	3	1.5
8	18CMMSN2080	Constitution of India, Professional Ethics & Human Rights (MC)	0	0	0	0
Total Credits						19

Semester III (Second year)

S.No	Course Code	Course Title	L	T	P	C
1	18CMMAT3010	Engineering Mathematics-III	3	1	0	4
2	18ECECT3020	Electronic Devices	3	0	0	3
3	18ECECT3030	Network Theory	3	0	0	3
4	18ECECT3040	Signals & Systems	3	0	0	3
5	18ECECT3050	Probability & Stochastic Processes	3	0	0	3
6	18ECECL3060	Electronic Devices Lab	0	0	3	1.5
7	18ECECL3070	Network Theory Lab	0	0	3	1.5
8	18ECECN3080	Pulse & Digital Circuits (MC)	3	0	0	0
Total Credits						19

Semester IV (Second year)

S.No	Course Code	Course Title	L	T	P	C
1	18ECECT4010	Digital System Design	3	0	0	3
2	18CMMET4020	Engineering Mechanics	3	1	0	4
3	18ECECT4030	Electro Magnetic Waves & Transmission Lines	3	0	0	3
4	18ECECT4040	Analog Circuits	3	0	0	3
5	18ECECT4050	Analog & Digital Communications	3	0	0	3
6	18ECECL4060	Digital System Design Lab	0	0	3	1.5
7	18ECECL4070	Analog Circuits Lab	0	0	3	1.5
8	18ECECL4080	Analog & Digital Communications Lab	0	0	3	1.5
Total Credits						20.5

Semester V (Third year)

S.No	Course Code	Course Title	L	T	P	C
1	18ELECT5010	Control Systems	3	0	0	3
2	18CMEGT5020	Personality Development & Professional Communication	2	0	0	2
3	18CMMST5030	Management Science	3	0	0	3
4	18ELECT5040	Micro Processors & Micro Controllers	3	0	0	3
5	18ELECT5050	Digital Signal Processing	3	0	0	3
6	18ECECL5060	Micro Processors & Micro Controllers Lab	0	0	3	1.5
7	18ECECL5070	Digital Signal Processing Lab	0	0	3	1.5
8	18ECECR5080	Term Paper with Seminar	2	0	0	2
Total Credits						19

Semester VI (Third year)

S.No	Course Code	Course Title	L	T	P	C
1	18CMBIT6010	Biology for Engineers	3	0	0	3
2	18ELECT6020	Computer Architectures & Organization	3	0	0	3
3	18ECECP603X	Program Elective-1	3	0	0	3
4	18ECECP604X	Program Elective-2	3	0	0	3
5	18CMMST6050	Engineering Economics and Financial Management	3	0	0	3
6	18ELECT6060	Computer Networks	3	0	0	3
7	18ECECL6070	Computer Networks Lab	0	0	3	1.5
8	18ECECL6080	Electronic Design Workshop	0	0	4	2
Total Credits						21.5

Semester VII (Fourth year)

S.No	Course Code	Course Title	L	T	P	C
1	18ECECT7010	Electronic Measurements & Instrumentation	3	0	0	3
2	18ECECP702X	Program Elective-3	3	0	0	3
3	18ECECP703X	Program Elective-4	3	0	0	3
4	18ECXXO704X	Open Elective-1	3	0	0	3
5	18ECXXO705X	Open Elective-2	3	0	0	3
6	18ECECL706X	Elective Related Lab	0	0	4	2
7	18ECECR7070	Project Work Phase-I	0	0	8	4
8	18ECECR7080	Internship	0	0	0	2
Total Credits						23

Semester VIII (Fourth year)

S.No	Course Code	Course Title	L	T	P	C
1	18ECECP801X	Program Elective-5	3	0	0	3
2	18ECECP802X	Program Elective-6	3	0	0	3
3	18ECXXO803X	Open Elective-3	3	0	0	3
4	18ECXXO804X	Open Elective-4	3	0	0	3
5	18ECECR8050	Project Work Phase-II	0	0	14	7
6	18ECECC8060	Co-Curricular and Extra Curricular Activity (MC)	0	0	0	0
Total Credits						19

Program Elective Courses:

Program Elective-1	18ECECP603A	Antennas & Wave Propagation
	18ECECP603B	CMOS VLSI Design
	18ECECP603C	Advanced Digital Signal Processing
Program Elective-2	18ECECP604A	Microwave Theory and Techniques
	18ECECP604B	Digital Design through Verilog HDL
	18ECECP604C	Digital Image Processing
Program Elective-3	18ECECP702A	Optical Communications
	18ECECP702B	Low Power VLSI
	18ECECP702C	Information Theory & Coding
Program Elective-4	18ECECP703A	Wireless Sensor Networks

	18ECECP703B	Bio-Medical Electronics
	18ECECP703C	Embedded System Design
Program Elective-5	18ECECP801A	Cellular Mobile Communication
	18ECECP801B	VLSI Physical Design Automation
	18ECECP801C	Internet of Things and its applications
Program Elective-6	18ECECP802A	Radar Systems
	18ECECP802B	Nano Electronics
	18ECECP802C	Embedded & Real Time Concepts

Elective Related Laboratories:

Elective Related Lab	18ECECL706A	Microwave & Optical Communication Lab
	18ECECL706B	VLSI Design Lab
	18ECECL706C	Embedded Systems Lab

Open Elective Courses offered by ECE to other Departments:

Open Electives	18XXECO0XA	Microcontroller Programming
	18XXECO0XB	Internet of Things and its applications
	18XXECO0XC	Digital Signal Processing
	18XXECO0XD	Digital Image Processing
	18XXECO0XE	Antennas and Wave Propagation
	18XXECO0XF	Cellular Mobile Communication
	18XXECO0XG	VLSI Design
	18XXECO0XH	VLSI Physical Design Automation


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Department of Electronics & Communication Engineering

Course Structure for M.Tech. (CE&SP) Under the Regulations of SITE-18

Semester I (First year)

S.No.	Course Code	Course	L	P	C
1	18ECSP101	Advanced Digital Communication	4	-	3
2	18ECSP102	Optical Networks	4	-	3
3	18ECSP103	Wireless Communication	4	-	3
4	18ECSP104	Advanced Digital Signal Processing	4	-	3
5	18ECSP105	Statistical Signal Processing	4	-	3
Elective I :					
6	18ECSP106A	Multimedia over Communication	4		3
	18ECSP106B	Communication System Design using DSP			
	18ECSP106C	Radar Signal Processing			
	18ECSP106D	VLSI Design for Signal Processing			
7	18ECSP151	Digital Signal Processing Laboratory	-	3	1.5
Total Credits					19.5

Semester II (First year)

S.No.	Course Code	Course	L	P	C
1	18ECSP201	Coding Theory and Applications	4		3
2	18ECSP202	Antenna Theory and Design	4		3
3	18ECSP203	Image Processing and Machine Vision	4		3
4	18ECSP204	Adaptive Signal Processing	4		3
5	18ECSP205	DSP Processors and Architectures	4		3
Elective II					
6	18ECSP206A	Embedded System Design	4		3
	18ECSP206B	Modern Spectrum Analysis and Estimation			
	18ECSP206C	Speech and Audio Processing			
7	18ECSP251	Advanced Communication Laboratory	-	3	1.5
8	18ECSP252	Term paper with Seminar	-	-	3
Total Credits					22.5

Semester III (Second year)

S.No	Course Code	Name of the Subject	L	P	C
1	18ECSP301	Self-Learning Course	-	-	3
2	18ECSP351	Internship	-	-	4
3	18ECSP352	Project Phase-I			5
Total Credits					12

Semester IV (Second year)

S.No	Course Code	Name of the Subject	L	P	C
1	18ECSP451	Project Phase-II	-	-	10
Total Credits					10


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Department of Electronics & Communication Engineering

**Course Structure for M.Tech. (VLSI & ES) Under the Regulations of SITE-18
Semester I (First year)**

S.No.	Course Code	Course	L	P	C
1	18ECVE101	Programming Concepts using Verilog HDL	4		3
2	18ECVE102	CMOS Analog IC Design	4		3
3	18ECVE103	IC Fabrication Technology	4		3
4	Elective I :		4		3
	18ECVE104A	CPLD and FPGA Architectures and Applications			
	18ECVE104B	Digital System Synthesis and Verification			
	18ECVE104C	Advanced Digital Design			
5	18ECVE105	Principles of Embedded Systems	4		3
6	Elective II :		4		3
	18ECVE106A	Microcontrollers for Embedded System Design			
	18ECVE106B	Embedded and Real Time Systems			
	18ECVE106C	Network Security and Cryptography			
7	18ECVE151	Digital VLSI and Embedded System Design Lab	-	3	1.5
Total Credits					19.5

Semester II (First year)

S.No.	Course Code	Course	L	P	C
1	18ECVE201	Low Power VLSI Design	4		3
2	18ECVE202	VLSI Testing and Testability	4		3
3	18ECVE203	VLSI Design Automation	4		3
4	Elective III : VLSI Design Course		4		3
	18ECVE204A	Functional Verification using Hardware Verification Languages			
	18ECVE204B	System-on-Chip design			
	18ECVE204C	CMOS Mixed Signal Circuit Design			
5	18ECVE205	Hardware Software Co-Design	4		3
6	Elective IV : Embedded Systems Course		4		3
	18ECVE206A	Embedded System Design			
	18ECVE206B	Internet of Things			
	18ECVE206C	Sensors And Actuators			
	18ECVE206D	Micro Electro Mechanical System (MEMS) Design			
7	18ECVE251	Analog VLSI Design Lab	-	3	1.5
8	18ECVE252	Seminar with term paper	-	-	3
Total Credits					22.5

Semester III (Second year)

S.No	Course Code	Name of the Subject	L	P	C
1	18ECVE301	Self-Learning Course	-	-	3
2	18ECVE351	Internship	-	-	4
3	18ECVE352	Project Phase-I			5
Total Credits					12

Semester IV (Second year)

S.No	Course Code	Name of the Subject	L	P	C
1	18ECVE451	Project Phase-II	-	-	10
Total Credits					10


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COURSE STRUCTURE SITE 18 REGULATIONS

For

**Computer Science and Engineering
(UG)**

**With effective from the Academic
Year
2018-19**

HEAD OF THE DEPARTMENT
Computer Science & Engineering
2nd Institute of Technology & Engg.
Tatabaluda-751024

SITE 18 SYLLABUS

Table 3: Comparison of Number of credits given by AICTE and Approved credits

S. No	Category	No. of Credits									
		ECE		EEE		CSE/IT		ME		CE	
		AICTE E	Appro ved	AICTE E	Appro ved	AICTE	Appro ved	AICTE	Appro ved	AICTE	Appro ved
1	Humanities and Social Sciences	12	11	12	11	12	11	12	11	12	08
2	Basic Science courses	25	23	26	25	24	26	25	26	26	26
3	Engineering Science courses	24	23	20	20	29	29.5	24	23	29	24.5
4	Professional Core courses	48	56	53	62	49	48.5	48	55	47	56.5
5	Professional Elective Courses	18	20	18	15	18	18	18	18	23	21
6	Open elective courses	18	12	18	12	12	12	18	12	11	9
7	Project work , Seminar and Internship	15	15	11	15	15	15	15	15	12	15
8	Mandatory Courses	-	-	-	-	-	-	-	-	-	-
Total Credits		160	160	158	160	159	160	160	160	160	160

Neogutty

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Sasi Institute of Technology & Engg
Tadepalligudem-534 101**

I B. Tech I Semester Course structure for the Academic Year 2018-2019
Common for ECE/CSE/IT

S. No.	Subject Code	Subject title	L	T	P	C
1	18CMMAT1010	Engineering Mathematics-I	3	1	0	4
2	18CSPHT1020	Engineering Physics	3	1	0	4
3	18CMCST1030	Programming for problem solving	3	0	0	3
4	18CMMEL1040	Engineering Graphics	1	0	4	3
5	18CSPHL1050	Engineering Physics Lab	0	0	3	1.5
6	18CMCSL1060	Programming for problem solving lab	0	0	4	2
7	18CMMEL1070	Work Shop/ Manufacturing practice	0	0	3	1.5
8	18CMCHN1080	Environmental Science (Non -Credit course)	3	0	0	0
Total Credits						19

I B. Tech II Semester Course structure for the Academic Year
2018-2019

S. No.	Subject Code	Subject title	L	T	P	C
1	18CMEGT2010	Technical English	3	0	0	3
2	18CMMAT2020	Engineering Mathematics II	3	1	0	4
3	18CMCHT2030	Engineering Chemistry	3	1	0	4
4	18CMEET2040	Basic Electrical Engineering	3	1	0	4
5	18CMEGL2050	English Communication skills lab	0	0	2	1
6	18CMCHL2060	Engineering Chemistry Lab	0	0	3	1.5
7	18CMEEL2070	Basic Electrical Engineering Lab	0	0	3	1.5
8	18CMMSN2080	Constitution of India, professional ethics & human rights (Non - Credit course)	3	0	0	0
Total Credits						19

Nagendra

Course Structure for B.Tech.
(Computer Science and Engineering & Information Technology) Semester III
(Second year)

S. No.	Course Code	Course Title	L	T	P	C
1	18CMMAT3010	Engineering Mathematics-III	3	1	0	4
2	18CSECT3020 18ITECT3020	Digital Electronics	3	0	0	3
3	18CSECT3030 18ITECT3030	Analog Electronic Circuits	3	0	0	3
4	18CSCST3040 18ITITT3040	Discrete Mathematics	3	1	0	4
5	18CSCST3050 18ITITT3050	Data Structures	3	0	0	3
6	18CSECL3060 18ITECL3060	Analog & Digital Electronics Lab	0	0	3	1.5
7	18CSCSL3070 18ITITL3070	IT Workshop Lab	0	0	3	1.5
8	18CSCSL3080 18ITITL3080	Data Structures Lab	0	0	3	1.5
Total Credits						21.5

(Computer Science and Engineering & Information Technology) Semester IV
(Second year)

No	Course Code	Course Title	L	T	P	C
1	18CSECT4010 18ITECT4010	Signals & Systems	3	0	0	3
2	18CMCET4020 18CMCET4020	Engineering Mechanics	3	0	0	3
3	18CSCST4030 18ITITT4030	Computer Organization	3	0	0	3
4	18CSCST4040 18ITITT4040	Algorithm Design and Analysis	3	0	0	3
5	18CSCST4050 18ITITT4050	Java Programming	3	0	0	3
6	18CSCSL4060 18ITITL4060	Computer Organization Lab	0	0	3	1.5
7	18CSCSL4070 18ITITL4070	Algorithm Design and Analysis Lab	0	0	3	1.5
8	18CSCSL4080 18ITITL4080	Java Programming Lab	0	0	3	1.5
Total Credits						19.5

Nagendra

III B. Tech I Semester

S. No.	Subject			Hours			
	Code	Type	Title	L	T	P	C
01	18CMBIT5010	BS	Biology for Engineers	3			3
02	18CMEGT5020	HS	Personality Development & Professional Communication	2			2
03	18CMMST5030	HS	Management Science	3			3
04	18CSCST5040	PC	Computer Networks	3			3
05	18CSCST5050	PC	Operating Systems	3			3
06	18CSCSL5060	PC	Computer Networks Lab			3	1.5
07	18CSCSL5070	PC	Operating Systems Lab			3	1.5
08	18CSCSL5080	PC	R Programming Lab			3	1.5
				14		9	18.5
				23			

III B. Tech II Semester

S. No.	Subject			Hours			
	Code	Type	Title	L	T	P	C
01	18CSCST6010	PC	Formal Languages & Automata Theory	3			3
02	18CSCST6020	PC	Database Systems	3			3
03	18CSCSP603G	PE	Program Elective-I	3			3
04	18CSHHO604G	OE	Open Elective-I	3			3
05	18CMMST6050	HS	Engineering Economics & Financial Management	3			3
06	18CSCSL6060	PC	Database Systems Lab			3	1.5
07	18CSCSL6070	PC	Python Programming Lab			3	1.5
08	18CSCSR6080	PROJ	Term Paper + Seminar			4	2
				15		10	20
				26			

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Tadepalligudem-534 101

Nagesh Kumar
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IV B. Tech I Semester

S. No.	Subject			Hours			C
	Code	Type	Title	L	T	P	
01	18CSCST7010	PC	Compiler Design	3			3
02	18CSCSP702G	PE	Program Elective-II	3			3
03	18CSCSP703G	PE	Program Elective-III	3			3
04	18CSHHO704G	OE	Open Elective-II	3			3
05	18CSHHO705G	OE	Open Elective-III	3			3
06	18CSCSL7060	PC	Compiler Design Lab			3	1.5
07	18CSCSR7070	PROJ	Internship				2
08	18CSCSR7080	PROJ	Project-I			8	4
				15	0	11	22.5
				26			

IV B. Tech II Semester

S. No.	Subject			Hours			C
	Code	Type	Title	L	T	P	
01	18CSCSP801G	PE	Program Elective-IV	3			3
02	18CSCSP802G	PE	Program Elective-V	3			3
03	18CSCSP803G	PE	Program Elective-VI	3			3
04	18CSHHO804G	OE	Open Elective-IV	3			3
05	18CSCSR8050	PROJ	Project-II			14	7
06		PROJ	Co-curricular/Extra-curricular Activities	2			1
				14		14	20
				28			

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Program Elective-I	
18CSCSP6031	Software Engineering
18CSCSP6032	Network Protocols
18CSCSP6033	Mobile Application Development
Program Elective-II	
18CSCSP7021	Unified Modeling Language
18CSCSP7022	Cryptography & Network Security
18CSCSP7023	Data Warehousing & Mining
Program Elective-III	
18CSCSP7031	Design Patterns
18CSCSP7032	Cyber Security
18CSCSP7033	Artificial Intelligence
Program Elective-IV	
18CSCSP8011	Software Testing
18CSCSP8012	Mobile Computing
18CSCSP8013	Machine Learning
Program Elective-V	
18CSCSP8021	Software Quality Assurance
18CSCSP8022	Ad-hoc & Sensor Networks
18CSCSP8023	Cloud: Hadoop & Big Data
Program Elective-VI	
18CSCSP8031	Software Project Management
18CSCSP8032	Cyber Forensics
18CSCSP8033	Data Science

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Nagesh

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Open Electives (offered by CSE chosen by Students other than CSE Department)

Sl. No.	Subject Title
A	Internet of Things
B	Block Chain
C	Quantum Computing
D	Virtual Reality
E	Data Structures through C
F	Designing Database Management Systems
H	Operating Systems Concepts
I	R Programming
J	Python Programming
K	Java Programming
L	App Technologies
M	Web Technologies
N	Artificial Intelligence



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COURSE STRUCTURE SITE 18 REGULATIONS

For

**Computer Science and Engineering
(PG)**

**With effective from the Academic
Year
2018-19**

M. Tech. COURSE STRUCTURE

Computer Science and Engineering

I SEMESTER

S.No	Course Code	Name of the Subject	L	P	C
1	18CSCS101	Research Methodology & IPR	3	-	3
2	18CSCS102	Science Mathematical Foundations of Computer	3	-	3
3	18CSCS103	Advanced Data Structures	3	-	3
4	18CSCS104	Artificial Intelligence	3	-	3
5	18CSCS105	Program Elective-I	3	-	3
6	18CSCS106	Program Elective-II	3	-	3
7	18CSCS151	Advanced Data Structures Lab		3	1.5
Total Credits					19.5

II SEMESTER

S.No	Course Code	Name of the Subject	L	P	C
1	18CSCS201	Data Warehouse and Data Mining	3		3
2	18CSCS202	Advanced Algorithms	3		3
3	18CSCS203	Soft Computing	3		3
4	18CSCS204	Program Elective-III	3		3
5	18CSCS205	Program Elective-IV	3		3
6	18CSCS206	Open Elective-I	3		3
7	18CSCS207	Advanced Algorithms Lab		3	1.5
8	18CSCS2080	Term Paper with Seminar		-	3
Total Credits					22.5

III SEMESTER

S.No	Course Code	Name of the Subject	L	P	C
1	18CSCS304	Program Elective-V (Self Learning)	-	-	3
2	18CSCS305	Internship with Seminar	-	-	4
3	18CSCS306	Project-I			5
Total Credits					12

135

IV SEMESTER

S.No	Course Code	Name of the Subject	L	P	C
1	18CSCS306	Project Phase-II	-	-	10
Total Credits					10

Total Credits: 19.5+22.5+12+10=64

Nagarathar

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Tadepalligudem-534 101**

Program Electives:

Program Elective-1	18CSCS105A	Machine Learning
	18CSCS105B	Wireless Sensor Networks
	18CSCS105C	Intelligent Systems
	18CSCS106A	Data Science
Program Elective-2	18CSCS106B	Advanced Wireless and Mobile Networks
	18CSCS106C	Distributed Systems
	18CSCS204A	Data Preparation and Analysis
Program Elective-3	18CSCS204B	Secure Software Design & Enterprise Computing
	18CSCS204C	Computer Vision
	18CSCS205A	Human Computer Interaction
Program Elective-4	18CSCS205B	GPU Computing
	18CSCS205C	Digital Forensics
	18CSCS304A	Mobile Applications and Services
Program Elective-5	18CSCS304B	Compiler for HPC
	18CSCS304C	Optimization Techniques

Open Elective:

18CSCS206A	Business Analytics
18CSCS206B	Industrial Safety/ Advanced Data Structures
18CSCS206C	Operations Research/ Data Warehouse & Data Mining
18CSCS206D	Cost Management of Engineering Projects/ Distributed Systems
18CSCS206E	Composite Materials/ Machine Learning
18CSCS206F	Waste to Energy/ GPU Computing



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SITE 18 REGULATIONS

**COURSE STRUCTURE AND
DETAILED SYLLABUS**

for

Bachelor of Technology

in

Information Technology



I B. Tech I Semester Course structure for the Academic Year 2018-2019

S. No	Subject			Hours			C
	Code	Type	Title	L	T	P	
01	18CMMAT1010	BS	Engineering Mathematics-I	3	1		4
02	18ITPHT1020	BS	Engineering Physics	3	1		4
03	18CMCST1030	ES	Programming for Problem Solving	3			3
04	18CMMEL1040	ES	Engineering Graphics	1		4	3
05	18ITPHL1050	BS	Engineering Physics Lab			3	1.5
06	18CMCSL1060	ES	Programming for Problem Solving Lab			4	2
07	18CMMEL1070	ES	Workshop/Manufacturing Practice	0		3	1.5
08	18CMCHN1080	MC	Environmental Science	3			0
				14	2	15	19
				31			

I B. Tech II Semester Course structure for the Academic Year 2018-2019

S. No	Subject			Hours			C
	Code	Type	Title	L	T	P	
01	18CMEGT2010	HS	Technical English	3			3
02	18CMMAT2020	BS	Engineering Mathematics-II	3	1		4
03	18CMCHT2030	BS	Engineering Chemistry	3	1		4
04	18CMEET2040	ES	Basic Electrical Engineering	3	1		4
05	18CMEGL2050	HS	English Communication Skills Lab			2	1
06	18CMCHL2060	BS	Engineering Chemistry Lab			3	1.5
07	18CMEEL2070	ES	Basic Electrical Engineering Lab			3	1.5
08	18CMMSN2080	MC	Indian Constitution, Professional Ethics & Human Rights	3			0
				15	3	8	19
				26			



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Department of Information Technology

II B. Tech I Semester Course structure for the Academic Year 2019-2020

S. No.	Subject			Hours			C
	Code	Type	Title	L	T	P	
01	18CMMAT3010	BS	Engineering Mathematics-III	3	1		4
02	18ITECT3020	ES	Digital Electronics	3			3
03	18ITECT3030	ES	Analog Electronic Circuits	3			3
04	18ITITT3040	PC	Discrete Mathematics	3	1		4
05	18ITITT3050	PC	Data Structures	3			3
06	18ITECL3060	ES	Analog & Digital Electronics.Lab			3	1.5
07	18ITITL3070	PC	IT Workshop Lab			3	1.5
08	18ITITL3080	PC	Data Structures Lab			3	1.5
				15	2	9	21.5
				26			

II B. Tech II Semester Course structure for the Academic Year 2019-2020

S. No.	Subject			Hours			C
	Code	Type	Title	L	T	P	
01	18ITECT4010	ES	Signals & Systems	3			3
02	18CMCET4020	ES	Engineering Mechanics	3			3
03	18ITITT4030	PC	Computer Organization	3			3
04	18ITITT4040	PC	Algorithm Design and Analysis	3			3
05	18ITITT4050	PC	Java Programming	3			3
06	18ITITL4060	PC	Computer Organization Lab			3	1.5
07	18ITITL4070	PC	Algorithm Design and Analysis Lab			3	1.5
08	18ITITL4080	PC	Java Programming Lab			3	1.5
				15		9	19.5
				24			



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III B. Tech I Semester Course structure for the Academic Year 2020-2021

S. No.	Subject			Hours			C
	Code	Type	Title	L	T	P	
01	18CMBIT5010	BS	Biology for Engineers	3			3
02	18CMEGT5020	HS	Personality Development & Professional Communication	2			2
03	18CMMST5030	HS	Management Science	3			3
04	18ITITT5040	PC	Database Systems	3			3
05	18ITITT5050	PC	Operating Systems	3			3
06	18ITITL5060	PC	Advanced Java and Web Technologies Lab			3	1.5
07	18ITITL5070	PC	Operating Systems & UNIX Programming Lab			3	1.5
08	18ITITL5080	PC	Database Systems Lab			3	1.5
				14		9	18.5
				23			

III B. Tech I Semester Course structure for the Academic Year 2020-2021

S. No.	Subject			Hours			C
	Code	Type	Title	L	T	P	
01	18ITITT6010	PC	Computer Networks	3			3
02	18ITITT6020	PC	Software Engineering	3			3
03	18ITITP603G	PE	Program Elective-I	3			3
04	18ITITO604G	OE	Open Elective-I	3			3
05	18CMMST6050	HS	Engineering Economics & Financial Management	3			3
06	18ITITL6060	PC	Software Engineering Lab			3	1.5
07	18ITITL6070	PC	Python Programming Lab			3	1.5
08	18ITITR6080	PROJ.	Term Paper + Seminar			4	2
				14		9	20
				23			



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Department of Information Technology

IV B. Tech I Semester Course structure for the Academic Year 2021-2022

S. No	Subject			Hours			C
	Code	Type	Title	L	T	P	
01	18ITITT7010	PC	Cryptography and Network security	3			3
02	18ITITP702G	PE	Program Elective-II	3			3
03	18ITITP703G	PE	Program Elective-III	3			3
04	18ITITO704G	OE	Open Elective-II	3			3
05	18ITITO705G	OE	Open Elective-III	3			3
06	18ITITL7060	PC	Object Oriented Analysis and Design Lab			3	1.5
07	18ITITR7070	PROJ	Internship				2
08	18ITITR7080	PROJ	Project Phase - I			8	4
				15	0	11	22.5
				26			

IV B. Tech II Semester Course structure for the Academic Year 2021-2022

S. No	Subject			Hours			C
	Code	Type	Title	L	T	P	
01	18ITITP801G	PE	Program Elective-IV	3			3
02	18ITITP802G	PE	Program Elective-V	3			3
03	18ITITP803G	PE	Program Elective-VI	3			3
04	18ITITO8040	OE	Open Elective-IV	3			3
05	18ITITR8050	PROJ	Project Phase- II			14	7
06			Co-curricular/Extra-curricular Activities	2			1
				12		14	20
				26			




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Department of Information Technology

Program Elective-I	
18ITITP603A	Wireless Sensor Networks
18ITITP603B	UI Design
Program Elective-II	
18ITITP702A	R Programming
18ITITP702B	Software Quality Assurance
Program Elective-III	
18ITITP703A	Cloud Computing
18ITITP703B	Software Testing Methodologies
Program Elective-IV	
18ITITP801A	Distributed Databases
18ITITP801B	Fault Tolerant Systems
Program Elective-V	
18ITITP802A	Big Data Analytics
18ITITP802B	Software Project Management
Program Elective-VI	
18ITITP803A	Open Source Software
18ITITP803B	Optimization Techniques

Open Electives	
18XXIT0XXMA	Office Automation
18XXIT0XXMB	Internet & Web Hosting
18XXIT0XXMC	Cloud Computing
18XXIT0XXMD	E-Commerce
18XXIT0XXME	Statistics and R Programming
18XXIT0XXMF	Open Source software
18XXIT0XXMH	Mobile Application Development


Head of the Department
 Head of the Department
 Department of Information Technology
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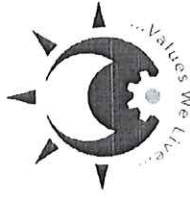
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Department of Management Science

MBA I Semester Course structure from the Academic Year 2018-2019

S. No	Subject Code	Title of the Course	T	L	C	Internal	External	Total
1.	18MS01 T1	Principles of Management	4	-	3	40	60	100
2.	18MS01 T2	Managerial Economics	4	-	3	40	60	100
3.	18MS01 T3	Accounting For Managers	4	-	3	40	60	100
4.	18MS01 T4	Managerial Communication & Soft Skills	4	-	3	40	60	100
5.	18MS01 T5	Quantitative Analysis for Business Decisions	4	-	3	40	60	100
6.	18MS01 T6	Business Environment	4	-	3	40	60	100
7.	18CS01 L7	Information Technology Lab	-	3	3	40	60	100
8.	18MS01 C8	Case Study*	2	-	2	-	-	-
Total Credits for I Semester (A)					23	280	420	700

Head of the Department
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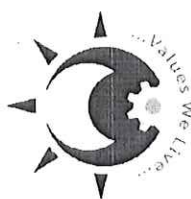
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Department of Management Science

MBA II Semester Course structure from the Academic Year 2018-2019

S. No	Subject Code	Title of the Course	T	L	C	Internal	External	Total
1.	18MS02T1	Financial Management	4	-	3	40	60	100
2.	18MS02T2	Marketing Management	4	-	3	40	60	100
3.	18MS02T3	Human Resource Management	4	-	3	40	60	100
4.	18MS02T4	Production & Operations Management	4	-	3	40	60	100
5.	18MS02T5	Research Methodology	4	-	3	40	60	100
6.	18MS02T6	Organisational Behaviour	4	-	3	40	60	100
7.	18MS02P7	Mini Project	4	-	2	-	-	50
		Seminar on Mini Project		-	2	-	-	50
8.	18MS02C8	Case Study*	2	-	2	-	-	-
Total Credits for II Semester (B)					24	240	360	700

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Department of Management Science

MBA III Semester Course structure from the Academic Year 2018-2019

S. No	Subject Code	Title of the Course	T	L	C	Internal	External	Total
1.	18MS03T1	Strategic Management	4	-	3	40	60	100
2.	18MS03T2	Legal Aspects of Business	4	-	3	40	60	100
3.	18MS03T3	Business Ethics & Corporate Governance	4	-	3	40	60	100
4.	18MS03F4 /M4/H4	Elective – I	4	-	3	40	60	100
5.	18MS03F5 /M5/H5	Elective – II	4	-	3	40	60	100
6.	18MS03F6 /M6/H6	Elective – III	4	-	3	40	60	100
7.	18MS03F7 /M7/H7	Elective – IV	4	-	3	40	60	100
8.	18MS03C8	Case Study*	2	-	2	-	-	-
Total Credits for III Semester (C)					23	280	420	700

The students may choose **ONE** Specialization among the following:

Subject code	Finance	Subject code	Marketing	Subject Code	HR
18MS03F4	Security Analysis & Portfolio Management	18MS03M4	Consumer Behaviour	18MS03H4	Leadership Management
18MS03F5	Banking & Insurance Management	18MS03M5	Retail Marketing	18MS03H5	Compensation and Reward Management
18MS03F6	Advanced Cost & Management Accounting	18MS03M6	Customer Relationship Management	18MS03H6	Performance Management
18MS03F7	Strategic Financial Management	18MS03M7	Strategic Marketing Management	18MS03H7	Strategic Human Resource Management



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Department of Management Science

MBA IV Semester Course structure from the Academic Year 2018-2019

S. No	Subject Code	Title of the Course	T	L	C	Internal	External	Total
1.	18MS04T1	Logistics & Supply Chain Management	4	-	3	40	60	100
2.	18MS04T2	Entrepreneurship Development	4	-	3	40	60	100
3.	18MS04F3/ M3/H3	Elective – V	4	-	3	40	60	100
4.	18MS04F4/ M4/H4	Elective – VI	4	-	3	40	60	100
5.	18MS04F5/ M5/H5	Elective – VII	4	-	3	40	60	100
6.	18MS04/F6 /M6/H6	Elective – VIII	4	-	3	40	60	100
7.	18MS04C7	Case Study*	2	-	2	-	-	-
8.	18MS04P8	Internship/Project and Viva Voce	-	-	10	-	-	-
Total Credits for IV Semester (D)					30	240	360	600

The students may choose **ONE** Specialization among the following:

Subject Code	Finance	Subject Code	Marketing	Subject code	HR
18MS04F3	Financial Markets & Service	18MS04M3	Services Marketing	18MS04H3	Global HRM
18MS04F4	Global Financial Management	18MS04M4	Promotion & Distribution Management	18MS04H4	Organizational Development and Change Management
18MS04F5	Financial Risk Management	18MS04M5	Global Marketing Management	18MS04H5	Labour Welfare Legislation
18MS04F6	Tax Management	18MS04M6	Product & Brand Management	18MS04H6	Management of Industrial Relations

COURSE STRUCTURE AND DETAILED SYLLABUS

For Civil Engineering

B.Tech.-SITE18M

Regulations

With Effective from the Academic Year

2020-2021

**B. Tech. (Civil Engineering)
Semester I (First Year)**

S. No	Course Category	Course Code	Subjects	Hours Per Week			Credits
				L	T	P	
1	HSMC	18CMEGT1010	Technical English	3	0	0	3
2	BSC	18CMMAT1020	Engineering Mathematics-I	3	1	0	4
3	BSC	18CMCHT1030	Engineering Chemistry	3	1	0	4
4	ESC	18CMEET1040	Basic Electrical Engineering	3	1	0	4
5	HSMC	18CMEGL1050	English Communication skills lab	0	0	2	1
6	BSC	18CMCHL1060	Engineering Chemistry Lab	0	0	3	1.5
7	ESC	18CMEEL1070	Basic Electrical Engineering Lab	0	0	3	1.5
8	MC	18CMMSN1080	Constitution of India, Professional Ethics & Human Rights	3	0	0	0
Total Credits							19

**B.Tech. (Civil Engineering)
Semester II (First Year)**

Sl. No.	Course Category	Course Code	Course Title	L	T	P	C
1.	BSC	18CMMAT2010	Engineering Mathematics-II	3	1	0	4
2.	BSC	18MEPHT2020	Engineering Physics	3	1	0	4
3.	ESC	18CMCST2030	Programming for Problem Solving	3	0	0	3
4.	ESC	18CMMEEL2040	Engineering Graphics	1	0	4	3
5.	BSC	18MEPHL2050	Engineering Physics Lab	0	0	3	1.5
6.	ESC	18CMCSL2060	Programming for Problem Solving lab	0	0	4	2
7.	ESC	18CMMEEL2070	Work Shop/Manufacturing Practice	0	0	3	1.5
8.	MC	18CMCHN2080	Environmental Science	3	0	0	0
Total Credits							19

**B.Tech. (Civil Engineering)
Semester III (Second Year)**

Sl. No	Course Category	Course Code	Course Title	L	T	P	C
1.	BSC	18CEMAT3010	Engineering Mathematics - III	3	1	0	4
2.	ESC	18CMCET3020	Engineering Mechanics	3	1	0	4
3.	PCC	18CECET3030	Engineering Geology	2	0	0	2
4.	PCC	18CECET3040	Surveying & Geomatics	3	0	0	3
5.	PCC	18CECET3050	Building materials & Concrete Technology	3	0	0	3
6.	PCC	18CECEL3060	Engineering Geology Lab	0	0	3	1.5
7.	PCC	18CECEL3070	Surveying field work Lab	0	0	3	1.5
8.	PCC	18CECEL3080	Computer- aided civil Engineering Drawing Lab	0	0	3	1.5
9.	MC	18CEECN3090	Basic Electronics	3	-	-	-
Total Credits							20.5

**B.Tech. (Civil Engineering)
Semester IV (Second Year)**

Sl. No	Course Category	Course Category	Course Title	L	T	P	C
1.	PCC	18CECET4010	Fluid Mechanics	3	0	0	3
2.	PCC	18CECET4020	Strength of Materials	3	0	0	3
3.	PCC	18CECET4030	Environmental Engineering	3	0	0	3
4.	PCC	18CECET4040	Transportation Engineering	3	0	0	3
5.	HSMC	18CMMST4050	Engineering Economics and Financial Management	3	0	0	3
6.	PCC	18CECEL4060	Strength of Materials Lab	0	0	3	1.5
7.	PCC	18CECEL4070	Environmental Engineering Lab	0	0	3	1.5
8.	PCC	18CECEL4080	Material Testing Lab	0	0	3	1.5
Total Credits							19.5

B.Tech. (Civil Engineering)
Semester V (Third Year)

S.No	Course Category	Course Code	Subjects	Hours Per Week			Credits
				L	T	P	
1.	PCC	18CECET5010	Geo Technical Engineering	3	0	0	3
2.	PCC	18CECET5020	Theory of Structures -I	3	0	0	3
3.	PCC	18CECET5030	Hydraulic & Hydraulics Machinery	3	0	0	3
4.	PCC	18CECET5040	Reinforced Concrete Structures	3	0	0	3
5.	OE	18CExxO505x	Open Elective- I	3	0	0	3
6.	PE	18CECEP506x	Professional Elective -I	3	0	0	3
7.	PCC	18CECEL5070	Geo Technical Engineering Lab	0	0	3	1.5
8.	PCC	18CECEL5080	Fluid mechanics & Hydraulics Machinery Lab				1.5
9.	SOC	18CEAHS5090	Soft Skills & Aptitude Builder - 1	2	0	0	2
10	MC	18CMBIT5100	Biology for Engineers	2	0	0	0
Total Credits							23

B.Tech. (Civil Engineering)
Semester VI (Third Year)

S.No	Course Category	Course Code	Subjects	Hours Per Week			Credits
				L	T	P	
1	PCC	18CECET6010	Theory of Structures -II	3	0	0	3
2	PCC	18CECET6020	Design of Steel Structures	3	0	0	3
3	OE	18CExxO603x	Open Elective- II	3	0	0	3
4	PE	18CECEP604x	Professional Elective -II	3	0	0	3
5	PE	18CECEP605x	Professional Elective- III	3	0	0	3
6	PCC	18CECEL6060	Structural Design and Drawing Lab	0	0	3	1.5
7	PCC	18CECEL6070	Software Applications in civil Engineering Lab	0	0	3	1.5
8	PCC	18CECEL6080	Surveying Field Camp	1	0	2	2
9	SOC	18CEAHS6090	Soft Skills & Aptitude Builder - 2	2	0	0	2
Total Credits							22

**B.Tech. (Civil Engineering)
Semester VII (Fourth Year)**

S.No	Course Category	Course Code	Subjects	Hours Per Week			Credits
				L	T	P	
1	PCC	18CECET7010	Contracts, Specifications & Project Management	3	0	0	3
2	PCC	18CECET7020	Hydrology and Water Resource Engineering	3	0	0	3
3	OE	18CExxO703x	Open Elective III	3	0	0	3
4	OE	18CExxO704x	Open Elective IV	3	0	0	3
5	PE	18CECEP705x	Professional Elective IV	3	0	0	3
6	PE	18CECEP706x	Professional Elective V	3	0	0	3
7	PCC	18CECEL7070	Irrigation Engineering & Drawing Lab	0	0	4	2
8		18CECEL7080	Internship with Seminar	0	0	3	3
9	SOC	18CECES7090	STAAD.Pro	1	0	2	2
Total Credits							25

Semester VIII (Fourth Year)

S.No	Course Category	Course Code	Subjects	Hours Per Week			Credits
				L	T	P	
1.		18CECEP8010	Project	0	0	0	12

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Professional Elective Courses:

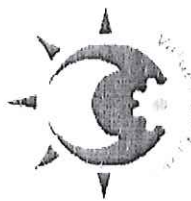
Elective -I	18CECEP506a	Solid and Hazardous Waste management
	18CECEP506b	Architecture & Town Planning
	18CECEP506c	Advanced Transportation Engineering
	18CECEP506d	Sustainable construction methods for buildings
Elective -II	18CECEP605a	Transportation Economics
	18CECEP605b	Advanced Concrete Technology
	18CECEP605c	Remote Sensing & GIS Applications
	18CECEP605d	Foundation Engineering
Elective -III	18CECEP606a	Ground Improvement Techniques
	18CECEP606b	Surface water Hydrology
	18CECEP606c	Offshore Engineering
	18CECEP606d	Rural Water Supply and Onsite Sanitation Systems
Elective -IV	18CECEP705a	Advanced Structural Analysis
	18CECEP705b	Environmental Impact Assessment and Environment Management Planning
	18CECEP705c	Engineering with Geo-synthetics
	18CECEP705d	Urban Hydrology
Elective -V	18CECEP706a	Pre-Stressed Concrete
	18CECEP706b	Repairs and Rehabilitation of Structures
	18CECEP706c	Ground Water Development & Management
	18CECEP706d	Air and Noise Pollution and Control

Open Elective Courses offered by Dept. of CE to Other Depts.

1	18xxCEOxxxx	Civil Engineering Societal & Global Impact
2	18xxCEOxxxx	Introduction to Civil Engineering
3	18xxCEOxxxx	Disaster Management
4	18xxCEOxxxx	Environmental Pollution and Control
5	18xxCEOxxxx	Building Materials
6	18xxCEOxxxx	Green Buildings and Sustainability

M. Rama Rao
HoD

Head of the Dept - Civil
Sasi Institute of Technology & Engineering
TADEPALLIGUDEM - 534 101
W.G. Dist. A.P.



GENERAL COURSE STRUCTURE(SITE-18M)

Total credits (4yearcourse) - 160

I -B. Tech I- Semester Approved Course structure Common for ME/CE/EEE

S. No	Subject Code		Subject title	L	T	P	C
1	18CMEGT1010	HSMC	Technical English	3	1		3
2	18CMMAT1020	BSC	Engineering Mathematics-I	3	1		4
3	18CMCHT1030	BSC	Engineering Chemistry	2			4
4	18CMEET1040	ESC	Basic Electrical Engineering	3	1		4
5	18CMEGL1050	HSMC	English Communication Skills Lab			2	1
6	18CMCHL1060	BSC	Engineering Chemistry Lab			3	1.5
7	18CMEEL1070	ESC	Basic Electrical Engineering Lab			3	1.5
8	18CMMSM1080	MC	Constitution of India. Professional Ethics & Human Rights(MC)	2			
Total				13	3	8	19

I B. Tech II Semester Approved Course structure Common for ME/CE/EEE

S. No	Subject Code		Subject title	L	T	P	C
1	18CMMAT2010	BSC	Engineering Mathematics II	3	1		4
2	18EEPHT2020	BSC	Engineering Physics	3	1		4
3	18CMCST2030	ESC	Programming for Problem solving	3			3
4	18CMMEI.2040	ESC	Engineering Graphics	1		4	3
5	18EEPHL.2050	BSC	Engineering Physics Lab			3	1.5
6	18CMCSL2060	ESC	Programming for Problem Solving Lab			4	2
7	18CMMEI.2070	ESC	Work Shop /Manufacturing practice			3	1.5
8	18CMCHN2080	MC	Environmental Science(MC)	2			
Total				12	2	14	19

II-B. Tech EEEI-Semester Approved Course structure

S. No	Subject Code		Subject title	L	T	P	C
1	18CMMAT3010	BSC	Engineering Mathematics III	3	1		4
2	18EEEEET3020	PCC	Analog Electronics	3			3
3	18EEEEET3030	PCC	Electromagnetic fields	3	1		4
4	18EEEEET3040	PCC	Electrical Circuit Analysis	3	1		4
5	18EEEEET3050	PCC	Electrical Machines I	3			3
6	18EEEEEL3060	PCC	Analog Electronics Lab			3	1.5
7	18EEEEEL3070	PCC	Electrical Circuit Analysis Lab			3	1.5
8	18EEEEEL3080	PCC	Electrical Machines I Lab			3	1.5
Total				15	3	9	22.5

II B. Tech EEE II Semester Approved Course structure

S. No	Subject Code		Subject title	L	T	P	C
1	18EEEEET4010	ESC	Signals & Systems	2	1		3
2	18CMMET4020	ESC	Engineering Mechanics	3	1		4
3	18EEEEET4030	PCC	Digital Electronics	3			3
4	18EEEEET4040	PCC	Control Systems	3			3
5	18EEEEET4050	PCC	Electrical Machines II	3			3
6	18EEEEEL4060	PCC	Digital Electronics Lab			3	1.5
7	18EEEEEL4070	PCC	Control Systems Lab			3	1.5
8	18EEEEEL4080	PCC	Electrical Machines II Lab			3	1.5
Total				14	2	9	20.5

III -B. Tech EEEl-Semester Approved Course structure

S. No	Subject Code		Subject title	L	T	P	C
1	18EEEEET5010	PCC	Microprocessors & Microcontrollers	3			3
2	18EEEEET5020	PCC	Power Generation, Transmission & Distribution	3			3
3	18CMMST5030	HSMC	Management Science	3			3
4	18EEEEET5040	PCC	Power Electronics	3			3
5	18EEEEET5050	PCC	Electrical Measurements & Instrumentation	3			3
6	18EEXXO506X	OE	Open Elective – 1	3			3
7	18EEEEEL5070	PCC	Power Systems Lab			3	1.5
8	18EEEEEL5080	PCC	Power Electronics Lab			3	1.5
9	18CMAHS5090	SOC	Soft Skills & Aptitude Builder - 1	1		2	2
Total				19		8	23

III B. Tech EEE II Semester Approved Course structure

S. No	Subject Code		Subject title	L	T	P	C
1	18EEEEET6010	PCC	Power Systems Operation & Control	3			3
2	18CMMST6020	HSMC	Engineering Economics & Financial management	3			3
3	18EEEEEP603X	PE	Program Elective-1	3			3
4	18EEXXO604X	OE	Open Elective – 2	3			3
5	18EEXXO605X	OE	Open Elective – 3	3			3
6	18EEEEEL6060	PCC	Microprocessors & Microcontrollers Lab			2	1
7	18EEEEEL6070	PCC	Measurements and Instrumentation Lab			3	1.5
8	18CMAHS6080	SOC	Soft Skills & Aptitude Builder – 2	1		2	2
9	18CMBIN6090	MC	Biology for Engineers	2			
Total				18		7	19.5

Program Elective-1

18EEEEEP603A	Line Commutated and Active Rectifiers
18EEEEEP603B	HVDC Transmission Systems
18EEEEEP603C	Control Systems Design

IV –B. Tech EEI-Semester Approved Course structure

S. No	Subject Code		Subject title	L	T	P	C
1	18EEEEET7010	PCC	Power System Protection	3			3
2	18EEEEEP702X	PE	Program Elective-2	3			3
3	18EEEEEP703X	PE	Program Elective-3	3			3
4	18EEEEEP704X	PE	Program Elective-4	3			3
5	18EEEEEP705X	PE	Program Elective-5	3			3
6	18EEEXO706X	OE	Open Elective – 4	3			3
7	18EEEEEL7070	PCC	Power System Analysis Lab			3	1.5
8	18EEEEES7080	SOC	Design of Photovoltaic Systems	1		2	2
9	18EEEEI7090	II	Industry Internship (During Summer vacation)				3
			Total	19		5	24.5

Program Elective-2

18EEEEEP702A	Modeling and Control of DC Drives
18EEEEEP702B	Smart Grid
18EEEEEP702C	Optimization Techniques

Program Elective-3

18EEEEEP703A	Electrical & Hybrid Vehicles
18EEEEEP703B	Power System Dynamics & Stability
18EEEEEP703C	Digital signal Processing

Program Elective-4

18EEEEEP704A	Modeling and Control of AC Drives
18EEEEEP704B	Electrical Energy Conservation & Auditing
18EEEEEP704C	Intelligent Control & Its Applications

Program Elective-5

18EEEEEP705A	Flexible Alternating Current Transmission Systems
18EEEEEP705B	Power Quality
18EEEEEP705C	Digital Control Systems

IV B. Tech EEE II Semester Approved Course structure

S. No	Subject Code	Subject title	L	T	P	C
1	18EEFER8010	Project			14	12
		Total			14	12

Open Electives offered by EEE department

S. No	Subject Code	Subject title
1	18XXEEM0XA	Control system design
2	18XXEEM0XB	Optimization techniques
3	18XXEEM0XC	Electrical Energy Conservation And Auditing
4	18XXEEM0XD	Electrical & Hybrid Vehicles
5	18XXEEM0XE	Intelligent control & its applications
6	18XXEEM0XF	Electrical materials
7	18XXEEM0XG	Industrial Electrical Systems
8	18XXEEM0XH	Modern Control Theory

A. Prasad

Head of the Department

HEAD OF THE DEPARTMENT OF
ELECTRICAL & ELECTRONICS ENGG
SASI INSTITUTE OF TECH & ENGG
TADEPALLIGUDEM - 534 101

10/10/2024

HEAD OF THE DEPARTMENT OF
ELECTRICAL & ELECTRONICS ENG
FAST INSTITUTE OF TECH & ENG
TADAPALLIGUDEM - 524 101

**COURSE STRUCTURE
AND SYLLABUS
SITE-18M
REGULATIONS**

For

III & IV B.Tech.

Mechanical Engineering

**With effective from the
Academic Year**

2022-23



sasi INSTITUTE OF
TECHNOLOGY &
autonomous ENGINEERING

Accredited by **NAAC** with "**A**" Grade
Recognised by **UGC** under section 2(f) & 12(B)
Approved by **AICTE** - NEW Delhi
Permanently Affiliated to **JNTUK, SBTET**
Ranked as "**A**" Grade by Govt. of A.P.

Department of Mechanical Engineering

B. Tech. (Mechanical Engineering)

Semester I (First Year) Approved Course structure

S.No.	Course Code		Course Title	L	T	P	C
1.	18CMEGT1010	HSMC	Technical English	3	0	0	3
2.	18CMMAT1020	BSC	Engineering Mathematics-I	3	1	0	4
3.	18CMCHT1030	BSC	Engineering Chemistry	3	1	0	4
4.	18CMEET1040	ESC	Basic Electrical Engineering	3	1	0	4
5.	18CMEGL1050	HSMC	English Communication skills lab	0	0	2	1
6.	18CMCHL1060	BSC	Engineering Chemistry Lab	0	0	3	1.5
7.	18CMEEL1070	ESC	Basic Electrical Engineering Lab	0	0	3	1.5
8.	18CMMSN1080	MC	Constitution of India, Professional Ethics & Human Rights	3	0	0	0
Total				11	03	07	19

B.Tech. (Mechanical Engineering)

Semester II (First Year) Approved Course structure

S.NO.	Course Code		Course Title	L	T	P	C
1.	18CMMAT2010	BSC	Engineering Mathematics-II	3	1	0	4
2.	18MEPHT2020	BSC	Engineering Physics	3	1	0	4
3.	18CMCST2030	ESC	Programming for Problem Solving	3	0	0	3
4.	18CMMEEL2040	ESC	Engineering Graphics	1	0	4	3
5.	18MEPHL2050	BSC	Engineering Physics Lab	0	0	3	1.5
6.	18CMCSL2060	ESC	Programming for Problem Solving lab	0	0	4	2
7.	18CMMEEL2070	ESC	Work Shop/Manufacturing Practice	0	0	3	1.5
8.	18CMCHN2080	MC	Environmental Science	3	0	0	0
Total				11	02	15	19

B.Tech. (Mechanical Engineering)
Semester III (Second Year) Approved Course structure

S.No.	Course Code		Course Title	L	T	P	C
1.	18CMMAT3010	BSC	Engineering Mathematics-III	3	1	0	4
2.	18MEMET3020	ESC	Engineering Mechanics	3	1	0	4
3.	18MEECT3030	ESC	Basic Electronics Engg.	3	0	0	3
4.	18MEMET3040	PCC	Manufacturing Processes	3	0	0	3
5.	18MEMET3050	PCC	Thermodynamics	3	0	0	3
6.	18MEMET3060	PCC	Materials Engineering	3	0	0	3
7.	18MEMEL3070	PCC	Manufacturing Processes Lab	0	0	3	1.5
8.	18MEMEL3080	PCC	CAEDP Lab	0	0	3	1.5
			Total	15	2	06	23

Semester IV (Second year) Approved Course structure

S.No.	Course Code		Course Title	L	T	P	C
1.	18MEMET4010	PCC	Strength of Materials	3	0	0	3
2.	18MEMET4020	PCC	Fluid Mechanics & Fluid Machines	3	0	0	3
3.	18MEMET4030	PCC	Theory of Machines-I	3	0	0	3
4.	18MEMET4040	PCC	Applied Thermodynamics	3	0	0	3
5.	18CMMST4050	HSM C	Engg. Economics & Financial Management	3	0	0	3
6.	18MEMEL4060	PCC	Fluid Mechanics & Fluid Machines Lab	0	0	3	1.5
7.	18MEMEL4070	PCC	Mechanics of Solids & Materials Lab	0	0	3	1.5
8.	18MEMEM4080	MC	Machine Drawing Lab	1	0	4	0
			Total	14	00	06	18

B.Tech. (Mechanical Engineering)
Semester V (Third year) Approved Course structure

S.No.	Course Code		Course Title	L	T	P	C
1.	18MEMET5010	PCC	Machine Tools & Metrology	3	0	0	3
2.	18MEMET5020	PCC	Design of Machine Elements -I	3	0	0	3
3.	18MEMET5030	PCC	Heat Transfer	3	0	0	3
4.	18MEMET5040	PCC	CAD/CAM/CIM	3	0	0	3
5.	18MEMET505X	PEC	Professional Elective-1	3	0	0	3
6.	18MEXXO506X	OEC	Open Elective-I	3	0	0	3
7.	18MEMEL5070	PCC	Heat Transfer Lab	0	0	3	1.5
8.	18MEMEL5080	PCC	Machine Tools & Metrology Lab	0	0	3	1.5
9.	18MEXXS5090	SOC	Soft Skills & Aptitude Builder - 1	0	0	4	2
10.	18MEMEM50100	ESC	Biology for Engineers	3	0	0	0
Total				18	00	10	23

Professional Elective Course -I

S.No.	Subject Code	Name of the subject	L	T	P	Cr
1.	18MEMEP505A	Conventional & Non-Conventional Power Stations	3	0	0	3*
2.	18MEMEP505B	Nano Technology	3	0	0	3*
3.	18MEMEP505C	Industrial Robotics with Artificial Intelligence	3	0	0	3*
NPTEL/SWAYAM/MOOCs (Course of 12 Weeks duration) to be offered						

**B. Tech. (Mechanical Engineering)
Semester VI (Third year) Approved Course structure**

S. No.	Course Code		Course Title	L	T	P	C
1.	18MEMET6010	PCC	Theory of Machines-II	3	0	0	3
2.	18MEMET6020	PCC	Design of Machine Elements -II	3	0	0	3
3.	18MEMEP603X	PE	Professional Elective -II	3	0	0	3
4.	18MEMEP604X	PE	Professional Elective -III	3	0	0	3
5.	18MEXXO605X	OE	Open Elective-II	3	0	0	3
6.	18MEMEL6060	PCC	Theory of Machines Lab	0	0	3	1.5
7.	18MEMEL6070	PCC	Thermal Engineering Lab	0	0	3	1.5
8.	18MEMEL6080	PCC	CAD/CAM Lab	0	0	3	1.5
9.	18MEXXS6090	SOC	Soft Skills & Aptitude Builder – 2	0	0	4	2
			Total	17	00	14	21.5

Professional Elective Course -II

S. No.	Subject Code	Name of the subject	L	T	P	Cr
1.	18MEMEP603A	Prime Movers for Automobiles	3	0	0	3*
2.	18MEMEP603B	Synthesis and Characterization of Materials	3	0	0	3*
3.	18MEMEP603C	Additive Manufacturing	3	0	0	3*
NPTEL/SWAYAM/MOOCs (Course of 12 Weeks duration) to be offered						

Professional Elective Course -III

S. No.	Subject Code	Name of the subject	L	T	P	Cr
1.	18MEMEP604A	Solar Energy Engineering and Applications	3	0	0	3*
2.	18MEMEP604B	Finite Element Methods	3	0	0	3*
3.	18MEMEP604C	Smart Manufacturing & IIOT	3	0	0	3*
NPTEL/SWAYAM/MOOCs (Course of 12 Weeks duration) to be offered						

B. Tech. (Mechanical Engineering)
Semester VII (Fourth Year) Approved Course structure

S. No.	Course Code		Course Title	L	T	P	C
1.	18MEMET7010	HSMC	Operations Research	3	0	0	3
2.	18MEMET7020	PCC	Instrumentation and Mechatronics	3	0	0	3
3.	18MEMET703X	PE	Professional Elective -IV	3	0	0	3
4.	18MEMEP704X	PE	Professional Elective -V	3	0	0	3
5.	18MEXXO705X	OE	Open Elective- III	3	0	0	3
6.	18MEXXO706X	OE	Open Elective- IV	3	0	0	3
7.	18MEMEL7070	PCC	Instrumentation and Mechatronics Lab	0	0	3	1.5
8.	18MEMER7080	PCC	Internship with Seminar	0	0	6	3
9.	18MEMES7090	SOC	Skill Oriented Course – 3 (Hyper Mesh)	0	0	4	2
Total				18	0	14	24.5

Professional Elective Course -IV

S.No.	Subject Code	Name of the subject	L	T	P	Cr
1.	18MEMEP703A	Refrigeration & Air Conditioning	3	0	0	3*
2.	18MEMEP703B	Mechanics of Composites	3	0	0	3*
3.	18MEMEP703C	Non – Destructive Evaluation	3	0	0	3*
NPTEL/SWAYAM/MOOCs (Course of 12 Weeks duration) to be offered						

Professional Elective Course -V

S.No.	Subject Code	Name of the subject	L	T	P	Cr
1.	18MEMEP704A	Gas Dynamics and Jet Propulsion	3	0	0	3*
2.	18MEMEP704B	Mechanical Vibrations	3	0	0	3*
3.	18MEMEP704C	Production Planning and Control	3	0	0	3*
NPTEL/SWAYAM/MOOCs (Course of 12 Weeks duration) to be offered						

Semester VIII (Fourth Year) Approved Course structure

S. No.	Course Code		Course Title	L	T	P	C
1.	18MEMER801X	PCC	Project Work, Seminar & Internship in industry	-	-	-	12
Total				-	-	-	12

COURSE STRUCTURE AND DETAILED SYLLABUS

for

M.Tech.

in

CAD/CAM

With Effective from the academic year

2018-2019

M.Tech. COURSE STRUCTURE**Mechanical Engineering****I SEMESTER**

S.No	Course Code	Name of the Subject	L	P	C
1	18MECC101	Advanced Optimization Techniques	3	0	3
2	18MECC102	Geometric Modeling	3	0	3
3	18MECC103	Computer Integrated Manufacturing	3	0	3
4	18MECC104	Industrial Robotics	3	0	3
5	18MECC105X	Elective –I	3	0	3
6	18MECC106X	Elective - II	3	0	3
7	18MECC151	Modeling and Analysis of Manufacturing Processes Lab	0	3	1.5
Total Credits					19.5

II SEMESTER

S.No	Course Code	Name of the Subject	L	P	C
1	18MECC201	Computational Methods in Engineering	3	0	3
2	18MECC202	Finite Element Methods	3	0	3
3	18MECC203	Computer Graphics	3	0	3
4	18MECC204	Mechanics and Manufacturing Methods of Composites	3	0	3
5	18MECC205X	Elective –III	3	0	3
6	18MECC206X	Elective - IV	3	0	3
7	18MECC251	Term Paper with Seminar	0	0	3
8	18MECC252	FEA Lab	0	3	1.5
Total Credits					22.5

III SEMESTER

S.No	Course Code	Name of the Subject	L	P	C
1	18MECC301	Self-Learning Course: CNC Technology & Programming	3	0	3
2	18MECC351	Internship with Seminar	0	0	4
3	18MECC352	Project Work Phase-I	0	0	5
Total Credits					12

IV SEMESTER

S.No	Course Code	Name of the Subject	L	P	C
1	18MECC451	Project Phase-II	-	-	10
Total Credits					10

Number of Credits for each semester:

SEMESTER	CREDITS
I	19.5
II	22.5
III	12
IV	10
TOTAL	64

Program Electives:

Program Elective-1	18MECC105A	Special Manufacturing Processes
	18MECC105B	Nano Technology
	18MECC105C	Mechatronics
Program Elective-2	18MECC106A	Intelligent Manufacturing Systems
	18MECC106B	Computational Fluid Dynamics
	18MECC106C	Non-Destructive Evaluation
Program Elective-3	18MECC205A	Quality Engineering in Manufacturing
	18MECC205B	Fracture Mechanics
	18MECC205C	Simulation Modeling of Manufacturing Systems
Program Elective-4	18MECC206A	Mechanical Vibrations
	18MECC206B	Design for Manufacturing
	18MECC206C	Computer Aided Process Planning

Course Structure

SITE18M Regulations

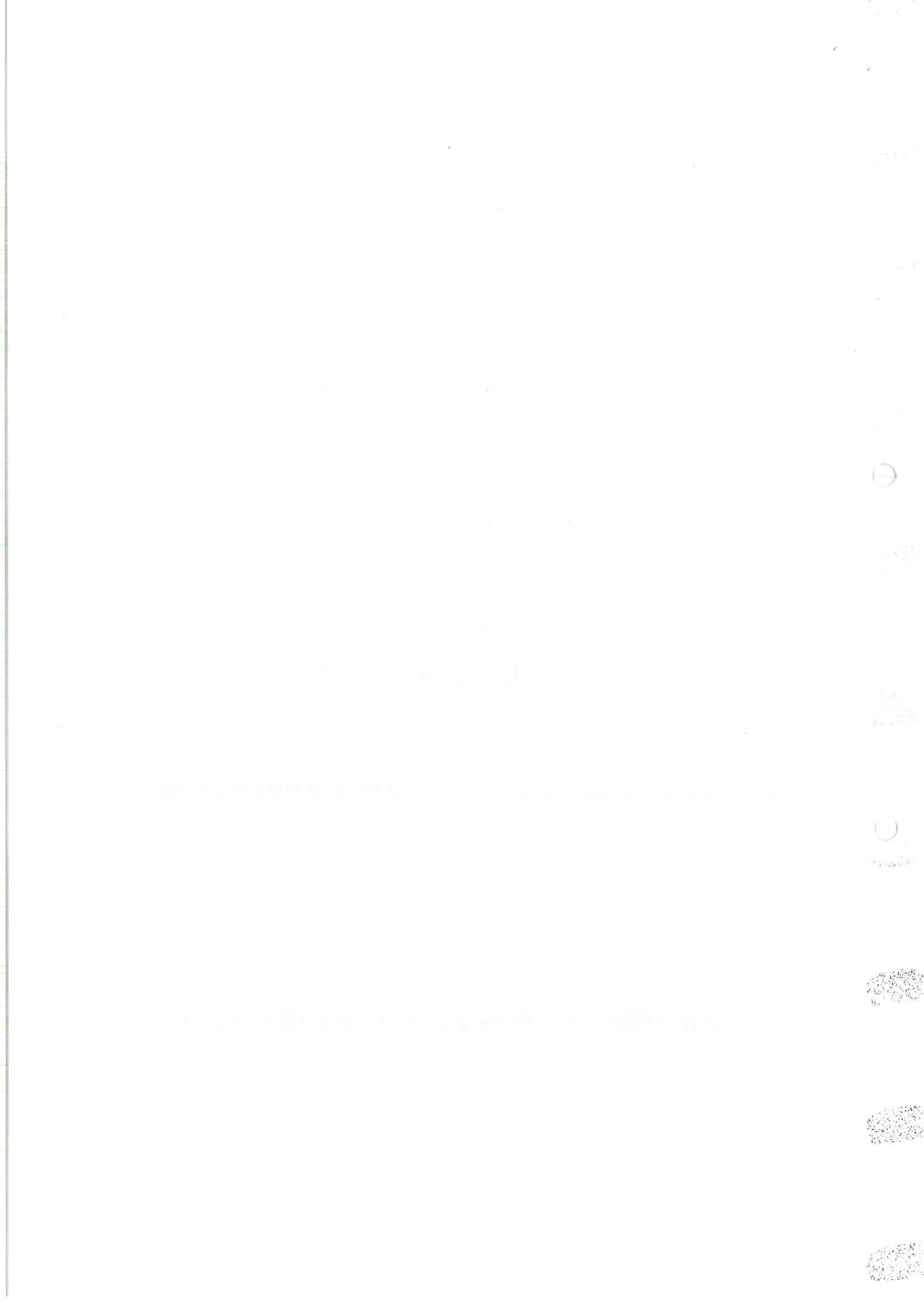
For

B.Tech.

in

Electronics and Communication Engineering

**With effective from the academic year
2020-21**





sasi INSTITUTE OF
autonomous TECHNOLOGY &
ENGINEERING

Accredited by **NAAC** with "**A**" Grade
 Recognised by **UGC** under section 2(f) & 12(B)
 Approved by **AICTE** - NEW Delhi
 Permanently Affiliated to **JNTUK, SBTET**
 Ranked as "**A**" Grade by Govt. of A.P.

Department of Electronics & Communication Engineering

Course Structure for SITE18M Regulations

B. Tech (Electronics and Communication Engineering)

Semester I (First year)

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	18CMMAT1010	Engineering Mathematics – I	3	1	0	4
2	18ECPHT1020	Engineering Physics	3	1	0	4
3	18CMCST1030	Programming for Problem Solving	3	0	0	3
4	18CMMEEL1040	Engineering Graphics	1	0	4	3
5	18ECPHL1050	Engineering Physics Lab	0	0	3	1.5
6	18CMCSL1060	Programming for Problem Solving Lab	0	0	4	2
7	18CMMEEL1070	Workshop/Manufacturing practice	0	0	3	1.5
8	18CMCHN1080	Environmental Science	3	0	0	0
Total						19

Semester II (First year)

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	18CMEGT2010	Technical English	3	0	0	3
2	18CMMAT2020	Engineering Mathematics - II	3	1	0	4
3	18CMCHT2030	Engineering Chemistry	3	1	0	4
4	18CMEET2040	Basic Electrical Engineering	3	1	0	4
5	18CMEGL2050	English Communication Skills Lab	0	0	2	1
6	18CMCHL2060	Engineering Chemistry Lab	0	0	3	1.5
7	18CMEEL2070	Basic Electrical Engineering Lab	0	0	3	1.5
8	18CMMSN2080	Constitution of India, PE&HR	3	0	0	0
Total						19

Course Structure for
B. Tech (Electronics and Communication Engineering)
Semester III (Second year)

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	18CMMAT3010	Engineering Mathematics – III	3	1	0	4
2	18ECECT3020	Electronic Devices	3	0	0	3
3	18ECECT3030	Network Analysis	3	0	0	3
4	18ECECT3040	Signals & Systems	3	0	0	3
5	18ECECT3050	Probability & Stochastic Processes	3	0	0	3
6	18ECECL3060	Electronic Devices Lab	0	0	3	1.5
7	18ECECL3070	Network Analysis Lab	0	0	3	1.5
8	18ECECN3080	Pulse & Digital Circuits	3	0	0	0
Total						19

Semester IV (Second year)

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	18ECECT4010	Digital System Design	3	0	0	3
2	18CMMET4020	Engineering Mechanics	3	1	0	4
3	18ECECT4030	EM Waves & Transmission Lines	3	0	0	3
4	18ECECT4040	Analog Circuits	3	0	0	3
5	18ECECT4050	Analog & Digital Communications	3	0	0	3
6	18ECECL4060	Digital System Design Lab	0	0	3	1.5
7	18ECECL4070	Analog Circuits Lab	0	0	3	1.5
8	18ECECL4080	Analog & Digital Communications Lab	0	0	3	1.5
Total						20.5

**Course Structure for
B. Tech (Electronics and Communication Engineering)
Semester V (Third year)**

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	18CMMST5010	Management Science	3	0	0	3
2	18ECECT5020	Control Systems	3	1	0	4
3	18ECECT5030	Computer Architecture & Organization	3	0	0	3
4	18ECECT5040	Microprocessor and Microcontrollers	3	0	0	3
5	18ECECT5050	Digital Signal Processing	3	0	0	3
6	18ECECP506X	Professional Elective - I	3	0	0	3
7	18ECECL5070	Microprocessor and Microcontrollers Lab	0	0	3	1.5
8	18ECECL5080	Digital Signal Processing Lab	0	0	3	1.5
9	18CMAHS5090	Soft Skills & Aptitude Builder-I (Skill Oriented Course-I)	1	0	2	2
10	18CMMSN50A0	Biology for Engineers	2	0	0	0
Total						24

Professional Elective-I

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	18ECECP506A	Antennas and Wave Propagation	3	0	0	3
2	18ECECP506B	Information Theory & Coding	3	0	0	3
3	18ECECP506C	System Design through Verilog	3	0	0	3

**Course Structure for
B. Tech (Electronics and Communication Engineering)
Semester VI (Third year)**

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	18ECECT6010	VLSI Design	3	0	0	3
2	18ECECT6020	Computer Networks	3	0	0	3
3	18ECECP603X	Professional Elective – II	3	0	0	3
4	18ECECP604X	Professional Elective – III	3	0	0	3
5	18ECXXO605X	Open Elective – I	3	0	0	3
6	18ECXXO606X	Open Elective – II	3	0	0	3
7	18ECECL6070	VLSI Design Lab	0	0	4	2
8	18ECECL6080	Computer Networks Lab	0	0	3	1.5
9	18CMAHS6090	Soft Skills and Aptitude Builder-2 (Skill Oriented Course-II)	1	0	2	2
Total						23.5

Professional Elective-II

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	18ECECP603A	Embedded System Design	3	0	0	3
2	18ECECP603B	Design for Testability	3	0	0	3
3	18ECECP603C	Advanced Digital Signal Processing	3	0	0	3

Professional Elective-III

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	18ECECP604A	Microwave Engineering	3	0	0	3
2	18ECECP604B	Internet Protocols	3	0	0	3
3	18ECECP604C	Digital Image Processing	3	0	0	3

OE-I & OE-II

Candidate should select the subject from list of subjects offered by other departments

**Course Structure for
B. Tech (Electronics and Communication Engineering)**

Semester VII (Fourth year)

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	18CMMST7010	Engineering Economics & Financial Management	3	0	0	3
2	18ECECT7020	Electronic Measurements & Instrumentation	3	0	0	3
3	18ECECP703X	Professional Elective – IV	3	0	0	3
4	18ECECP704X	Professional Elective – V	3	0	0	3
5	18ECXXO705X	Open Elective – III	3	0	0	3
6	18ECXXO706X	Open Elective - IV	3	0	0	3
7	18ECECS7070	IOT and its Applications / Microwave Circuits and Antenna Design using HFSS (Skill Oriented Course-III)	1	0	2	2
8	18ECECR7080	Industrial/Research Internship 2 Months (Mandatory) after third year (to be evaluated during VII semester)	0	0	6	3
Total						23

Professional Elective-IV

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	18ECECP703A	Embedded and Real Time Concepts	3	0	0	3
2	18ECECP703B	Low Power VLSI	3	0	0	3
3	18ECECP703C	Cellular and Mobile Communications	3	0	0	3

Professional Elective-V

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	18ECECP704A	Radar Systems	3	0	0	3
2	18ECECP704B	Wireless Sensor Networks.	3	0	0	3
3	18ECECP704C	Computer vision and Image Processing	3	0	0	3

OE-III & OE-IV

Candidate should select the subject from list of subjects offered by other departments

Course Structure for
B. Tech (Electronics and Communication Engineering)
Semester VIII (Fourth year)

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	18ECECR8010	Project: Project work, seminar and internship in industry	0	0	24	12
Total						12

Open Elective Courses offered by ECE Department to the other Departments

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	18XXECO0XA	VLSI Design	3	0	0	3
2	18XXECO0XB	HDL Programming for IC Design	3	0	0	3
3	18XXECO0XC	Principles of Communication Systems	3	0	0	3
4	18XXECO0XD	Transducers and Sensors	3	0	0	3
5	18XXECO0XE	Fundamentals of Microprocessors and Microcontrollers	3	0	0	3
6	18XXECO0XF	Fundamentals of Internet of Things	3	0	0	3
7	18XXECO0XG	Fundamentals of Digital Image Processing	3	0	0	3
8	18XXECO0XH	Signals and Systems	3	0	0	3


Head of the Department
Head of the Department
Electronics & Communication Engineering
Sasi Institute of Technology & Engineering
Tadepalligudem-534 101. W.G.Dist.,A.P.

**COURSE STRUCTURE
SITE18M REGULATIONS**

For

Computer Science and Engineering

**With effective from the
Academic Year**

2020-21

Table 2: Comparison of Number of credits given by AICTE and Approved credits

S. No.	Category	No. of Credits									
		ECE/ ECT		EEE		CSE/IT/CST		ME		CE	
		AICTE	Approved	AICTE	Approved	AICTE	Approved	AICTE	Approved	AICTE	Approved
1	Humanities and Social Sciences	12	11	12	11	12	11	12	11	12	08
2	Basic Science courses	25	23	26	25	24	26	25	26	26	26
3	Engineering Science courses	24	23	20	20	29	29.5	24	23	29	24.5
4	Professional Core courses	48	56	53	62	49	48.5	48	55	47	56.5
5	Professional Elective Courses	18	20	18	15	18	18	18	18	23	21
6	Open elective courses	18	12	18	12	12	12	18	12	11	9
7	Project work , Seminar and Internship	15	15	11	15	15	15	15	15	12	15
8	Mandatory Courses	-	-	-	-	-	-	-	-	-	-
Total Credits		160	160	160	160	160	160	160	160	160	160

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Sasi Institute of Technology & Engg.
Tadepalligudem-534 101.

I B. Tech I Semester

S. No.	Code	Title	Hours			Credits
			L	T	P	
01	18CMMAT1010	Engineering Mathematics-I	3	1		4
02	18CSPHT1020	Engineering Physics	3	1		4
03	18CMCST1030	Programming for Problem Solving	3			3
04	18CMME1040	Engineering Graphics	1		4	3
05	18CSPHL1050	Engineering Physics Lab			3	1.5
06	18CMCSL1060	Programming for Problem Solving Lab			4	2
07	18CMME1070	Workshop/Manufacturing Practice	0		3	1.5
08	18CMCHN1080	Environmental Science	3			0
Total			13	2	14	19

I B. Tech II Semester

S. No.	Code	Title	Hours			Credits
			L	T	P	
01	18CMEGT2010	Technical English	3			3
02	18CMMAT2020	Engineering Mathematics-II	3	1		4
03	18CMCHT2030	Engineering Chemistry	3	1		4
04	18CMEET2040	Basic Electrical Engineering	3	1		4
05	18CMEGL2050	English Communication Skills Lab			2	1
06	18CMCHL2060	Engineering Chemistry Lab			3	1.5
07	18CMEEL2070	Basic Electrical Engineering Lab			3	1.5
08	18CMMSN2080	Indian Constitution, Professional Ethics & Human Rights	3			0
Total			15	3	8	19

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II B. Tech I Semester

S. No.	Code	Title	Hours			Credits
			L	T	P	
01	18CMMAT3010	Engineering Mathematics- III	3	1		4
02	18CSECT3020	Digital Electronics	3			3
03	18CSECT3030	Analog Electronic Circuits	3			3
04	18CSCST3040	Discrete Mathematics	3	1		4
05	18CSCST3050	Data Structures	3			3
06	18CSECL3060	Analog & Digital Electronics Lab			3	1.5
07	18CSCSL3070	IT Workshop Lab			3	1.5
08	18CSCSL3080	Data Structures Lab			3	1.5
Total			15	2	9	21.5

II B. Tech II Semester

S. No.	Code	Title	Hours			Credits
			L	T	P	
01	18CSECT4010	Signals & Systems	3			3
02	18CMCET4020	Engineering Mechanics	3			3
03	18CSCST4030	Computer Organization	3			3
04	18CSCST4040	Algorithm Design and Analysis	3			3
05	18CSCST4050	Java Programming	3			3
06	18CSCSL4060	Computer Organization Lab			3	1.5
07	18CSCSL4070	Algorithm Design and Analysis Lab			3	1.5
08	18CSCSL4080	Java Programming Lab			3	1.5
Total			15	0	9	19.5

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III B. Tech I Semester

S. No.	Subject			Hours			C
	Code	Type	Title	L	T	P	
01	18CMMST5010	HS	Management Science	3			3
02	18CSCST5020	PC	Database Management Systems	3			3
03	18CSCST5030	PC	Operating Systems	3			3
04	18CSCSP504X	PE	Professional Elective-I	3			3
05	18CSXX505X	OE	Open Elective-I	3			3
06	18CSCSL5060	PC	Database Management Systems Lab			3	1.5
07	18CSCSL5070	PC	Operating Systems Lab			3	1.5
08	18CMAHS5080	SOC	Soft Skills & Aptitude Builder - 1	2			2
09	18CMBIN5090	MC	Biology for Engineers	2			0
Total Credits							20

III B. Tech II Semester

S. No.	Subject			Hours			C
	Code	Type	Title	L	T	P	
01	18CSCST6010	HS	Engineering Economics & Financial Management	3			3
02	18CSCST6020	PC	Computer Networks	3			3
03	18CSCST6030	PC	Software Engineering	3			3
04	18CSCSP604X	PE	Professional Elective-II	3			3
05	18CSXXO605X	OE	Open Elective-II	3			3
06	18CMMST6060	PC	Automata theory and Compiler Design	3			3
07	18CSCSL6070	PC	Computer Networks Lab			3	1.5
08	18CSCSL6080	PC	Compiler Design Lab			3	1.5
09	18CMAHS6090	SOC	Soft Skills & Aptitude Builder - 2	2			2
Total Credits							23

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IV B. Tech I Semester

S. No.	Code	Type	Subject Title	Hours			C
				L	T	P	
01	18CSCST7010	PC	Data Warehousing and Data Mining	3			3
02	18CSCSP702X	PE	Professional Elective-III	3			3
03	18CSCSP703X	PE	Professional Elective-IV	3			3
04	18CSCSP704X	PE	Professional Elective-V	3			3
05	18CSXXO705X	OE	Open Elective-III	3			3
06	18CSXXO706X	OE	Open Elective-IV	3			3
07	18CSCSL7070	PC	Internet of Things Lab			3	1.5
08	18CSCSL7080	PC	Data Warehousing and Data Mining Lab			3	1.5
09	18CSCSL7090	SOC	MEAN Stack Technologies			4	2
10	18CSCSR7100		Internship				3
						Total Credits	26

IV B. Tech II Semester

S. No.	Code	Title	Hours			Credits
			L	T	P	
01	18CSCSR8010	Project Phase -II			24	12
Total					24	12

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Open Elective Courses offered by CSE

S.No.	Subject Code	Name of the subject	L	T	P	Cr
1.	18XXCSOXXXX	Internet of Things	3	0	0	3
2.	18XXCSOXXXX	Block Chain	3	0	0	3
3.	18XXCSOXXXX	Quantum Computing	3	0	0	3
4.	18XXCSOXXXX	Virtual Reality	3	0	0	3
5.	18XXCSOXXXX	Data Structures through C	3	0	0	3
6.	18XXCSOXXXX	Designing Database Management Systems	3	0	0	3
7.	18XXCSOXXXX	Operating Systems Concepts	3	0	0	3
8.	18XXCSOXXXX	R Programming	3	0	0	3
9.	18XXCSOXXXX	Python Programming	3	0	0	3
10.	18XXCSOXXXX	Java Programming	3	0	0	3
11.	18XXCSOXXXX	App Technologies	3	0	0	3
12.	18XXCSOXXXX	Web Technologies	3	0	0	3
13.	18XXCSOXXXX	Artificial Intelligence	3	0	0	3

Professional Electives

S.No.	Subject
A	Software Project Management
B	Network Protocols
C	Mobile Application Development
D	Unified Modeling Language
E	Cryptography & Network Security
F	Data Science
G	Design Patterns
H	Cyber Security
I	Artificial Intelligence
J	Software Testing
K	Mobile Computing
L	Machine Learning
M	Software Quality Assurance
N	Ad-hoc & Sensor Networks
O	Hadoop & Big Data

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The Anandapuram-53A 401

SITE 18M REGULATIONS

**COURSE STRUCTURE AND
DETAILED SYLLABUS**

for

Bachelor of Technology

in

Information Technology



sasi INSTITUTE OF
TECHNOLOGY &
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Approved by **AICTE** - NEW Delhi
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Ranked as "A" Grade by Govt. of A.P.

Department of Information Technology

Course Structure for the Academic Year 2022-2023
Regulation SITE 18M

I B. Tech I Semester

S. No.	Code	Title	Hours			Credits
			L	T	P	
01	18CMMAT1010	Engineering Mathematics-I	3	1		4
02	18ITPHT1020	Engineering Physics	3	1		4
03	18CMCST1030	Programming for Problem Solving	3			3
04	18CMMEL1040	Engineering Graphics	1		4	3
05	18ITPHL1050	Engineering Physics Lab			3	1.5
06	18CMCSL1060	Programming for Problem Solving Lab			4	2
07	18CMMEL1070	Workshop/Manufacturing Practice	0		3	1.5
08	18CMCHN1080	Environmental Science	3			0
Total			13	2	14	19

I B. Tech II Semester

S. No.	Code	Title	Hours			Credits
			L	T	P	
01	18CMEGT2010	Technical English	3			3
02	18CMMAT2020	Engineering Mathematics-II	3	1		4
03	18CMCHT2030	Engineering Chemistry	3	1		4
04	18CMEET2040	Basic Electrical Engineering	3	1		4
05	18CMEGL2050	English Communication Skills Lab			2	1
06	18CMCHL2060	Engineering Chemistry Lab			3	1.5
07	18CMEEL2070	Basic Electrical Engineering Lab			3	1.5
08	18CMMSN2080	Indian Constitution, Professional Ethics & Human Rights	3			0
Total			15	3	8	19



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Department of Information Technology

II B. Tech I Semester

S. No.	Code	Title	Hours			Credits
			L	T	P	
01	18CMMAT3010	Engineering Mathematics- III	3	1		4
02	18ITECT3020	Digital Electronics	3			3
03	18ITECT3030	Analog Electronic Circuits	3			3
04	18ITITT3040	Discrete Mathematics	3	1		4
05	18ITITT3050	Data Structures	3			3
06	18ITECL3060	Analog & Digital Electronics Lab			3	1.5
07	18ITITL3070	IT Workshop Lab			3	1.5
08	18ITITL3080	Data Structures Lab			3	1.5
Total			15	2	9	21.5

II B. Tech II Semester

S. No.	Code	Title	Hours			Credits
			L	T	P	
01	18ITECT4010	Signals & Systems	3			3
02	18CMCECT4020	Engineering Mechanics	3			3
03	18ITITT4030	Computer Organization	3			3
04	18ITITT4040	Algorithm Design and Analysis	3			3
05	18ITITT4050	Java Programming	3			3
06	18ITITL4060	Computer Organization Lab			3	1.5
07	18ITITL4070	Algorithm Design and Analysis Lab			3	1.5
08	18ITITL4080	Java Programming Lab			3	1.5
Total			15	0	9	19.5



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Department of Information Technology

III B. Tech I Semester

S. No.	Code	Title	Hours			Credits
			L	T	P	
01	18CMMST5010	Management Science	3			3
02	18TITT5020	Data Base Management Systems	3			3
03	18TITT5030	Operating Systems	3			3
04	18TITP504X	Professional Elective-I	3			3
05	18ITXXO505X	Open Elective-I	3			3
06	18TITL5060	Data Base Management Systems Lab			3	1.5
07	18TITL5070	Operating Systems Lab			3	1.5
08	18CMAHS5080	Soft Skills & Aptitude Builder - I	2			2
09	18CMBIN5090	Biology for Engineers	2			0
Total			19	0	6	20

III B. Tech II Semester

S. No.	Code	Title	Hours			Credits
			L	T	P	
01	18CMMST6010	Engineering Economics & Financial Management	3			3
02	18TITT6020	Data Warehousing and Data Mining	3			3
03	18TITT6030	Computer Networks	3			3
04	18TITT6040	Software Engineering	3			3
05	18TITP605X	Professional Elective-II	3			3
06	18ITXXO606X	Open Elective-II	3			3
07	18TITL6070	Software Engineering Lab			3	1.5
08	18TITL6080	Data Mining using Python Lab			3	1.5
09	18CMAHS6090	Soft Skills & Aptitude Builder - 2	2			2
Total			20		6	23



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Department of Information Technology

IV B. Tech I Semester

w	Code	Title	Hours			Credits
			L	T	P	
01	18ITIT17010	Machine Learning	3			3
02	18ITITP702X	Professional Elective-III	3			3
03	18ITITP703X	Professional Elective-IV	3			3
04	18ITITP704X	Professional Elective-V	3			3
05	18ITXXO705X	Open Elective-III	3			3
06	18ITXXO706X	Open Elective-IV	3			3
07	18ITITL7070	Machine Learning Lab			3	1.5
08	18ITITL7080	Object Oriented Analysis and Design Lab			3	1.5
09	18ITITS7090	MEAN Stack Technologies			4	2
10	18ITITR7100	Internship				3
Total			18		10	26

IV B. Tech II Semester

S. No.	Code	Title	Hours			Credits
			L	T	P	
01	18ITITR8010	Project Phase -II			24	12
Total					24	12



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Program Elective-I	
18ITITP504A	UI Design
18ITITP504B	Artificial Intelligence
Program Elective-II	
18ITITP605A	R Programming
18ITITP605B	Software Quality Assurance
Program Elective-III	
18ITITP702A	Distributed Databases
18ITITP702B	Big Data Analytics
Program Elective-IV	
18ITITP703A	Software Project Management
18ITITP703B	Software Testing Methodologies
Program Elective-V	
18ITITP704A	Cryptography & Network Security
18ITITP704B	Cloud Computing

Open Elective Courses offered by IT

S.No.	Subject Code	Name of the subject	L	T	P	Cr
1.	18XXITOXXXX	Internet of Things	3	0	0	3
2.	18XXITOXXXX	Block Chain	3	0	0	3
3.	18XXITOXXXX	Quantum Computing	3	0	0	3
4.	18XXITOXXXX	Virtual Reality	3	0	0	3
5.	18XXITOXXXX	Data Structures through C	3	0	0	3
6.	18XXITOXXXX	Designing Database Management Systems	3	0	0	3
7.	18XXITOXXXX	Operating Systems Concepts	3	0	0	3
8.	18XXITOXXXX	R Programming	3	0	0	3
9.	18XXITOXXXX	Python Programming	3	0	0	3
10.	18XXITOXXXX	Java Programming	3	0	0	3
11.	18XXITOXXXX	App Technologies	3	0	0	3
12.	18XXITOXXXX	Web Technologies	3	0	0	3
13.	18XXITOXXXX	Artificial Intelligence	3	0	0	3

Head of the Department

Head of the Department
Department of Information Technology
Sasi Institute of Technology & Engineering
TADEPALLIGUDEM, W.G.Dt., A.P.

MEMORANDUM FOR THE RECORD
DATE: 10/10/50
TO: THE DIRECTOR, NATIONAL BUREAU OF STANDARDS
FROM: [Signature]
SUBJECT: [Illegible]

Course Structure and Syllabus

SITE18M Regulations



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Department of Electronics & Communication Technology

Course Structure for SITE18M

I -B. Tech I- Semester Course structure

S. No.	Subject Code	Subject title	L	T	P	C
1	18CMEGT1010	Technical English	3	0	0	3
2	18CMMAT1020	Engineering Mathematics-I	3	1	0	4
3	18CMCHT1030	Engineering Chemistry	3	1	0	4
4	18CMEET1040	Basic Electrical Engineering	3	1	0	4
5	18CMEGL1050	English Communication skills lab	0	0	2	1
6	18CMCHL1060	Engineering Chemistry Lab	0	0	3	1.5
7	18CMEEL1070	Basic Electrical Engineering Lab	0	0	3	1.5
8	18CMEEL1080	Constitution of India, professional ethics & human rights (Non -Credit course)	3	0	0	--
Total Credits						19

I B. Tech II Semester Course structure

S. No.	Subject Code	Subject title	L	T	P	C
1	18CMMAT2010	Engineering Mathematics II	3	1	0	4
2	18EEPHT2020, 18MEPHT2020, 18CEPHT2020	Engineering Physics	3	1	0	4
3	18CMCST2030	Programming for problem solving	3	0	0	3
4	18CMMEL2040	Engineering Graphics	1	0	4	3
5	18EEPHL2050, 18MEPHL2050, 18CEPHL2050	Engineering Physics Lab	0	0	3	1.5
6	18CMCSL2060	Programming for problem solving lab	0	0	4	2
7	18CMMEL2070	Work Shop/ Manufacturing practice	0	0	3	1.5
8	18CMMEL2080	Environmental Science (Non -Credit course)	3	0	0	---
Total Credits						19

**Course Structure for
II-B.Tech. (Electronics and Communication Technology)
Semester III (Second year)**

S.No	Course Code	Course Title	L	T	P	C
1	18CMMAT3010	Engineering Mathematics-III	3	1	0	4
2	18ETETT3020	Electronic Devices	3	0	0	3
3	18ETETT3030	Network Theory	3	0	0	3
4	18ETETT3040	Signals & Systems	3	0	0	3
5	18ETETT3050	Probability & Stochastic Processes	3	0	0	3
6	18ETETL3060	Electronic Devices Lab	0	0	3	1.5
7	18ETETL3070	Network Theory Lab	0	0	3	1.5
8	18ETETN3080	Pulse & Digital Circuits (MC)	3	0	0	0
Total Credits						19

Semester IV (Second year)

S.No	Course Code	Course Title	L	T	P	C
1	18ETETT4010	Digital System Design	3	0	0	3
2	18CMMET4020	Engineering Mechanics	3	1	0	4
3	18ETETT4030	Electro Magnetic Waves & Transmission Lines	3	0	0	3
4	18ETETT4040	Analog Circuits	3	0	0	3
5	18ETETT4050	Analog & Digital Communications	3	0	0	3
6	18ETETL4060	Digital System Design Lab	0	0	3	1.5
7	18ETETL4070	Analog Circuits Lab	0	0	3	1.5
8	18ETETL4080	Analog & Digital Communications Lab	0	0	3	1.5
Total Credits						20.5

III B. Tech I Sem Course Structure (Electronics & Communication Technology)

Semester V (Third year)

S.No	Course Code	Course Title	L	T	P	C
1	18ETETT5010	Management science	3	0	0	3
2	18ETETT5020	Control Systems	3	0	0	3
3	18CMMST5030	Telecommunications and Switching Networks	3	0	0	3
4	18ETETT5040	Microprocessors and Micro Controllers	3	0	0	3
5	18ETETT5050	Digital Signal Processing	3	0	0	3
6	18ETETP5060	Professional Elective – 1*	3	0	0	3
7	18ETETL5070	Microprocessors and Micro Controllers Lab	0	0	3	1.5
8	18ETETL5080	Digital Signal Processing Lab	0	0	3	1.5
9	18CMAHS5090	Skill Oriented Course – I (Soft skills & Aptitude Builder -1)	1	0	2	2
10	18ETETN50A0	Biology for Engineers	3	0	0	0
Total Credits						23

Professional Elective -I

S.No	Course Code	Course Title	L	T	P	C
1	18ETETP506A	Radiation Systems	3	0	0	3
2	18ETETP506B	Digital Design Through Verilog	3	0	0	3
3	18ETETP506C	IoT Fundamentals	3	0	0	3
4	18ETETP506D	Spread Spectrum Techniques	3	0	0	3

Semester VI (Third year)

S.No	Course Code	Course Title	L	T	P	C
1	18ETETT6010	Engineering Economics and Financial Management	3	0	0	3
2	18ETETT6020	VLSI Design	3	0	0	3
3	18CMMST6030	Computer Networks	3	0	0	3
4	18ETETP6040	Professional Elective – II*	3	0	0	3
5	18ETXXO605X	Open Elective – I**	3	0	0	3
6	18ETXXO606X	Open Elective – II**	3	0	0	3
7	18ETETL6070	Computer Networks Lab	0	0	3	1.5
8	18ETETL6080	VLSI Design Lab	0	0	3	1.5
9	18CMAHS6090	Skill Oriented Course – II (Soft skills & Aptitude Builder -2)	1	0	2	2
Total Credits						23

Professional Elective -II

S.No	Course Code	Course Title	L	T	P	C
1	18ETETP604A	Micro Wave and Optical Communications	3	0	0	3
2	18ETETP604B	Design of Fault Tolerant Systems	3	0	0	3
3	18ETETP604C	Embedded System Design	3	0	0	3
4	18ETETP604D	Digital Image and Video Processing	3	0	0	3

IV B. Tech I Sem Course Structure (Electronics & Communication Technology)

Semester VII (Fourth year)

S.No	Course Code	Course Title	L	T	P	C
1	18ETETT7010	RF System Design	3	0	0	3
2	18ETETP7020	Professional Elective – III*	3	0	0	3
3	18ETETP7030	Professional Elective – IV*	3	0	0	3
4	18ETETP7040	Professional Elective – V*	3	0	0	3
5	18ETXXO705X	Open Elective – III**	3	0	0	3
6	18ETXXO706X	Open Elective – IV**	3	0	0	3
7	18ETETL7070	RF System Design Lab	0	0	3	1.5
8	18ETETI7080	Research Internship	0	0	3	3
9	18ETETS7090	Skill Oriented Course – III (Image Processing With Open CV)OR (Electromagnetic Simulation Tools (HFSS, CST & FEKO))	1	0	2	2
10	18ETETN70A0	Electronics Measurements & Instrumentation	3	0	0	0
Total Credits						24.5

Professional Elective -III

S.No	Course Code	Course Title	L	T	P	C
1	18ETETP702A	Radar and Satellite Communications	3	0	0	3
2	18ETETP702B	Low Power VLSI Design	3	0	0	3
3	18ETETP702C	System On Chip Architectures	3	0	0	3
4	18ETETP702D	Bio-Medical Signal Processing	3	0	0	3

Professional Elective -IV

S.No	Course Code	Course Title	L	T	P	C
1	18ETETP703A	Software Defined Radio	3	0	0	3
2	18ETETP703B	CPLD and FPGA Architectures & Applications	3	0	0	3
3	18ETETP703C	Wireless Technologies for IOT	3	0	0	3
4	18ETETP703D	Artificial Neural Networks	3	0	0	3

Professional Elective -V

S.No	Course Code	Course Title	L	T	P	C
1	18ETETP704A	Global Positioning Systems	3	0	0	3
2	18ETETP704B	CAD Tools for VLSI	3	0	0	3
3	18ETETP704C	Big Data Analytics for IoT	3	0	0	3
4	18ETETP704D	Fuzzy Logic Systems	3	0	0	3

IV B. Tech II Sem Course Structure(Electronics and Communication Technology)

Semester VIII (Fourth year)

S.No	Course Code	Course Title	L	T	P	C
1	18ETETPR8010	Project Work, Seminar & Internship in Industry	0	0	0	12
Total Credits						12
INTERNSHIP (6 MONTHS)						

Course Structure for B.Tech. ECT
B. Tech (Electronics and Communication Technology)
Open Electives

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	18ETETOXXXX	Signals and Systems	3	0	0	3
2	18ETETOXXXX	Principles of Signal Processing	3	0	0	3
3	18ETETOXXXX	Consumer Electronics	3	0	0	3
4	18ETETOXXXX	Transducers and Sensors	3	0	0	3
5	18ETETOXXXX	IOT and Applications	3	0	0	3
6	18ETETOXXXX	IC Applications	3	0	0	3
7	18ETETOXXXX	Principles of Communication Systems	3	0	0	3
8	18ETETOXXXX	Data Communications	3	0	0	3
9	18ETETOXXXX	Digital Logic design	3	0	0	3
10	18ETETOXXXX	Remote Sensing and GIS	3	0	0	3



Head of the Department

Head of the Dept-ECT
Sasi Institute of Technology & Engineering
TADEPALLIGUDEM-534101
W.G.Dist., A.P.

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**COURSE STRUCTURE AND
SYLLABUS
SITE-21 REGULATIONS**

**For
B.Tech.
Civil Engineering**

With effect from the Academic Year 2021-22



sasi INSTITUTE OF
TECHNOLOGY &
ENGINEERING

Department of Civil Engineering

Accredited by **NAAC** with **"A"** Grade
Recognised by **UGC** under section 2(f) & 12(B)
Approved by **AICTE** - NEW Delhi
Permanently Affiliated to **JNTUK, SBTET**
Ranked as **"A"** Grade by Govt. of A.P.

Course structure for the Academic Year 2021-22

B. Tech. (Civil Engineering) Semester I (First Year) Approved Course structure

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21CMMAT1010	Engineering Mathematics - I	3	1	0	3
2	21CEPHT1020	Engineering Physics	3	0	0	3
3	21CMCHT1030	Engineering Chemistry	3	0	0	3
4	21CMCST1040	Programming for Problem solving	3	0	0	3
5	21CEMEL1050	Engineering Graphics	2	0	2	3
6	21CEPHL1060	Engineering Physics Lab	0	0	3	1.5
7	21CMCHL1070	Engineering Chemistry Lab	0	0	3	1.5
8	21CMCSL1080	Programming for Problem Solving Lab	0	0	3	1.5
9	21CMMSN1090	Constitution of India, Professional ethics and Human values	2	0	0	0
Total Credits						19.5

B.Tech. (Civil Engineering) Semester II (First year) Approved Course structure

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21CMEGT2010	Technical English	3	0	0	3
2	21CMMAT2020	Engineering Mathematics - II	3	1	0	3
3	21CMEET2030	Basic Electrical Engineering	3	0	0	3
4	21CMCST2040	Python Programming	2	0	2	3
5	21ETETT2050	Engineering Mechanics	3	0	0	3
6	21CMEGL2060	English Communication Skills Lab	0	0	3	1.5
7	21CMEEL2070	Basic Electrical Engineering Lab	0	0	3	1.5
8	21CEMEL2080	Engineering Workshop Lab	0	0	3	1.5
9	21CMCHN2090	Environmental Science	2	0	0	0
Total Credits						19.5

**B.Tech. (Civil Engineering)
Semester III (Second year)
Approved Course structure**

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21CEMAT3010	Engineering Mathematics - III	3	0	0	3
2	21CECET3020	Mechanics of Solids	3	0	0	3
3	21CECET3030	Fluid Mechanics	3	0	0	3
4	21CECET3040	Building Materials, Construction & Concrete Technology	3	0	0	3
5	21CECET3050	Surveying and Geomatics	3	0	0	3
6	21CECEL3060	Concrete Technology Lab	0	0	3	1.5
7	21CECEL3070	Surveying Field Work	0	0	3	1.5
8	21CECEL3080	Strength of Materials Lab	0	0	3	1.5
9	21CECES3090	Computer Aided Civil Engineering Drawing (SOC)	1	0	2	2
10	21CECEN3100	Essence of Indian Traditional Knowledge Mandatory course (AICTE suggested)	2	0	0	0
Total Credits						21.5

**B.Tech. (Civil Engineering)
Semester IV (Second year)
Approved Course structure**

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21CEMAT4010	Engineering Mathematics - IV	3	0	0	3
2	21CECET4020	Structural Analysis	3	0	0	3
3	21CECET4030	Engineering Geology	3	0	0	3
4	21CECET4040	Hydraulic & Hydraulics Machinery	3	0	0	3
5	21CMMST4050	Engineering Economics & Financial Management	3	0	0	3
6	21CECEL4060	Engineering Geology Lab	0	0	3	1.5
7	21CECEL4070	Fluid Mechanics and Hydraulic Machinery Lab	0	0	3	1.5
8	21CECEL4080	Building Planning & Drawing	1	0	2	1.5
9	21CECES4090	Advanced Surveying (SOC)	1	0	2	2
Total Credits						21.5
		Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)	4	0	0	4

**B.Tech. (Civil Engineering)
Semester V (Third year)**

S. No	Subject Code	Name of the subject	L	T	P	Cr
1	21CECET5010	Soil Mechanics	3	0	0	3
2	21CECET5020	Transportation Engineering	3	0	0	3
3	21CECET5030	Design and Drawing of Reinforced Concrete Structures	3	0	0	3
4	21CECEP504x	Professional Elective - I	3	0	0	3
5	21CExxO505x	Open Elective course - I	2	0	2	3
6	21CECEL5060	Soil Mechanics Lab	0	0	3	1.5
7	21CECEL5070	Transportation Engineering Lab	0	0	3	1.5
8	21CEAHS5080	Soft Skills & Aptitude Builder - I	1	0	2	2
9	21CECEN5090	Disaster Management				
		Mandatory course (AICTE suggested)	2	0	0	0
Summer Internship 2 Months (Mandatory) after second year (to be evaluated during V semester)			0	0	3	1.5
Total Credits						21.5
Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)			4	0	0	4

S.No	Professional Electives	Subject Code	Name of the subject	L	T	P	Cr
1	PE1	21CECEP504a	Advanced Concrete Technology	3	0	0	3
2		21CECEP504b	Open Channel flow	3	0	0	3
3		21CECEP504c	Advanced Structural Analysis	3	0	0	3
4		21CECEP504d	Remote Sensing and GIS	3	0	0	3

Open Electives:

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21xxCEOxxxx	Geo-Spatial Technologies	3	0	0	3
2	21xxCEOxxxx	Industrial Waste Water Treatment	3	0	0	3
3	21xxCEOxxxx	Smart Cities	3	0	0	3
4	21xxCEOxxxx	Building Materials	3	0	0	3
5	21xxCEOxxxx	Elements of Civil Engineering	3	0	0	3
6	21xxCEOxxxx	Watershed Management	3	0	0	3
7	21xxCEOxxxx	Air, Noise Pollution and Control	3	0	0	3
8	21xxCEOxxxx	Civil - Engineering societal global impact	3	0	0	3
9	21xxCEOxxxx	Environmental Pollution & Control	3	0	0	3
10	21xxCEOxxxx	Green Buildings	3	0	0	3

**B.Tech. (Civil Engineering)
Semester VI (Third year)**

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21CECET6010	Hydrology and Water Resources Engineering	3	0	0	3
2	21CECET6020	Design and Drawing of Steel Structures	3	0	0	3
3	21CECET6030	Environmental Engineering	3	0	0	3
4	21CECEP604x	Professional Elective - II	3	0	0	3
5	21CEExO605x	Open Elective course - II	2	0	2	3
6	21CECEL6060	Environmental Engineering Lab	0	0	3	1.5
7	21CECEL6070	RS & GIS LAB	0	0	3	1.5
8	21CECEL6080	Irrigation Design and Drawing Lab	0	0	3	1.5
9	21CEAHS6090	Soft Skills & Aptitude Builder - 2	1	0	2	2
10	21CMBIT6100	Biology for Engineers	2	0	0	0
Total Credits						21.5
		Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)	4	0	0	4
Industrial/Research Internship (Mandatory) 2 months during summer vacation						

S.No	Professional Electives	Subject Code	Name of the subject	L	T	P	Cr
1	PE2	21CECEP604a	Foundation Engineering	3	0	0	3
2		21CECEP604b	Offshore Structures	3	0	0	3
3		21CECEP604c	Advanced Transportation Engineering	3	0	0	3
4		21CECEP604d	Urban Hydrology	3	0	0	3

Open Electives:

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21xxCEOxxxx	Geo-Spatial Technologies	3	0	0	3
2	21xxCEOxxxx	Industrial Waste Water Treatment	3	0	0	3
3	21xxCEOxxxx	Smart Cities	3	0	0	3
4	21xxCEOxxxx	Building Materials	3	0	0	3
5	21xxCEOxxxx	Elements of Civil Engineering	3	0	0	3
6	21xxCEOxxxx	Watershed Management	3	0	0	3
7	21xxCEOxxxx	Air, Noise Pollution and Control	3	0	0	3
8	21xxCEOxxxx	Civil - Engineering societal global impact	3	0	0	3
9	21xxCEOxxxx	Environmental Pollution & Control	3	0	0	3
10	21xxCEOxxxx	Green Buildings	3	0	0	3

**B.Tech. (Civil Engineering)
Semester VII (Fourth year)**

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21CECEP701x	Professional Elective - III	3	0	0	3
2	21CECEP702x	Professional Elective - IV	3	0	0	3
3	21CECEP703x	Professional Elective - V	3	0	0	3
4	21CExxO704x	Open Elective courses - III	2	0	2	3
5	21CExxO705x	Open Elective courses - IV	2	0	2	3
6	21CEMST7060	Management Science	3	0	0	3
7	21CECES7070	STAAD.Pro (SOC)	1	0	2	2
Industrial/Research Internship 2 Months (Mandatory) after third year (to be evaluated during VII semester)			0	0	6	3
Total Credits						23
Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)			4	0	0	4

S.No	Professional Electives	Subject Code	Name of the subject	L	T	P	Cr
1	PE3	21CECEP701a	Prestressed Concrete	3	0	0	3
2		21CECEP703b	Ground Water Development & Management	3	0	0	3
3		21CECEP703c	Soil Dynamics and Machine Foundation	3	0	0	3
4		21CECEP703d	Air and Noise Pollution and Control	3	0	0	3
1	PE4	21CECEP702a	Solid Waste & Hazardous Waste Management	3	0	0	3
2		21CECEP702b	Ground Improvement Techniques	3	0	0	3
3		21CECEP702c	Hydraulic Structures	3	0	0	3
4		21CECEP702d	Bridge Engineering	3	0	0	3
1	PE5	21CECEP703a	Construction, Specifications and Project Management	3	0	0	3
2		21CECEP703b	Railway, Airport Docks and Harbors	3	0	0	3
3		21CECEP703c	Repair and rehabilitation of structures	3	0	0	3
4		21CECEP703d	Earth and Rock fill Dams	3	0	0	3

Open Electives:

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21xxCEOxxxx	Geo-Spatial Technologies	3	0	0	3
2	21xxCEOxxxx	Industrial Waste Water Treatment	3	0	0	3
3	21xxCEOxxxx	Smart Cities	3	0	0	3
4	21xxCEOxxxx	Building Materials	3	0	0	3
5	21xxCEOxxxx	Elements of Civil Engineering	3	0	0	3
6	21xxCEOxxxx	Watershed Management	3	0	0	3
7	21xxCEOxxxx	Air, Noise Pollution and Control	3	0	0	3
8	21xxCEOxxxx	Civil - Engineering societal global impact	3	0	0	3
9	21xxCEOxxxx	Environmental Pollution & Control	3	0	0	3
10	21xxCEOxxxx	Green Buildings	3	0	0	3

**B.Tech. (Civil Engineering)
Semester VIII (Fourth year)**

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	2ICEER8010	Project work, seminar and internship in industry	0	0	24	12
Total Credits						12

Humanities and Social Sciences courses:

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21CMEGT2010	Technical English	3	0	0	3
2	21CMMST4050	Engineering Economics & Financial Management	3	0	0	3
3	21CEHMS7060	Management Science	3	0	0	3
4	21CMEGL2060	English Communication Skills Lab	3	0	0	1.5
Total						10.5

Basic Sciences courses and Labs

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21CMMAT1010	Engineering Mathematics - I	3	0	0	3
2	21CEPHT1020	Engineering Physics	3	0	0	3
3	21CMCHT1030	Engineering Chemistry	3	0	0	3
4	21CMMAT2020	Engineering Mathematics - II	3	0	0	3
5	21CEMAT3010	Engineering Mathematics - III	3	0	0	3
6	21CEMAT4020	Engineering Mathematics - IV	3	0	0	3
7	21CEPHL1060	Engineering Physics Lab	0	0	3	1.5
8	21CMCHL1070	Engineering Chemistry Lab	0	0	3	1.5
Total						21

Engineering Sciences courses and Labs

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21CMCST1040	Programming for Problem solving	3	0	0	3
2	21CEMEL1050	Engineering Graphics	3	0	0	3
3	21CMEET2030	Basic Electrical Engineering	3	0	0	3
4	21CMCST2040	Python Programming	3	0	0	3
5	21ETETT2050	Engineering Mechanics	3	0	0	3
6	21CECET4030	Engineering Geology	3	0	0	3
7	21CMCSL1080	Programming for Problem Solving Lab	0	0	3	1.5
8	21CMEEL2070	Basic Electrical Engineering Lab	0	0	3	1.5
9	21CEMEL2080	Engineering Workshop Lab	0	0	3	1.5
10	21CECEL4060	Engineering Geology Lab	0	0	3	1.5
Total						24

Professional Core courses and Labs

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21CECET3020	Mechanics of Solids	3	0	0	3
2	21CECET3030	Fluid Mechanics	3	0	0	3
3	21CECET3040	Building Materials & Concrete Technology	3	0	0	3
4	21CECET3050	Surveying and Geomatics	3	0	0	3
5	21CECET4020	Structural Analysis	3	0	0	3
6	21CECET4040	Hydraulic & Hydraulics Machinery	3	0	0	3
7	21CECET5010	Geotechnical Engineering	3	0	0	3
8	21CECET5020	Transportation Engineering	3	0	0	3

9	21CECET5030	Design and Drawing of Reinforced Concrete Structures	3	0	0	3
10	21CECET6010	Hydrology and Water Resources Engineering	3	0	0	3
11	21CECET6020	Design and Drawing of Steel Structures	3	0	0	3
12	21CECET6030	Environmental Engineering	3	0	0	3
13	21CECEL3060	Concrete Technology Lab	0	0	3	1.5
14	21CECEL3070	Surveying Field Work	0	0	3	1.5
15	21CECEL3080	Strength of Materials Lab	0	0	3	1.5
16	21CECEL4070	Fluid Mechanics and Hydraulic Machinery Lab	0	0	3	1.5
17	21CECEL4080	Building Planning & Drawing	0	0	3	1.5
18	21CECEL5060	Geotechnical Engineering Lab	0	0	3	1.5
19	21CECEL5070	Transportation Engineering LAB	0	0	3	1.5
20	21CECEL6060	Environmental Engineering Lab	0	0	3	1.5
21	21CECEL6070	RS & GIS LAB	0	0	3	1.5
22	21CECEL6080	Irrigation Engineering Drawing Lab				1.5
Total Credits						51

Professional Electives

S.No	Professional Electives	Subject Code	Name of the subject	L	T	P	Cr
1	PE1	21CECEP504a	Advanced Concrete Technology	3	0	0	3
2		21CECEP504b	Open Channel flow	3	0	0	3
3		21CECEP504c	Advanced Structural Analysis	3	0	0	3
4		21CECEP504d	Remote Sensing and GIS	3	0	0	3
1	PE2	21CECEP604a	Advanced Foundation Engineering	3	0	0	3
2		21CECEP604b	Offshore Structures	3	0	0	3
3		21CECEP604c	Advanced Transportation Engineering	3	0	0	3
4		21CECEP604d	Construction, Specifications and Project Management	3	0	0	3
1	PE3	21CECEP701a	Prestressed Concrete	3	0	0	3
2		21CECEP703b	Ground Water Development	3	0	0	3
3		21CECEP703c	Ground Improvement Techniques	3	0	0	3
4		21CECEP703d	Air and Noise Pollution and Control	3	0	0	3
1	PE4	21CECEP702a	Solid Waste & Hazardous Waste Management	3	0	0	3
2		21CECEP702b	Soil dynamics and machine foundation	3	0	0	3
3		21CECEP702c	Hydraulic Structures	3	0	0	3
4		21CECEP702d	Bridge Engineering	3	0	0	3
1	PE5	21CECEP703a	Urban Hydrology	3	0	0	3
2		21CECEP703b	Railway, Airport Docks and Harbors	3	0	0	3
3		21CECEP703c	Repair and rehabilitation of structures	3	0	0	3
4		21CECEP703d	Earth and rock fill dams	3	0	0	3
Total Credits							15

Honors

S.No	Honors	Subject Code	Name of the subject	L	T	P	Cr
1	POOL 1		Finite Element Methods	4	0	0	4
2			Earthquake Resistant Design of Structures	4	0	0	4
3			Advanced Structural Design	4	0	0	4
4			Bridge engineering	4	0	0	4
1	POOL 2		Rock Mechanics	4	0	0	4
2			Foundation Engineering	4	0	0	4
3			Advanced Foundation Engineering	4	0	0	4
4			Earth and Rock Fill Dams	4	0	0	4
1	POOL 3		Highway Engineering	4	0	0	4
2			Pavement Analysis design	4	0	0	4
3			Intelligent transport systems	4	0	0	4
4			Traffic Engineering and Management	4	0	0	4
1	POOL 4		Environmental Laws and Policy	4	0	0	4
2			Environmental Change and sustainable development	4	0	0	4
3			Physico-Chemical Processes for Water and Wastewater Treatment	4	0	0	4
4			Environmental Impact Assessment and Management	4	0	0	4

Open Electives:

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21xxCEOxxxx	Geo-Spatial Technologies	3	0	0	3
2	21xxCEOxxxx	Industrial Waste Water Treatment	3	0	0	3
3	21xxCEOxxxx	Smart Cities	3	0	0	3
4	21xxCEOxxxx	Building Materials	3	0	0	3
5	21xxCEOxxxx	Elements of Civil Engineering	3	0	0	3
6	21xxCEOxxxx	Watershed Management	3	0	0	3
7	21xxCEOxxxx	Air, Noise Pollution And Control	3	0	0	3
8	21xxCEOxxxx	Civil - Engineering societal global impact	3	0	0	3
9	21xxCEOxxxx	Environmental Pollution & Control	3	0	0	3
10	21xxCEOxxxx	Green Buildings	3	0	0	3
Total credits						12

Skill oriented course:

S.No	Subject Code	Title of the certificate course	L	T	P	Cr
1	21CECES3090	Computer Aided Civil Engineering Drawing	1	0	2	2
2	21CECES4090	Advanced Surveying (SOC)	1	0	2	2
3	21CEAHS5080	Soft Skills & Aptitude Builder - 1	1	0	2	2
4	21CEAHS5080	Soft Skills & Aptitude Builder - 2	1	0	2	2
5	21CECES7070	STAAD.Pro (SOC)	1	0	2	2
Total credits						10

MOOC courses

S.No	Name of the subject	https://onlinecourses.swayam2.ac.in/nou20_cs11/preview	L	T	P	Cr
1	Building Cost Estimation Simplified	https://nptel.ac.in/courses/105103207	2	0	0	2
2	Advanced soil Mechanics	https://onlinecourses.nptel.ac.in/noc21_ce08/preview	2	0	0	2
3	Digital Land Surveying And Mapping (DLS&M)	https://nptel.ac.in/courses/105107181	2	0	0	2
4	Environmental Remediation of Contaminated Sites	https://onlinecourses.nptel.ac.in/noc22_ce26/preview	2	0	0	2
5	Geographic Information Systems	https://nptel.ac.in/courses/105106052	2	0	0	2
6	Geosynthetics and Reinforced Soil Structures	https://onlinecourses.nptel.ac.in/noc22_ce45/preview	2	0	0	2
7	Rural water resources management	https://archive.nptel.ac.in/courses/105/106/105106202/	2	0	0	2
8	Maintenance and repair of concrete structures	https://nptel.ac.in/courses/105106053	2	0	0	2
9	Modern construction materials	https://onlinecourses.nptel.ac.in/noc22_ce31/preview	2	0	0	2
10	Probability methods in civil engineering	https://onlinecourses.swayam2.ac.in/nou20_cs11/preview	2	0	0	2

Mandatory courses

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21CMCHN1090	Constitution of India, Professional ethics and Human rights	2	0	0	0
2	21CMCHN2090	Environmental Science	2	0	0	0
3	21CMCHN3090	Essence of Indian Traditional Knowledge	2	0	0	0
4	21CECEN5090	Disaster Management	2	0	0	0
5	21CMBIT6100	Biology for Engineers	2	0	0	0

SUGGESTED COURSES FOR MINOR PROGRAM IN CE

The following are the Offline and MOOC courses offered by CE Department for the Minors program Starting from IV semester.

S.No	Subject Code	Name of the subject	Offered Semester	L	T	P	Cr
1		Building materials	IV Semester	3/4	0	0/2	4
2		Solid Waste & Hazardous Waste Management	V Semester	3/4	0	0/2	4
3		Traffic engineering	VI Semester	3/4	0	0/2	4
4		Ground Improvement Techniques	VII Semester	3/4	0	0/2	4

MOOC/NPTEL Courses for Minor program:

S.No	Name of the subject	Link	L	T	P	Cr
1	Digital Land Surveying and Mapping (DLS&M)	https://nptel.ac.in/courses/105107181	2	0	0	2
2	Environmental Remediation of Contaminated Sites	https://onlinecourses.nptel.ac.in/noc22_ce26/preview	2	0	0	2
3	Geographic Information Systems	https://nptel.ac.in/courses/105106052	2	0	0	2

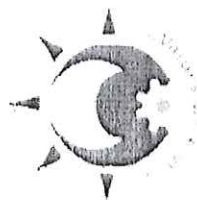
S.No	Name of the subject	Link	L	T	P	Cr
1	Rural water resources management	https://archive.nptel.ac.in/courses/105/106/105106202/	2	0	0	2
2	Modern construction materials	https://onlinecourses.nptel.ac.in/noc22_ce31/preview	2	0	0	2
3	Probability methods in civil engineering	https://onlinecourses.swayam2.ac.in/noc20_cs11/preview	2	0	0	2

Note:

1. Students has to study all four regular/offline minor courses starting from **IV semester** and complete by **VII semester** by taking **one course per semester**.
2. Additionally, TWO MOOC courses of minimum EIGHT-week duration a total covering of 4 credits (offered by CE Department only).
3. Students can register for any two MOOC courses and one from each pool out of three courses listed in the each pool in the above table via the NPTEL online platform from IV semester to VII semester by prior information to concerned department.

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HOD, CE

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SITE-21

Course Structure for I B. Tech I Semester Under the Regulations of SITE-21							
Common for (CE, EEE, ME, ECT, CST, AI & ML) SEM -I							
S. No	Course Category	Course code	Course Title	L	T	P	C
1	BS	21CMMAT1010	Engineering Mathematics – I(Calculus and Differential Equations)	3	0	0	3
2	BS	21EEPHT1020	Engineering Physics	3	0	0	3
3	BS	21CMCHT1030	Engineering Chemistry	3	0	0	3
4	ES	21CMCST1040	Programming for Problem Solving	3	0	0	3
5	ES	21CMMEL1050	Engineering Graphics	2	0	2	3
6	BS LAB	21EEPHL1060	Engineering Physics Lab	0	0	3	1.5
7	BS LAB	21CMCHL1070	Engineering Chemistry Lab	0	0	3	1.5
8	ES LAB	21CMCSL1080	Programming for Problem Solving Lab	0	0	3	1.5
9	MC	21CMMSN1090	Constitution of India, Professional Ethics & Human Rights	2	0	0	0
TOTAL				16	0	11	19.5

Course Structure for I B. Tech II Semester Under the Regulations of SITE-21							
Common for (CE, EEE, ME, ECT, CST, AI & ML) SEM -II							
S. No	Course Category	Course code	Course Title	L	T	P	C
1	HS	21CMEGT2010	Technical English	3	0	0	3
2	BS	21CMMAT2020	Engineering Mathematics – II(Linear algebra, Laplace Transforms and Numerical Methods)	3	0	0	3
3	ES	21CMEET2030	Basic Electrical Engineering	3	0	0	3
4	ES	21CMCST2040	Python Programming	1	0	4	3
5	ES	21EEMET2050	Engineering Mechanics	3	0	0	3
6	HS LAB	21CMEGL2060	English Communication Skills Lab	0	0	3	1.5
7	ES LAB	21CMEEL2070	Basic Electrical Engineering Lab	0	0	3	1.5
8	ES LAB	21CMMEL2080	Engineering Workshop Lab	0	0	3	1.5
9	MC	21CMCHN2090	Environmental Science	2	0	0	0
TOTAL				15	0	13	19.5

Course Structure for II B. Tech I Semester Under the Regulations of SITE-21							
III SEMESTER							
S. No	Course Category	Course Code	Course Title	L	T	P	C
1	BS	21CMMAT3010	Engineering Mathematics-III(Vector Calculus and Complex Analysis)	3	0	0	3
2	PC	21EEEEET3020	Electrical Circuits Analysis	3	0	0	3
3	PC	21EEEEET3030	Analog Electronics	3	0	0	3
4	PC	21EEEEET3040	Electrical Measurements & Instrumentation	3	0	0	3
5	PC	21EEEEET3050	DC Machines & Transformers	3	0	0	3
6	PC LAB	21EEEEEL3060	Analog Electronics Lab	0	0	3	1.5
7	PC LAB	21EEEEEL3070	Electrical Circuit Analysis Lab	0	0	3	1.5
8	PC LAB	21EEEEEL3080	DC Machines & Transformers Lab	0	0	3	1.5
9	SOC	21EEEEES3090	Electrical Wiring & Installation	1	0	2	2
10	MC	21EEEEEN3100	Electromagnetic Fields	2	0	0	0
TOTAL				18	0	11	21.5

Course Structure for II B. Tech II Semester Under the Regulations of SITE-21							
IV SEMESTER							
S. No	Course Category	Course Code	Course Title	L	T	P	C
1	ES	21EEEEET4010	Signals & Systems	3	0	0	3
2	PC	21EEEEET4020	Digital Electronics	3	0	0	3
3	BS	21CMMAT4030	Engineering Mathematics-IV (Probability & Statistics)	3	0	0	3
4	PC	21EEEEET4040	Induction & Synchronous Machines	3	0	0	3
5	HSS	21CMMST4050	Engineering Economics And Financial Management	3	0	0	3
6	PC LAB	21EEEEEL4060	Digital Electronics Lab	0	0	3	1.5
7	PC LAB	21EEEEEL4070	Electrical Measurements & Instrumentation Lab	0	0	3	1.5
8	PC LAB	21EEEEEL4080	Induction & Synchronous Machines Lab	0	0	3	1.5
9	SOC	21EEEEES4090	Design of Electrical Circuits using Engineering software tools	1	0	2	2
TOTAL				16	0	11	21.5
10	H/M		Honor/Minor courses(The hours distribution can be 3-0-2 or 3-1-0)	4	0	0	4

Course Structure for III B. Tech I Semester Under the Regulations of SITE-21							
V SEMESTER							
S. No	Course Category	Course Code	Course Title	L	T	P	C
1	PC	21EEEEET5010	Power Generation, Transmission & Distribution	3	0	0	3
2	PC	21EEEEET5020	Power Electronics	3	0	0	3
3	PC	21EEEEET5030	Control Systems	3	0	0	3
4	OE	21EEXXO504X	Open Elective-I	2	0	2	3
5	PE	21EEEEEP505X	Professional Elective-I	3	0	0	3
6	PC LAB	21EEEEEL5060	Power Systems Lab	0	0	3	1.5
7	PC LAB	21EEEEEL5070	Power Electronics Lab	0	0	3	1.5
8	SAC/SC	21CMAHSx0x	Soft Skills & Aptitude Builder - I	1	0	2	2
9	MC	21EEEEEN5090	Energy studies	2	0	0	0
10	SI	21EEEEI5010	Summer Internship (1-2 months) after second year to evaluate in V semester	0	0	0	1.5
TOTAL				17	0	10	21.5
11	H/M		Honor/Minor courses(The hours distribution can be 3-0-2 or 3-1-0)	4	0	0	4

Professional Elective - I

S. No	Course Code	Course Title	L	T	P	C
1	21EEEEEP505A	Special Electrical Machines.	3	0	0	3
2	21EEEEEP505B	Electrical Energy conservation & Auditing.	3	0	0	3
3	21EEEEEP505C	Digital signal Processing	3	0	0	3

Course Structure for III B. Tech II Semester Under the Regulations of SITE-21							
VI SEMESR							
S. No	Course Category	Course Code	Course Title	L	T	P	C
1	PC	21EEEEET6010	Power System Analysis, Operation & Control	3	0	0	3
2	PC	21EEEEET6020	Microprocessors & Microcontrollers	3	0	0	3
3	PC	21EEEEET6030	Power Semiconductor Drives	3	0	0	3
4	PE	21EEEEEP604X	Professional Elective-II	3	0	0	3
5	OE	21EEXXO605X	Open Elective -II	2	0	2	3
6	PC	21EEEEEL6040	Microprocessors & Microcontrollers Laboratory	0	0	3	1.5
7	PC LAB	21EEEEEL6050	Control Systems Lab	0	0	3	1.5
8	PC LAB	21EEEEEL6060	Power Systems Analysis Lab	0	0	3	1.5
9	SAC/SC	21CMAHSx0x	Soft Skills & Aptitude Builder - 2	0	0	0	2
TOTAL				14	0	11	21.5
10	H/M		Honor/Minor courses(The hours distribution can be 3-0-2 or 3-1-0)	4	0	0	4

Professional Elective-II

S. No	Course Code	Course Title	L	T	P	C
1	21EEEEEP604A	Electrical Machine Modeling & Analysis	3	0	0	3
2	21EEEEEP604B	Power system Protection.	3	0	0	3
3	21EEEEEP604C	Control system design.	3	0	0	3

Course Structure for IV B. Tech I Semester Under the Regulations of SITE-21							
VII SEMESTER							
S. No	Course Category	Course Code	Course Title	L	T	P	C
1	PE	21EEEEEP701X	Professional Elective-III	3	0	0	3
2	PE	21EEEEEP702X	Professional Elective -IV	3	0	0	3
3	PE	21EEEEEP703X	Professional Elective -V	3	0	0	3
4	OE	21EEEXO704X	Open Elective -III	2	0	2	3
5	OE	21EEEXO805X	Open Elective -IV	2	0	2	3
6	H&SS	21EEEEEOX0XX	Elective	3	0	0	3
7	SAC/SC	21EEEEES7010	Design of Photovoltaic Systems	1	0	2	2
8	SI	21EEEEI7020	Industrial/Research Internship (1-2 Months) after third year to be evaluated in VII semester	0	0	0	3
TOTAL				17	0	6	23
9	H/M		Honor/Minor courses(The hours distribution can be 3-0-2 or 3-1-0)	4	0	0	4

Professional Elective-III

S.No.	Course Code	Course Title	L	T	P	C
1	21EEEEEP701A	Switched Mode Power Converters	3	0	0	3
2	21EEEEEP701B	Electrical & Hybrid Vehicles	3	0	0	3
3	21EEEEEP701C	Artificial Intelligence Techniques	3	0	0	3

Professional Elective-IV

S.No.	Course Code	Course Title	L	T	P	C
1	21EEEEEP702A	Wind & Solar Energy Systems	3	0	0	3
2	21EEEEEP702B	Power Quality	3	0	0	3
3	21EEEEEP702C	Digital Control Systems	3	0	0	3

Professional Elective-V

S.No.	Course Code	Course Title	L	T	P	C
1	21EEEEEP703A	FACTS & HVDC Transmission Systems	3	0	0	3
2	21EEEEEP703B	Smart Grid	3	0	0	3
3	21EEEEEP703C	Optimization Techniques	3	0	0	3

Course Structure for IV B. Tech II Semester Under the Regulations of SITE-21							
VIII SEMESTER							
S.No.	Course Category	Course Code	Course Title	L	P	T	C
1	Project	21EEER8010	Project, Seminar and Internship in Industry (6 months)	0	14	0	12
Total				0	14	0	12

**Course structure for Electrical & Electronics Engineering
Honors (for EEE Students)**

II B. Tech II Semester:

S. No	Subject code	Name of the Subject	L	T	P	C
1	21EEEEH410A	Electrical Wiring, Estimation and Costing	3	1	0	4
2	21EEEEH410B	SCADA Energy Management Systems	3	1	0	4
3	21EEEEH410C	Linear IC Applications	3	1	0	4
4	21EEEEH410D	Renewable Energy Systems	3	1	0	4

III B. Tech I Semester:

S. No	Subject code	Name of the Subject	L	T	P	C
1	21EEEEH511A	Electrical Machine Design	3	1	0	4
2	21EEEEH511B	Utilization of Electrical Energy & Traction	3	1	0	4
3	21EEEEH511C	Solar & Advanced Energy Storage System	3	1	0	4
4	21EEEEH511D	Modern Control Systems	3	1	0	4

III B. Tech II Semester:

S. No	Subject code	Name of the Subject	L	T	P	C
1	21EEEEH611A	Modern Power Electronics	3	1	0	4
2	21EEEEH611B	AC Drives	3	1	0	4
3	21EEEEH611C	Power Quality & Custom Power Devices	3	1	0	4
4	21EEEEH611D	High Voltage Engineering	3	1	0	4

IV B. Tech I Semester:

S. No	Subject code	Name of the Subject	L	T	P	C
1	21EEEEH709A	EHV AC Transmission	3	1	0	4
2	21EEEEH709B	Line Commutated & Active Rectifiers	3	1	0	4
3	21EEEEH709C	Electrical Distribution Systems	3	1	0	4
4	21EEEEH709D	Power Systems Dynamics & Stability	3	1	0	4

**Course structure for Electrical & Electronics Engineering
Minors to other Departments**

II B. Tech II Semester:

S. No	Subject code	Name of the Subject	L	T	P	C
1	21XXEEM410A	Fundamental of Electrical Circuit Theory	3	1	0	4
2	21XXEEM410B	Fundamental of EMF Theory	3	1	0	4
3	21XXEEM410C	Fundamental of Control Systems	3	1	0	4

III B. Tech I Semester:

S. No	Subject code	Name of the Subject	L	T	P	C
1	21XXEEM511A	Fundamentals of Electrical Machines	3	1	0	4
2	21XXEEM511B	Fundamentals of Power Electronics	3	1	0	4
3	21XXEEM511C	Fundamental of Electrical Measurements & Instrumentation	3	1	0	4

III B. Tech II Semester:

S. No	Subject code	Name of the Subject	L	T	P	C
1	21XXEEM611A	Fundamentals of Electrical Power Generation & Economic Concepts	3	1	0	4
2	21XXEEM611B	Fundamentals of Renewable Energy Sources	3	1	0	4
3	21XXEEM611C	Fundamentals of Energy Storage Systems	3	1	0	4

IV B. Tech I Semester:

S. No	Subject code	Name of the Subject	L	T	P	C
1	21XXEEM709A	Fundamentals of Electrical Power Transmission & Distribution	3	1	0	4
2	21XXEEM709B	Fundamentals of Utilization of Electrical Energy	3	1	0	4
3	21XXEEM709C	Fundamentals of Electrical Safety	3	1	0	4

A. Parthasarathy

Head of the department

**HEAD OF THE DEPARTMENT OF
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M. Tech. COURSE STRUCTURE (SITE-21)

Power Electronics Course Structure

I SEMESTER

S.No	Course Code	Name of the Subject	L	P	C
1	21EEPE101	Modelling and Analysis of Electrical Machines	4	-	3
2	21EEPE102	Analysis of Power Electronic Converters	4	-	3
3	21EEPE103	Power Semiconductor Devices and Modelling	4	-	3
4	21EEPE104	Power Electronic Control of DC Drives	4	-	3
5	Elective:1		4	-	3
	21EEPE105A	Special Electrical Machines			
	21EEPE105B	HVDC Transmission & FACTS			
6	Elective:2		4	-	3
	21EEPE106A	Hybrid and Electrical Vehicles			
	21EEPE106B	Digital Control Systems			
7	21EEPE151	Systems Simulation Laboratory	-	3	1.5
Total Credits					19.5

II SEMESTER

S.No	Course Code	Name of the Subject	L	P	C
1	21EEPE201	Power Electronic Control of AC Drives	4	-	3
2	21EEPE202	Power Converters for Renewable Energy Systems	4	-	3
3	21EEPE203	Power Quality & Custom Power Devices	4	-	3
4	Elective:3		4	-	3
	21EEPE204A	Artificial Intelligence Techniques			
	21EEPE204B	Digital Controllers			
5	Elective:4		4	-	3
	21EEPE205A	Modelling & Simulation of Power Electronics and Drive Systems			
	21EEPE205B	Smart Grid Technologies			
6	Elective:5		4	-	3
	21EEPE206A	Switch Mode and Resonant Converters			
	21EEPE206B	Optimization Techniques			
7	21EEPE251	Electrical Drives Laboratory	-	3	1.5
8	21EEPE252	Term Paper with seminar	-	-	3
Total Credits					22.5


III SEMESTER

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 K. J. Somaiya Institute of Technology & Engineering

S.No	Course Code	Name of the Subject	L	P	C
1	21EEPE301	Self-Learning Course: Design of Photovoltaic Systems	-	-	3
2	21EEPE351	Project Work Phase – I	-	-	5
3	21EEPE352	Internship with seminar			4
Total Credits					12

IV SEMESTER

S.No	Course Code	Name of the Subject	L	P	C
1	21EEPE451	Project Work Phase-II	-	-	10
Total Credits					10


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 HEAD OF THE DEPARTMENT OF
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 TADEPALLIGUDEM - 534 101

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HEAD OF THE DEPARTMENT OF
ELECTRICAL & ELECTRONICS ENGRS
PAST INSTITUTE OF TECH & ENGRS
TADEPALLIGUDEM - 524 101

**COURSE STRUCTURE AND
SYLLABUS
SITE-21 REGULATIONS**

**For
III B.Tech. VI Sem. &
IV B.Tech. VII Sem.
Mechanical Engineering**

**With effect from the Academic Year
2023-24**



sasi INSTITUTE OF
TECHNOLOGY &
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Accredited by **NAAC** with "**A**" Grade
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Ranked as "**A**" Grade by Govt. of A.P.

Department of Mechanical Engineering

**I B. Tech. I Semester Proposed Course Structure for the
Regulation SITE 21**

S.No	CC	Course code	Course Title	L	T	P	C
1	BSC	21CMMAT1010	Engineering Mathematics – I (Calculus and Differential Equations)	3	0	0	3
2	BSC	21EEPHT1020	Engineering Physics	3	0	0	3
3	BSC	21CMCHT1030	Engineering Chemistry	3	0	0	3
4	ESC	21CMCST1040	Programming for Problem Solving	3	0	0	3
5	ESC	21CMMEL1050	Engineering Graphics	2	0	2	3
6	BSC	21EEPHE1060	Engineering Physics Lab	0	0	3	1.5
7	BSC	21CMCHL1070	Engineering Chemistry Lab	0	0	3	1.5
8	ESC	21CMCSL1080	Programming for Problem Solving Lab	0	0	3	1.5
9	MC	21CMMSN1090	Constitution of India, Professional Ethics & Human Rights	2	0	0	0
TOTAL				16	0	11	19.5

**I B. Tech. II Semester Proposed Course Structure for the
Regulation SITE 21**

S. No	CC	Course code	Course Title	L	T	P	C
1	HSC	21CMEGT2010	Technical English	3	0	0	3
2	BSC	21CMMAT2020	Engineering Mathematics – II (Linear algebra, Laplace Transforms and Numerical Methods)	3	0	0	3
3	ESC	21CMEET2030	Basic Electrical Engineering	3	0	0	3
4	ESC	21CMCST2040	Python Programming	1	0	4	3
5	ESC	21EEMET2050	Engineering Mechanics	3	0	0	3
6	HSC	21CMEGL2060	English Communication Skills Lab	0	0	3	1.5
7	ESC	21CMEEL2070	Basic Electrical Engineering Lab	0	0	3	1.5
8	ESC	21CMMEL2080	Engineering Workshop Lab	0	0	3	1.5
9	MC	21CMCHN2090	Environmental Science	2	0	0	0
TOTAL				15	0	13	19.5

**II B. Tech. III Semester Proposed Course Structure for the
Regulation SITE 21**

S.No.	CC	Course Code	Course Title	L	T	P	C
1	BSC	21CMMAT3010	Engineering Mathematics -III (Vector Calculus and Complex Analysis)	3	0	0	3
2	ESC	21MEMET3020	Materials Engineering	3	0	0	3
3	PCC	21MEMET3030	Mechanics of Solids	3	0	3	3
4	PCC	21MEMET3040	Thermodynamics	3	0	0	3
5	PCC	21MEMET3050	Fluid Mechanics and Fluid Machines	3	0	3	3
6	ESC	21MEMEL3060	Mechanics of Solids & Materials Lab	0	0	3	1.5
7	PCC	21MEMEL3070	Fluid Mechanics and Fluid Machine s Lab	0	0	3	1.5
8	SOC	21MEMES3080	Computer Aided Engineering Drawing and Drafting (CAEDP)	1	0	2	2
9	MC	21MEECN3090	Basic Electronics Engineering	3	0	0	0
Total Credit							20

**II B. Tech. IV Semester Proposed Course Structure for the
Regulation SITE 21**

S.No.	CC	Course Code	Course Title	L	T	P	Cr
1.	BSC	21 CMMAT 4010	Engineering Mathematics –IV (Fourier series, Applications of PDE and Probability & Statistics)	3	0	0	3
2.	PCC	21MEMET4020	Applied Thermodynamics	3	0	0	3
3.	PCC	21MEMET4030	Design of Machine Elements -I	3	0	0	3
4.	PCC	21MEMET4040	Production Technology	3	0	0	3
5.	PCC	21MEMET4050	Kinematics of Machinery	3	0	0	3
6.	HSC	21MEMST4060	Engineering Economics and Financial Management	3	0	0	3
7.	PCC	21MEMEL4070	Thermal Engineering Lab	0	0	3	1.5
8.	PCC	21MEMEL4080	Production Technology Lab	0	0	3	1.5
9.	SOC	21MEMES4090	Computer Aided Three-Dimensional Interactive Application (CATIA)	1	0	2	2
Total credits							23
H/M			Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)	4	0	0	4

**III B. Tech. V Semester Course Structure for the
Regulation SITE 21**

S. No.	CC	Course Code	Course Title	L	T	P	Cr
1	PCC	21MEMET5010	Machine Tools and Metrology	3	0	0	3
2	PCC	21MEMET5020	Dynamics of Machinery	3	0	0	3
3	PCC	21MEMET5030	Design of Machine Elements-II	3	0	0	3
4	PEC	21MEMEP504X	Professional Elective-I	3	0	0	3
5	OEC	21MEXXO505X	Open Elective Course-I	3	0	0	3
6	PCC	21MEMEL5060	Machine Tools and Metrology Lab	0	0	3	1.5
7	PCC	21MEMEL5070	Theory of Machines Lab	0	0	3	1.5
8	SOC	21MEXXS5080	Soft Skills & Aptitude Builder - 1	1	0	2	2
9	MC	21MEMEM5090	Machine Drawing Practice Lab	0	0	3	0
10	SI	21MEMEI5100	Summer Internship (2 months) after II year to be evaluated during V semester	0	0	0	1.5
Total credits							21.5
11	H/M		Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)	4	0	0	4

Professional Elective Course -I

S.No.	CC	Course Code	Course Title	L	T	P	Cr
1	PEC	21MEMEP504A	Conventional and Non Conventional Power Stations	3	0	0	3
2		21MEMEP504B	Nano Technology	3	0	0	3
3		21MEMEP504C	Industrial Robotics with Artificial Intelligence	3	0	0	3
NPTEL/SWAYAM/MOOCs (Course of 12 Weeks duration) to be offered							

**III B. Tech. VI Semester Course Structure for the
Regulation SITE 21**

S.No.	CC	Course Code	Course Title	L	T	P	Cr	
1	PCC	21MEMET6010	CAD/CAM/CIM	3	0	0	3	
2	PCC	21MEMET6020	Finite Element Methods	3	0	0	3	
3	PCC	21MEMET6030	Heat Transfer	3	0	0	3	
4	PEC	21MEMEP604X	Professional Elective-II	3	0	0	3	
5	OEC	21MEXXO605X	Open Elective Course-II	3	0	0	3	
6	PCCL	21MEMEL6060	CAD/CAM Lab	0	0	3	1.5	
7	PCCL	21MEMEL6070	Heat Transfer Lab	0	0	3	1.5	
8	PCCL	21MEMEL6080	Instrumentation and Mechatronics Lab	0	0	3	1.5	
9	SOC	21MEXXS6090	Soft Skills & Aptitude Builder - 2	1	0	2	2	
10	MC	21MEMEN6100	Biology for Engineers	2	0	0	0	
11	I/RI	Research Internship - 2 Months (Mandatory) after Third year (to be evaluated during VII semester)						
Total Credits							21.5	
12	H/M		Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)	4	0	0	4	

Professional Elective-II

S. No.	CC	Subject Code	Name of the subject	L	T	P	Cr
1	PEC	21MEMEP604A	Gas Dynamics and Jet Propulsion	3	0	0	3*
2		21MEMEP604B	Mechanical Vibrations	3	0	0	3*
3		21MEMEP604C	Instrumentation and Mechatronics	3	0	0	3*

NPTEL/SWAYAM/MOOCs (Course of 12 Weeks duration) to be offered

IV B. Tech. VII Semester Course Structure for the Regulation SITE 21

S.No.	CC	Course Code	Course Title	L	T	P	Cr
1	PEC	21MEMEP701X	Professional Elective-III	3	0	0	3
2	PEC	21MEMEP702X	Professional Elective-IV	3	0	0	3
3	PEC	21MEMEP703X	Professional Elective-V	3	0	0	3
4	OEC	21MEXXO704X	Open Elective Course-III	3	0	0	3
5	OEC	21MEXXO705X	Open Elective Course-IV	3	0	0	3
6	HSC	21MEMET7060	Operation Research	3	0	0	3
7	SOC	21MEMES7070	Modelling and Analysis (FEA)	1	0	2	2
8	I/RI	21MEMER7080	Research Internship - 2 Months (Mandatory) after Third year (to be evaluated during VII semester)	0	0	6	3
Total Credits							23
9	H/M		Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)	4	0	0	4

Professional Elective Course -III

S.No.	CC	Course Code	Course Title	L	T	P	Cr
1	PEC	21MEMEP701A	Prime Movers for Automobiles	3	0	0	3
2		21MEMEP701B	Mechanics of Composites	3	0	0	3
3		21MEMEP701C	Non – Destructive Evaluation	3	0	0	3

NPTEL/SWAYAM/MOOCs (Course of 12 Weeks duration) to be offered

Professional Elective Course -IV

S. No.	CC	Course Code	Course Title	L	T	P	Cr
1	PEC	21MEMEP702A	Refrigeration & Air Conditioning	3	0	0	3
2		21MEMEP702B	Synthesis and Characterization of Materials	3	0	0	3
3		21MEMEP702C	Smart Manufacturing and IIOT	3	0	0	3

NPTEL/SWAYAM/MOOCs (Course of 12 Weeks duration) to be offered

Professional Elective Course -V

S. No.	CC	Course Code	Course Title	L	T	P	Cr
1	PEC	21MEMEP703A	Solar Energy Engineering and Applications	3	0	0	3
2		21MEMEP703B	Additive Manufacturing	3	0	0	3
3		21MEMEP703C	Production Planning and Control	3	0	0	3

NPTEL/SWAYAM/MOOCs (Course of 12 Weeks duration) to be offered

**IV B. Tech. II Semester Course Structure for the
Regulation SITE 21**

S. No.	CC	Course Code	Course Title	L	T	P	Cr
1	Project	21MEMER8010	Project, Seminar and Internship in Industry (6 months)	0	0	0	12
Total Credits							12

**COURSE STRUCTURE
AND DETAILED SYLLABI**

for

**M.Tech. Regular in
Mechanical Engineering**

Effective from the Academic Year

2021-22

**I M. Tech. (CAD/CAM) I Semester Proposed Course structure for the
Academic Year 2021-22**

I Semester						
S. No	Course Code	Course Name	L	T	P	Credits
1	21MECC101	Geometric Modeling	3	0	0	3
2	21MECC102	Computer Aided Manufacturing	3	0	0	3
3		Program Elective – 1	3	0	0	3
	21MECC103A	Computational Methods in Engineering				
	21MECC103B	Materials Technology				
	21MECC103C	Mechanical Vibrations				
4		Program Elective – 2	3	0	0	3
	21MECC104A	Mechatronics				
	21MECC104B	Industrial Robotics				
	21MECC104C	Simulation of Manufacturing Systems				
5	21MECC155	Advanced CAD Lab	0	0	4	2
6	21MECC156	Advanced manufacturing Lab	0	0	4	2
7	21MECC157	Research Methodology and IPR	2	0	0	2
8	21MECC158	Writing Skills for Scientific Communication	2	0	0	0
Total						18

**I M. Tech. (CAD/CAM) II Semester Proposed Course structure for the
Academic Year 2021-22**

II Semester						
S. No	Course Code	Course Name	L	T	P	Credits
1	21MECC201	Theory of Elasticity and Plasticity	3	0	0	3
2	21MECC202	Advanced Manufacturing Processes	3	0	0	3
3		Program Elective – 3	3	0	0	3
	21MECC203A	Advanced Finite Element Methods				
	21MECC203B	Fracture mechanics				
	21MECC203C	Product Design and Development				
4		Program Elective – 4	3	0	0	3
	21MECC204A	Materials Characterization Techniques				
	21MECC204B	Optimization & Reliability				
	21MECC204C	Additive Manufacturing				
5	21MECC255	Material Characterization Lab	0	0	4	2
6	21MECC256	Simulation of Manufacturing Systems Lab	0	0	4	2
7	21MECC257	Mini Project With Seminar	2	0	0	2
8	21MECC258	Personality development through life Enlightenment skills	2	0	0	0
Total						18

II M. Tech. (CAD/CAM) III Semester Proposed Course structure for the Academic Year 2021-2022

III SEMESTER					
S. No	Course Code	Course Name	T	P	Credits
1		Program Elective - 5	3	0	3
	21MECC301A	Non Destructive Evaluation			
	21MECC301B	Quality Engineering			
	21MECC301C	Green Manufacturing			
	21MECC301D	MOOCS/ NPTEL *			
2		Open Elective	3	0	3
	21MECC302A	Nano Technology			
	21MECC302B	Optimization Techniques			
	21MECC302C	Product Design and Manufacturing			
3	21MECC303A	Project /Dissertation Phase-I	0	20	10
Total					16

III M. Tech. (CAD/CAM) IV Semester Proposed Course structure for the Academic Year 2021-2022

IV SEMESTER						
S. No	Course Code	Course Name	L	T	P	Credits
1	21MECC401A	Project /Dissertation Phase-II	0	0	32	16
Total						16

Course Structure

SITE21 Regulations

For

B.Tech.

in

Electronics and Communication Engineering

**With effective from the academic year
2021-22**



sasi INSTITUTE OF
autonomous TECHNOLOGY &
ENGINEERING

Accredited by **NAAC** with **"A"** Grade
 Recognised by **UGC** under section 2(f) & 12(B)
 Approved by **AICTE** - NEW Delhi
 Permanently Affiliated to **JNTUK, SBTET**
 Ranked as **"A"** Grade by Govt. of A.P.

Department of Electronics & Communication Engineering

Course structure for SITE21 Regulations

B. Tech (Electronics and Communication Engineering)

Semester I (First year)

S.No	Subject Code	Course	L	T	P	C
1	21CMEGT1010	Technical English	3	0	0	3
2	21CMMAT1020	Engineering Mathematics-I	3	0	0	3
3	21CMEET1030	Basic Electrical Engineering	3	0	0	3
4	21CMCST1040	Programming for Problem Solving	3	0	0	3
5	21ECMEL1050	Computer Aided Engineering Graphics	2	0	2	3
6	21CMEGL1060	English Communication Skills Lab	0	0	3	1.5
7	21CMEEL1070	Basic Electrical Engineering Lab	0	0	3	1.5
8	21CMCSL1080	Programming for Problem Solving Lab	0	0	3	1.5
9	21CMESN1090	Environmental Science	2	0	0	0
Total Semester Credits						19.5

Semester II (First year)

S.No	Subject Code	Course	L	T	P	C
1	21CMMAT2010	Engineering Mathematics - II	3	0	0	3
2	21ECPHT2020	Engineering Physics	3	0	0	3
3	21CMCHT2030	Engineering Chemistry	3	0	0	3
4	21CMCST2040	Python Programming	1	0	4	3
5	21ECECT2050	Network Analysis	3	0	0	3
6	21ECPHL2060	Engineering Physics Lab	0	0	3	1.5
7	21CMEEL2070	Engineering Chemistry Lab	0	0	3	1.5
8	21ECMEL2080	Engineering Workshop	0	0	3	1.5
9	21CMMSN2090	Constitution of India, Professional Ethics & Human Rights	2	0	0	0
Total Semester Credits						19.5

Course Structure for
B. Tech (Electronics and Communication Engineering)
Semester III (Second year)

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21ECMAT3010	Engineering Mathematics - III	3	0	0	3
2	21ECECT3020	Probability Theory & Stochastic Processes	3	0	0	3
3	21ECECT3030	Semiconductor Devices	3	0	0	3
4	21ECECT3040	Digital System Design	3	0	0	3
5	21ECECT3050	Signals & Systems	3	0	0	3
6	21ECECL3060	Semiconductor Devices Lab	0	0	3	1.5
7	21ECECL3070	Digital System Design Lab	0	0	3	1.5
8	21ECECL3080	Electrical Circuits Lab	0	0	3	1.5
9	21ECECS3090	Data Science using Python (Skill Oriented Course-1)	1	0	2	2
Total Semester Credits						21.5

Semester IV (Second year)

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21CMMST4010	Management Science	3	0	0	3
2	21ECECT4020	EM Waves & Transmission Lines	3	0	0	3
3	21ECECT4030	Principles of Communication Theory	3	0	0	3
4	21ECECT4040	Electronic Circuit Analysis	3	0	0	3
5	21ECECT4050	Control Systems	3	0	0	3
6	21ECECL4060	Principles of Communication Theory Lab	0	0	3	1.5
7	21ECECL4070	Electronic Circuit Analysis Lab	0	0	3	1.5
8	21ECECL4080	Signals & Systems Lab	0	0	3	1.5
9	21ECECS4090	FPGA Architecture and Programming Using Verilog/ Matlab for Engineers (Skill Oriented Course-2)	1	0	2	2
10	21ECECN40A0	Pulse & Digital Circuits	2	0	0	0
Total Semester Credits						21.5
H/M	Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)		4	0	0	4

**Course Structure for
B. Tech (Electronics and Communication Engineering)**

III B.Tech. V-Semester

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21ECECT5010	Digital Modulation and Coding	3	0	0	3
2	21ECECT5020	Antenna Theory and Design	3	0	0	3
3	21ECECT5030	Linear IC Applications	3	0	0	3
4	21ECECP504X	Professional Elective-1	3	0	0	3
5	21ECXXO505X	Open Elective - 1	3	0	0	3
6	21ECECL5060	Digital Modulation and Coding Lab	0	0	3	1.5
7	21ECECL5070	Linear IC Applications Lab	0	0	3	1.5
8	21ECECS5080	Skill advanced course/ soft skill course-3* (Soft Skills & Aptitude Builder-1).	1	0	2	2
9	21ECECN5090	Biology for Engineers	2	0	0	0
10	21ECECR50A0	Summer Internship - 2 Months (Mandatory) after second year (to be evaluated during V semester	0	0	3	1.5
Total Semester Credits						21.5
11		Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)	4	0	0	4

Professional Elective-1

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21ECECP504A	Computer Architecture & Organization	3	0	0	3
2	21ECECP504B	Introduction to Machine Learning	3	0	0	3
3	21ECECP504C	System Design through Verilog	3	0	0	3

Open Elective-1

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21XXECO505A	Fundamentals of Integrated Circuits	3	0	0	3
2	21XXECO505B	Fundamentals of Microprocessors and Microcontrollers	3	0	0	3
3	21XXECO505C	Fundamentals of Digital Signal Processing	3	0	0	3

Course Structure for
B. Tech (Electronics & Communication Engineering)
III B.Tech. VI-Semester

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21ECECT6010	Digital Signal Processing	3	0	0	3
2	21ECECT6020	VLSI Design	3	0	0	3
3	21ECECT6030	Microprocessors & Microcontrollers	3	0	0	3
4	21ECECP604X	Professional Elective-2	3	0	0	3
5	21ECXXO605X	Open Elective - 2	3	0	0	3
6	21ECECL6060	Digital Signal Processing Lab	0	0	3	1.5
7	21ECECL6070	VLSI Design Lab	0	0	3	1.5
8	21ECECL6080	Microcontroller and Applications Lab	0	0	3	1.5
9	21ECECS6090	Skill advanced course/ soft skill course-4* Soft Skills and Aptitude Builder-2	1	0	2	2
10	21ECECN60A0	Research Methodology	2	0	0	0
						21.5
11	H/M	Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)	4	0	0	4

Professional Elective-2

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21ECECP604A	Embedded System Design	3	0	0	3
2	21ECECP604B	Cellular and Mobile Communications	3	0	0	3
3	21ECECP604C	Microwave Engineering	3	0	0	3

Open Elective-2

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21XXECO605A	Fundamentals of Digital Image Processing	3	0	0	3
2	21XXECO605B	Transducers and Sensors	3	0	0	3
3	21XXECO605C	Embedded Systems	3	0	0	3

**Course Structure for
B. Tech (Electronics & Communication Engineering)
IV B.Tech. VII-Semester**

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21ECECP701X	Professional Elective-3	3	0	0	3
2	21ECECP702X	Professional Elective-4	3	0	0	3
3	21ECECP703X	Professional Elective-5	3	0	0	3
4	21ECECO704X	Open Elective - 3	3	0	0	3
5	21ECXXO705X	Open Elective - 4	3	0	0	3
6	21ECXXO706X	Humanities and Social Science Elective	3	0	0	3
7	21ECECS7070	Skill Advanced Course/ Soft Skill Course - 5* IoT and its Applications/ Microwave Circuits and Antenna Design using HFSS/Deep Learning	1	0	2	2
8	21ECECR7080	Research Internship - 2 Months (Mandatory) after Third year (to be evaluated during V semester)	0	0	6	3
						23
9	H/M	Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)	4	0	0	4

Professional Elective-3

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21ECECP701A	Digital Image Processing	3	0	0	3
2	21ECECP701B	Low Power VLSI Design	3	0	0	3
3	21ECECP701C	Embedded and Real-Time Systems	3	0	0	3

Professional Elective-4

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21ECECP702A	Wireless Sensor Networks	3	0	0	3
2	21ECECP702B	Design for Testability	3	0	0	3
3	21ECECP702C	Optical Communication	3	0	0	3

Professional Elective-5

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21ECECP703A	Radar Systems	3	0	0	3
2	21ECECP703B	Internet of Things	3	0	0	3
3	21ECECP703C	Soft Computing Techniques	3	0	0	3

Open Elective-3

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21XXECO704A	Fundamentals of Internet of Things	3	0	0	3
2	21XXECO704B	Introduction to Cellular and Mobile Communications	3	0	0	3
3	21XXECO704C	Consumer Electronics	3	0	0	3

Open Elective-4

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21XXECO705A	Embedded and Real-Time Concepts	3	0	0	3
2	21XXECO705B	Digital Integrated Circuits	3	0	0	3
3	21XXECO705C	Wireless Sensor Networks	3	0	0	3

Course Structure for
B. Tech (Electronics & Communication Engineering)
IV B.Tech. VIII-Semester

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21ECECR8010	Project: Project work, seminar and internship in industry	0	0	24	12
Total						12

**Course Structure for
B. Tech (Electronics & Communication Engineering)**

COURSES OFFERED FOR MINORS

S.No.	Course Code	Course	L-T-P	Credits
1	21MRECTXXXX	Electronics Devices and Basic Circuits	3-1-0	4
2	21MRECTXXXX	Digital Electronics	3-1-0	4
3	21MRECTXXXX	Principles of Communication Systems	3-1-0	4
4	21MRECTXXXX	Signal Analysis	3-1-0	4

In addition to any of the four subjects, MOOC/NPTEL Courses for 04 credits (02 courses@ 2 credits each) are compulsory in the domain of Electronics and Communication Engineering

MOOC/NPTEL Courses for Minor program:

	Course Name	Tentative period	Duration	Course Link
Minors Program	Modern Digital Communication Techniques	July-Oct	12	https://swayam.gov.in/explorer?searchText=Modern+Digital+Communication+Techniques
	System Design Through VERILOG	July-Sept	08	https://swayam.gov.in/explorer?searchText=System+Design+Through+VERILOG
	Analog Electronic Circuits	Jan-April	12	https://onlinecourses.nptel.ac.in/noc23_ce77/preview
	Digital Signal Processing	Jan-April	12	https://nptel.ac.in/courses/117102060

**Course Structure for
B. Tech (Electronics and Communication Engineering)**

COURSES OFFERED FOR HONORS PROGRAMME

POOL-1

Embedded Systems: (any four of the following subjects which are not chosen as professional electives are to be considered for Honors Degree)

S.No.	Subject Code	Subject	L-T-P	Credits
1	2IECECHXXXX	Embedded System Design	3-1-0	4
2	2IECECHXXXX	Advanced Embedded Controllers	3-1-0	4
3	2IECECHXXXX	Parallel Processing	3-1-0	4
4	2IECECHXXXX	Embedded Systems for Biomedical applications	3-1-0	4
5	2IECECHXXXX	Internet of Things Fundamentals	3-1-0	4
6	2IECECHXXXX	Communication Protocols for Internet of Things	3-1-0	4
7	2IECECHXXXX	Industrial Internet of Things	3-1-0	4
8	2IECECHXXXX	Sensor Networks and Internet of Things	3-1-0	4

In addition to any of the four subjects, MOOC/NPTEL Courses for 04 credits (02 courses@ 2 credits each) are compulsory in the domain of Electronics and Communication Engineering

POOL-2

Integrated circuits and Systems: (any four of the following subjects which are not chosen as professional electives are to be considered for Honors Degree)

S.No.	Subject Code	Subject	L-T-P	Credits
1	2IECECHXXXX	VLSI Technology and Design	3-1-0	4
2	2IECECHXXXX	CMOS Analog IC Design	3-1-0	4
3	2IECECHXXXX	CMOS Digital IC design	3-1-0	4
4	2IECECHXXXX	Design for Testability	3-1-0	4
5	2IECECHXXXX	System on Chip	3-1-0	4
6	2IECECHXXXX	Programmable Logic Devices and ASIC	3-1-0	4
7	2IECECHXXXX	Scripting Language	3-1-0	4
8	2IECECHXXXX	Low Power VLSI Design	3-1-0	4

In addition to any of the four subjects, MOOC/NPTEL Courses for 04 credits (02 courses@ 2 credits each) are compulsory in the domain of Electronics and Communication Engineering

POOL-3

Communication Engineering: (any four of the following subjects which are not chosen as a professional electives are to be considered for Honors Degree)

S.No.	Subject Code	Subject	L-T-P	Credits
1	21ECECHXXXX	Wireless Sensor Networks	3-1-0	4
2	21ECECHXXXX	Software defined radio	3-1-0	4
3	21ECECHXXXX	Data Communications & Computer Networks	3-1-0	4
4	21ECECHXXXX	Cognitive radio	3-1-0	4
5	21ECECHXXXX	5G Communications	3-1-0	4
6	21ECECHXXXX	Satellite communication	3-1-0	4
7	21ECECHXXXX	Optical Communication	3-1-0	4
8	21ECECHXXXX	Global navigational satellite systems	3-1-0	4

In addition to any of the four subjects, MOOC/NPTEL Courses for 04 credits (02 courses@ 2 credits each) are compulsory in the domain of Electronics and Communication Engineering

POOL-4

Digital Signal processing: (any four of the following subjects which are not chosen as a professional elective are to be considered for Honors Degree)

S.No.	Subject Code	Subject	L-T-P	Credits
1	21ECECHXXXX	Speech Signal Processing	3-1-0	4
2	21ECECHXXXX	Video Signal Processing	3-1-0	4
3	21ECECHXXXX	Adaptive Signal Processing	3-1-0	4
4	21ECECHXXXX	Bio- Medical Signal Processing	3-1-0	4
5	21ECECHXXXX	DSP Processors and Architectures	3-1-0	4
6	21ECECHXXXX	Wavelet Theory	3-1-0	4
7	21ECECHXXXX	Multirate Systems And Filter Banks	3-1-0	4
8	21ECECHXXXX	Mathematical methods for signal processing	3-1-0	4

In addition to any of the four subjects, MOOC/NPTEL Courses for 04 credits (02 courses@ 2 credits each) are compulsory in the domain of Electronics and Communication Engineering

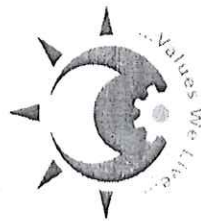
MOOC/NPTEL Courses for Honor program:

	Course Name		Tentative period	Duration	Course Link
Honors Program	Track-1 Embedded Systems	Embedded System Design With ARM	July-Sept	08	https://onlinecourses.nptel.ac.in/noc22_cs93/preview
		Fabrication Techniques for MEMs-based sensors: clinical perspective	July-Oct	12	https://onlinecourses.nptel.ac.in/noc22_ee76/preview
		Introduction To Industry 4.0 And Industrial Internet of Things	July-Oct	12	https://onlinecourses.nptel.ac.in/noc22_cs95/preview
		Sensors and actuators	Jan-April	12	https://onlinecourses.nptel.ac.in/noc21_ee32/preview
	Track-2 Integrated circuits and Systems	VLSI Interconnects	July-Sept	08	https://onlinecourses.nptel.ac.in/noc22_ee125/preview
		Hardware Modelling Using Verilog	July-Sept	08	https://onlinecourses.nptel.ac.in/noc22_cs94/preview
		Architectural Design of Digital Integrated Circuits	Jan-April	12	https://onlinecourses.nptel.ac.in/noc22_ee58/preview
		Design and Analysis of VLSI Subsystems	Jan-April	12	https://onlinecourses.nptel.ac.in/noc22_ee44/preview
	Track-3 Communication Engineering	Principles of Signal Estimation for MIMO/ OFDM Wireless Communication	July-Sept	12	https://onlinecourses.nptel.ac.in/noc22_ee72/preview
		Evolution Of Air Interface Towards 5G	Jan-April	08	https://onlinecourses.nptel.ac.in/noc22_ee56/preview
		Optical Wireless Communications for Beyond 5G Networks and IoT	Jan-April	12	https://onlinecourses.nptel.ac.in/noc23_ee61/preview

		Spread Spectrum Communications and Jamming	Jan-April	12	https://onlinecourses.nptel.ac.in/noc20_ee34/preview
	Track-4 Digital Signal Processing	Signal Processing for mm Wave communication	July-Oct	12	https://onlinecourses.nptel.ac.in/noc22_ee102/preview
		Pattern Recognition and Application	July-Oct	12	https://onlinecourses.nptel.ac.in/noc22_ee119/preview
		VLSI Signal Processing	Jan-April	12	https://onlinecourses.nptel.ac.in/noc20_ee44/preview
		Multirate DSP	Jan-April	12	https://archive.nptel.ac.in/courses/108/106/108106136/


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Head of the Department
Electronics & Communication Engineering
Jawahar Institute of Technology & Engineering
Jalpaiguri-721 101, W.B., India, A.R.



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Department of Electronics & Communication Engineering

**Course Structure for M.Tech. (CE & SP) Under the Regulations of
SITE-21**

Semester I (First year)

S.No.	Category	Course Code	Name of the Subject	L	T	P	C
1	CE	21ECSP101	Advanced Digital Signal Processing	3	0	0	3
2	CE	21ECSP102	Coding Theory & Applications	3	0	0	3
Elective-I							
3	PE	21ECSP103A	DSP Architectures	3	0	0	3
		21ECSP103B	Statistical Signal Processing	3	0	0	
		21ECSP103C	Radar signal processing	3	0	0	
Elective-II							
4	PE	21ECSP104A	Digital data communications	3	0	0	3
		21ECSP104B	Wireless Sensor Networks	3	0	0	
		21ECSP104C	Multimedia over communication	3	0	0	
5	MC	21ECSP105	Research methodology and IPR	2	0	0	2
6	CE	21ECSP151	Advanced Digital Signal Processing Lab	0	0	4	2
7	CE	21ECSP152	Data communications lab	0	0	4	2
8	AUD	21ECSP106	Audit course 1	2	0	0	-
Total Credits							18

Semester II (First year)

S.No.	Category	Course Code	Name of the Subject	L	T	P	C
1	CE	21ECSP201	Antenna theory & Design	3	0	0	3
2	CE	21ECSP202	Image processing & machine vision	3	0	0	3
Elective-I							
3	PE	21ECSP203A	Internet of things	3	0	0	3
		21ECSP203B	Adaptive Signal processing	3	0	0	
		21ECSP203C	Biomedical Signal Processing	3	0	0	
Elective-II							
4	PE	21ECSP204A	Optical Networks	3	0	0	3
		21ECSP204B	Modern Spectrum Analysis & Estimation	3	0	0	

		21ECSP204C	EMI/EMC	3	0	0	0
5	CE	21ECSP251	Digital image & Video processing Lab	0	0	3	2
6	CE	21ECSP252	Detection and Estimation Theory Lab	0	0	3	2
7	MP	21ECSP253	Mini Project	0	0	0	2
8	AUD 2	21ECSP206	Audit course	2	0	0	0
Total Credits							18

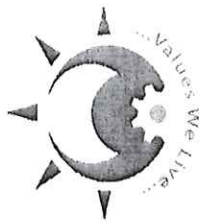
Semester III (Second year)

S.No.	Category	Course Code	Name of the Subject	L	T	P	C
1	PE	1ECSP301A	Mobile computing technologies	3	0	-	3
		21ECSP301B	Soft Computing Techniques	3	0	-	-
		21ECSP301C	Pattern Recognition & Machine Learning	3	0	-	-
2	OE	21ECSP302A	Optimization Techniques	3	0	-	3
		21ECSP302B	Modeling and Simulation Techniques	3	0	-	
		21ECSP302C	Artificial Intelligence	3	0	-	
3	Dissertation	21ECSP351	Dissertation Phase -I /Industrial Project (to be continued and evaluated next semester)	-	0	20	10
Total Credits							16

Semester IV (Second year)

S.No	Category	Course Code	Name of the Subject	L	T	P	C
1	Dissertation Project/ Dissertation Phase	21ECVE451	Project/ Dissertation Phase-II	0	0	0	16
Total Credits							16


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Department of Electronics & Communication Engineering

**Course Structure for M.Tech. (VLSI & ES) Under the Regulations of
SITE-21**

First Year (Semester – I)

S.No.	Category	Course Code	Name of the Subject	L	T	P	C
1	CE	21ECVE101	Principles of Embedded Systems	3	0	0	3
2	CE	21ECVE102	CMOS Analog IC Design	3	0	0	3
Elective-I							
3	PE	21ECVE103A	Physical Design Automation	3	0	0	3
		21ECVE103B	Digital System Synthesis and Verification	3	0	0	
		21ECVE103C	Advanced Digital Design	3	0	0	
Elective-II							
4	PE	21ECVE104A	Micro controllers for Embedded System Design	3	0	0	3
		21ECVE104B	Embedded and Real Time Systems	3	0	0	
		21ECVE104C	Network Security and Cryptography	3	0	0	
5	MC	21ECVE105	Research methodology and IPR	2	0	0	2
6	CE	21ECVE151	Advanced VLSI Design Lab I	0	0	4	2
7	CE	21ECVE152	Embedded System Lab	0	0	4	2
8	AUD	21ECVE106	Audit course I	2	0	0	-
Total Credits							18

First Year (Semester – II)

S.No.	Category	Course Code	Name of the Subject	L	T	P	C
1	CE	21ECVE201	Internet of Things	3	0	0	3
2	CE	21ECVE202	VLSI Testing and Testability	3	0	0	3
Elective-I VLSI design course							
3	PE	21ECVE203A	Functional Verification using Hardware Verification Languages	3	0	0	3
		21ECVE203B	CMOS Mixed Signal Circuit Design	3	0	0	
		21ECVE203C	Low Power VLSI Design	3	0	0	

Elective-II Embedded system course							
4	PE	21ECVE204A	Embedded System Design	3	0	0	3
		21ECVE204B	Sensors And Actuators	3	0	0	
		21ECVE204C	Micro Electro Mechanical System (MEMS) Design	3	0	0	
5	CE	21ECVE251	Advanced VLSI Design Lab II	0	0	3	2
6	CE	21ECVE252	IOT Lab	0	0	3	2
7	MP	21ECVE253	Mini Project	0	0	0	2
8	AUD 2	21ECVE206	Audit course	2	0	0	0
Total Credits							18

Second Year (Semester – III)

S.No.	Category	Course Code	Name of the Subject	L	T	P	C
1	PE	21ECVE301A	VLSI Technology	3	0	-	3
		21ECVE301B	CPLD and FPGA Architectures and Applications	3	0	-	-
		21ECVE301C	Programming Languages for Embedded Systems	3	0	-	-
2	OE	21ECVE302A	Optimization Techniques	3	0	-	3
		21ECVE302B	Modeling and Simulation Techniques	3	0	-	
		21ECVE302C	Artificial Intelligence	3	0	-	
3	Dissertation	21ECVE351	Dissertation Phase -I /Industrial Project (to be continued and evaluated next semester)	-	0	20	10
Total Credits							16

Second Year (Semester – IV)

S.No	Category	Course Code	Name of the Subject	L	T	P	C
1	Dissertation Project/ Dissertation Phase	21ECVE451	Project/ Dissertation Phase-II	0	0	0	16
Total Credits							16


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**COURSE STRUCTURE
SITE 21 REGULATIONS**

For

Computer Science and Engineering

**With effective from the Academic Year
2021-22**

SITE21 Regulations
COURSE STRUCTURE for B. Tech. (CSE)
Semester I (First year I -I)

S.No	SubjectCode	Course	Hours			Credits
			L	T	P	
1	21CMEGT1010	Technical English	3	0	0	3
2	21CMMAT1020	Engineering Mathematics - I	3	0	0	3
3	21CMEET1030	Basic Electrical Engineering	3	0	0	3
4	21CMCST1040	Programming for Problem Solving	3	0	0	3
5	21CSMEL1050	Computer Aided Engineering Graphics	2	0	2	3
6	21CMEGL1060	English Communication Skills Lab	0	0	3	1.5
7	21CMEEL1070	Basic Electrical Engineering Lab	0	0	3	1.5
8	21CMCSL1080	Programming for Problem Solving Lab	0	0	3	1.5
9	21CMESN1090	Environmental Science	2	0	0	0
Total			16	0	11	19.5

Semester II (First year I -II)

S. No	Subject Code	Course	Hours			Credits
			L	T	P	
1	21CMMAT2010	Engineering Mathematics - II	3	0	0	3
2	21CSPHT2020	Engineering Physics	3	0	0	3
3	21CMCHT2030	Engineering Chemistry	3	0	0	3
4	21CMCST2040	Python Programming	1	0	4	3
5	21CSCST2050	Data Structures	3	0	0	3
6	21CSPHL2060	Engineering Physics Lab	0	0	3	1.5
7	21CMCHL2070	Engineering Chemistry Lab	0	0	3	1.5
8	21CSCSL2080	Data Structures Lab	0	0	3	1.5
9	21CMMSN2090	Constitution of India, Professional Ethics & Human Rights	2	0	0	0
Total			16	0	11	19.5

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Semester III (Second year II-I)

S. No	Code	Course Title	Hours			Credits
			L	T	P	
1	21CMMAT3010	Probability Distributions & Statistical Methods	3	0	0	3
2	21CSECT3020	Analog & Digital Electronics	3	0	0	3
3	21CSCST3030	Computer Organization	3	0	0	3
4	21CSCST3040	Java Programming	3	0	0	3
5	21CSCST3050	Data Base Management Systems	3	0	0	3
6	21CSCSL3060	Analog & Digital Electronics Lab	0	0	3	1.5
7	21CSCSL3070	Java Programming Lab	0	0	3	1.5
8	21CSCSL3080	Data Base Management Systems Lab	0	0	3	1.5
9	21CSCSS3090	Data Science Using Python	0	0	3	2
10	21CMBIN3100	Biology for Engineers	2	0	0	0
Total			17	0	12	21.5

Semester IV (Second year II-II)

S.No	Code	Course Title	Hours			Credits
			L	T	P	
1	21CMMAT4010	Discrete Mathematics	3	0	0	3
2	21CMMST4020	Engineering Economics & Financial Management	3	0	0	3
3	21CSCST4030	Operating systems	3	0	0	3
4	21CSCST4040	Design and Analysis of Algorithms	3	0	0	3
5	21CSCST4050	Software Engineering	3	0	0	3
6	21CSCSL4060	Operating systems Lab	0	0	3	1.5
7	21CSCSL4070	Design and Analysis of Algorithms Lab	0	0	3	1.5
8	21CSSCL4080	Software Engineering Lab	0	0	3	1.5
9	21CSCSS4090	MEAN Stack Technologies	2	0	0	2
Total			17	0	9	21.5

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Semester V (Third Year III-I)

S. No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	PC	21CSCST5010	Automata Theory & Compiler Design	3	0	0	3
2	PC	21CSCST5020	Computer Networks	3	0	0	3
3	PC	21CSCST5030	Data Warehousing and Mining	3	0	0	3
4	PE-I	21CSCSP504X	Professional Elective -I	3	0	0	3
5	OE-I	21CSXXO505X	Open Elective - I	3	0	0	3
6	PC	21CSCSL5060	Computer Networks lab	0	0	3	1.5
7	PC	21CSCSL5070	Data Mining Lab	0	0	3	1.5
8	SOC	21CMAHS5080	Skill Oriented Course Soft Skills & Aptitude Builder - 1	1	0	2	2
9	MC	21CSCSN5090	Intellectual Property Rights	2	0	0	0
Summer Internship 2 Months (Mandatory) after second year (to be evaluated during V semester) (21CSCSR5100)				0	0	0	1.5
Total credits							21.5
Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)				4	0	0	4

Category	Credits
Professional core Courses	12
Professional Elective courses	3
Open Elective Course	3
Skill oriented course	2
Summer Internship	1.5
Total Credits	21.5

Professional Elective - I	
Code	Course Title
21CSCSP504A	Software Testing
21CSCSP504B	Software Project Management
21CSCSP504C	Software Quality Assurance
21CSCSP504D	Agile Software Development

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Semester VI (Third year III-II)

S. No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	PC	21CSCST6010	Machine Learning	3	0	0	3
2	PC	21CSCST6020	Cryptography & Network Security	3	0	0	3
3	PC	21CSCST6030	Unified Modelling Language	3	0	0	3
4	PE-I	21CSCSP604X	Professional Elective - II	3	0	0	3
5	OE-II	21CSXXO605X	Open Elective Course	3	0	0	3
6	PC	21CSCSL6060	Unix Programming Lab	0	0	3	1.5
7	PC	21CSCSL6070	Machine Learning Lab	0	0	3	1.5
8	PC	21CSCSL6080	Unified Modelling LanguageLab	0	0	3	1.5
9	SOC	21CMAHS6090	Skill Oriented Course Soft Skills & Aptitude Builder - 2	1	0	2	2
10	MC	21CSCSN6100	Mandatory course Essence of Indian Traditional Knowledge	2	0	0	0
Total credits							21.5
Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)				4	0	0	4

Category	Credits
Professional core courses	13.5
Professional Elective courses	3
Open Elective Course	3
Skill-oriented course/ soft skill course*	2
Mandatory course (AICTE)	0
Total Credits	21.5

Professional Elective - II	
Code	Course Title
21CSCSP604A	Data Science
21CSCSP604B	Artificial Intelligence
21CSCSP604C	Cloud Computing
21CSCSP604D	Hadoop & Big Data

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JSS Mysore

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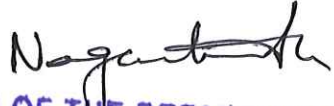
Semester VII (Fourth year IV-I)

S. No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	PE	21CSCSP701X	Professional Elective -III	3	0	0	3
2	PE	21CSCSP702X	Professional Elective - IV	3	0	0	3
3	PE	21CSCSP703X	Professional Elective - V	3	0	0	3
4	OE-III	21CSXXO704X	Open Elective Course	3	0	0	3
5	OE-IV	21CSXXO705X	Open Elective Course	3	0	0	3
6	HS	21CSMST7060	Management Science	0	0	3	3
7	SOC	21CSCSS7070	Skill Oriented Course ETL Spark	0	0	3	2
Summer Internship 2 Months (Mandatory) after third year (to be evaluated during VII semester)(21CSCSR7080)				0	0	0	3
Total credits							23
Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)				4	0	0	4

Professional Elective - III	
Code	Course Title
21CSCSP701A	Network Protocols
21CSCSP701B	Ad-hoc & Sensor Networks
21CSCSP701C	Mobile Computing
21CSCSP701D	Cyber Security

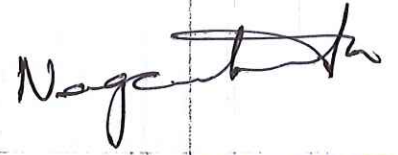
Professional Elective - III	
Code	Course Title
21CSCSP702A	Mobile Application Development
21CSCSP702B	Social Networks & Semantic Web
21CSCSP702C	Computer Vision
21CSCSP702D	Ethical Hacking

Professional Elective - V	
Code	Course Title
21CSCSP703A	Block-Chain Technologies
21CSCSP703B	Wireless Network Security
21CSCSP703C	Deep Learning
21CSCSP703D	Neural Networks and Soft Computing



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Semester VIII (Fourth year IV-II)

S. No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	PR	21CSCSR8010	Project	0	0	12	12
Total credits							12



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Suggested Courses for Honors Program

POOL1- AI & ML

1. Mathematics for Machine Learning
2. Text Mining and Time Series Analysis
3. Natural Language Processing
4. Reinforcement Learning

POOL2- Systems Engineering

1. Internet of Things
2. Data Communications and Information Coding Theory
3. Service Oriented Architectures
4. Design of Secure Protocols
5. Network Coding

POOL3- Information Security

1. Principles of Cyber Security
2. Computational Number Theory
3. Public Key Infrastructure and Trust Management
4. Information Security Analysis and Audit
5. Cloud and IoT Security
6. Web Security
7. Block Chain Architecture Design and Use Cases

POOL4 – Data Science

1. Data Visualization
2. Statistical Foundations for Data Science
3. Mining Massive Data Sets
4. Medical Image Data Processing



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SUGGESTED COURSES MINOR ENGINEERING IN CSE

Note:

1. Any THREE courses need to be studied from PART-A.
2. Any ONE course need to be studied from PART-B.
3. TWO, NPTEL courses of EIGHT week duration covering a total of 4 credits (offered by CSE Department only), Student can register at any time after the completion of II B.Tech. I Sem.
4. Students can pursue suggested MOOC Courses via NPTEL from II B.Tech II Sem and onwards, by prior information to the concern.

Eligibility for Minor in CSE:

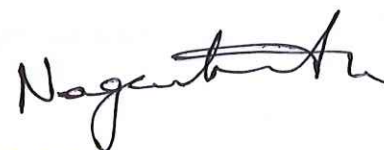
PART A					
	Subject	L-T-P	Credits	Course available in NPTEL	NPTEL Link
1	Operating Systems	3-0-2	4	Operating Systems	https://onlinecourses.syam2.ac.in/cec21_cs20/preview
2	Data Structures and Algorithms	3-0-2	4	Data Structures Programming, Data Structures and Algorithms using Python	https://onlinecourses.syam2.ac.in/cec22_cs10/preview https://onlinecourses.nptel.ac.in/noc22_cs26/preview
3	Software Engineering	3-0-2	4	Software Engineering	https://onlinecourses.syam2.ac.in/cec21_cs21/preview
4	Computer Networks	3-0-2	4	Computer Networks	https://onlinecourses.syam2.ac.in/cec22_cs05/preview
5	Database Management Systems	3-0-2	4	Data Base Management System (noc22-cs51)	https://onlinecourses.nptel.ac.in/noc22_cs51/preview

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PART B

S.No	Subject	L-T-P	Credits	Course available in NPTEL	NPTEL Link
1	Computational Thinking	4-0-0	4	Physics through Computational Thinking	https://onlinecourses.nptel.ac.in/noc22_ph12/preview
2	Object Oriented Programming through JAVA	3-0-2	4		
3	Artificial Intelligence	4-0-0	4	Artificial Intelligence: Knowledge Representation And Reasoning	https://onlinecourses.nptel.ac.in/noc22_cs56/preview https://onlinecourses.swayam2.ac.in/cec21_cs08/preview
				(noc22-cs02), An Introduction to Artificial Intelligence (noc22-cs56), AI: Constraint Satisfaction (noc22-cs06)	
4	Unix and Shell Programming	3-0-2	4		
5	Cloud Computing	4-0-0	4	Cloud Computing and Distributed Systems (noc22-cs18), Cloud computing(noc22-cs20)	https://onlinecourses.nptel.ac.in/noc22_cs18/preview https://onlinecourses.nptel.ac.in/noc22_cs20/preview




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**COURSE STRUCTURE
SITE 21 REGULATIONS**

For

**Computer Science and
Engineering (PG)**

**With effective from the Academic
Year
2021-22**


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Department of Computer Science & Engineering

M.Tech I Semester

S. No	CourseCode	Courses	L	T	P	C
1	21CSCS101	ProgramCore-1 MathematicalFoundationsofComputerScience	3	0	0	3
2	21CSCS102	ProgramCore-2 AdvancedDataStructures&Algorithms	3	0	0	3
3	21CSCS103A 21CSCS103B 21CSCS103C	ProgramElective-1 1. BigDataAnalytics 2. DigitalImageProcessing 3. AdvancedOperatingSystems	3	0	0	3
4	21CSCS104A 21CSCS104B 21CSCS104C	ProgramElective-2 1. AdvancedComputerNetworks 2. InternetofThings 3. ObjectOrientedSoftwareEngineering	3	0	0	3
5	21CSCS105	ResearchMethodologyandIPR	2		0	2
6	21CSCS106	Laboratory-1 AdvancedDataStructures&AlgorithmsLab	0	0	4	2
7	21CSCS107	Laboartory-2 AdvancedComputingLab	0	0	4	2
8	21CSCS108	AuditCourse-1*	2	0	0	0
TotalCredits						18

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M.Tech II Semester

S.No	CourseCode	Courses	L	T	P	C
1	21CSCS201	ProgramCore-3 Machinelearning	3	0	0	3
2	21CSCS202	ProgramCore-4 MEANStack Technologies	3	0	0	3
3	21CSCS203A 21CSCS203B 21CSCS203C	ProgramElective-3 1. AdvancedDatabasesandMining 2. AdHoc&SensorNetworks 3. SoftComputing	3	0	0	3
4	21CSCS204A 21CSCS204B 21CSCS204C	ProgramElective-4 1. CloudComputing 2. Principlesofcomputersecurity 3. HighPerformanceComputing	3	0	0	3
5	21CSCS205	Laboratory-3 MachineLearningwith python lab	0	0	4	2
6	21CSCS206	Laboartory-4 MEANStackTechnologiesLab	0	0	4	2
7	21CSCS207	MiniProjectwithSeminar	2	0	0	2
8	21CSCS208	AuditCourse-2*	2	0	0	0
TotalCredits						18

***Student must choose anyone audit course listed below.**

Audit Course 1&2:

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. English for Research Paper Writing 2. Disaster Management 3. Sanskrit for Technical Knowledge 4. Value Education | <ol style="list-style-type: none"> 5. Constitution of India 6. Pedagogy Studies 7. Stress Management by Yoga 8. Personality Development through Life Enlightenment Skills |
|--|---|

Nagendra

**HEAD OF THE DEPARTMENT
Computer Science & Engineering
Sasi Institute of Technology & Engg.
Tadepalligudem-534 101**

HEAD OF THE DEPARTMENT
Computer Science & Engineering
Sasi Institute of Technology & Engg.
Tadepalligudem-534 101

M.Tech III Semester

S.No	Course Code	Courses	L	T	P	C
1	21CSCS301A 21CSCS301B 21CSCS301C	Program Elective-5 1. Deep Learning 2. Social Network Analysis 3. MOOCs-1 (NPTEL/SWAYAM) 12 Week Program related to the program which is not listed in the course structure	3	0	0	3
2	21XXXX302N 21XXXX302N	Open Elective 1. MOOCs-2 (NPTEL/SWAYAM)- Any 12 Week Course on Engineering/Management/ Mathematics offered by other than parent department 2. Course offered by other departments in the college	3	0	0	3
3	21CSCS303	Dissertation-I/ Industrial Project#	0	0	20	10
Total Credits						16

Students going for Industrial Project/Thesis will complete these courses through MOOCs

M.Tech IV Semester

S.No	Course Code	Courses	L	T	P	C
1	21CSCS401	Dissertation-II	0	0	32	16
Total Credits						16

Open Electives offered by the Department of CSE

1. Python Programming
2. Principles of Cyber Security
3. Internet of Things
4. Machine Learning
5. Digital Forensics
6. Next Generation Databases

Nagendra

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Tadepalligudem-534 101

SITE 21 REGULATIONS

**COURSE STRUCTURE AND
DETAILED SYLLABUS**

for

Bachelor of Technology

in

Information Technology

COURSE STRUCTURE for B. Tech. (IT)

Semester I (First Year I-I)

S. No.	Code	Course Title	Hours			Credits
			L	T	P	
1	21CMEGT1010	Technical English	3	0	0	3
2	21CMMAT1020	Engineering Mathematics - I	3	0	0	3
3	21CMEET1030	Basic Electrical Engineering	3	0	0	3
4	21CMCST1040	Programming for Problem Solving	3	0	0	3
5	21ITMEL1050	Computer Aided Engineering Graphics	2	0	2	3
6	21CMEGL1060	English Communication Skills Lab	0	0	3	1.5
7	21CMEEL1070	Basic Electrical Engineering Lab	0	0	3	1.5
8	21CMCSL1080	Programming for Problem Solving Lab	0	0	3	1.5
9	21CMESN1090	Environmental Science	2	0	0	0
Total			16	0	11	19.5

Semester II (First Year I-II)

S. No.	Code	Course Title	Hours			Credits
			L	T	P	
1	21CMMAT2010	Engineering Mathematics - II	3	0	0	3
2	21ITPHT2020	Engineering Physics	3	0	0	3
3	21CMCHT2030	Engineering Chemistry	3	0	0	3
4	21CMCST2040	Python Programming	1	0	4	3
5	21ITITT2050	Data Structures	3	0	0	3
6	21ITPHL2060	Engineering Physics Lab	0	0	3	1.5
7	21CMCHL2070	Engineering Chemistry Lab	0	0	3	1.5
8	21ITITL2080	Data Structures Lab	0	0	3	1.5
9	21CMMSN2090	Constitution of India, Professional Ethics & Human Rights	2	0	0	0
Total			16	0	11	19.5

Semester III (Second Year-II-I)

S. No.	Code	Course Title	Hours			Credits
			L	T	P	
1	21CMMAT3010	Probability Distributions & Statistical Methods	3	0	0	3
2	21ITECT3020	Analog & Digital Electronics	3	0	0	3
3	21ITITT3030	Computer Organization	3	0	0	3
4	21ITITT3040	Java Programming	3	0	0	3
5	21ITITT3050	Data Base Management Systems	3	0	0	3
6	21ITECL3060	Analog & Digital Electronics Lab	0	0	3	1.5
7	21ITITL3070	Java Programming Lab	0	0	3	1.5
8	21ITITL3080	Data Base Management Systems Lab	0	0	3	1.5
9	21ITITS3090	Data Science Using Python	0	0	3	2
10	21CMBIN3100	Biology for Engineers	2	0	0	0
Total			17	0	12	21.5

Semester IV (Second Year II-II)

S. No.	Code	Course Title	Hours			Credits
			L	T	P	
1	21CMMAT4010	Discrete Mathematics	3	0	0	3
2	21CMMST4020	Engineering Economics & Financial Management	3	0	0	3
3	21ITITT4030	Operating systems	3	0	0	3
4	21ITITT4040	Design and Analysis of Algorithms	3	0	0	3
5	21ITITT4050	Software Engineering	3	0	0	3
6	21ITITL4060	Operating systems Lab	0	0	3	1.5
7	21ITITL4070	Design and Analysis of Algorithms Lab	0	0	3	1.5
8	21ITITL4080	Software Engineering Lab	0	0	3	1.5
9	21ITITS4090	MEAN Stack Technologies	2	0	0	2
Total			17	0	9	21.5

Semester V (Third Year III-I)

S. No.	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	PC	21ITTT5010	Automata Theory & Compiler Design	3	0	0	3
2	PC	21ITTT5020	Computer Networks	3	0	0	3
3	PC	21ITTT5030	Data Warehousing and Data Mining	3	0	0	3
4	PE-I	21ITTP504X	Professional Elective - I	3	0	0	3
5	OE-I	21ITXXO505X	Open Elective - I	3	0	0	3
6	PC	21ITL5060	Computer Networks Lab	0	0	3	1.5
7	PC	21ITL5070	Data Mining using Python Lab	0	0	3	1.5
8	SOC	21ITTS5080	Soft Skills & Aptitude Builder -I	1	0	2	2
9	MC	21ITTN5090	Intellectual Property Rights	2	0	0	0
Summer Internship 2 Months (Mandatory) after second year (to be evaluated during V semester)				0	0	3	1.5
Total Credits							21.5
Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)				4	0	0	4

Category	Credits
Professional Core Courses	12
Professional Elective courses	3
Open Elective Course	3
Skill oriented course	2
Summer Internship	1.5
Total Credits	21.5

Professional Elective – I	
Course Code	Course Title
21ITTP504A	Artificial Intelligence
21ITTP504B	Fundamentals of Data Science
21ITTP504C	Mobile Application Development

Semester VI (Third Year III-II)

S. No.	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	PC	21ITIT6010	Machine Learning	3	0	0	3
2	PC	21ITIT6020	Big Data Analytics	3	0	0	3
3	PC	21ITIT6030	Object Oriented Analysis and Design	3	0	0	3
4	PE-I	21ITIT604X	Professional Elective -II	3	0	0	3
5	OE-I	21ITXXO605X	Open Elective-II	3	0	0	3
6	PC	21ITITL6060	Machine Learning Lab	0	0	3	1.5
7	PC	21ITITL6070	OOAD Lab	0	0	3	1.5
8	PC	21ITITL6080	R Programming Lab	0	0	3	1.5
9	SOC	21ITITS6090	Soft Skills & Aptitude Builder -II	1	0	2	2
10	MC	21ITITN6100	Essence of Indian Traditional Knowledge	2	0	0	0
Total credits							21.5
Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)				4	0	0	4

Category	Credits
Professional core Courses	13.5
Professional Elective courses	3
Open Elective Course	3
Skill oriented course	2
Total Credits	21.5

Professional Elective - II	
Course Code	Course Title
21ITITP604A	Computer Graphics
21ITITP604B	User Interface
21ITITP604C	R Programming

Semester VII (Fourth Year IV-I)

S. No.	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	PC	21ITITP701X	Professional Elective -III	3	0	0	3
2	PC	21ITITP702X	Professional Elective -IV	3	0	0	3
3	PC	21ITITP703X	Professional Elective -V	3	0	0	3
4	OE-I	21ITXXO704X	Open Elective - III	3	0	0	3
5	OE-II	21ITXXO705X	Open Elective - IV	3	0	0	3
6	HS-I	21ITXXO706X	Humanities and Social Science Elective - I	3	0	0	3
7	SOC	21ITITS7070	Continuous Integration and Continuous Delivery Using DevOps	1	0	2	2
Summer Internship 2 Months (Mandatory) after third year (to be evaluated during VII semester)				0	0	3	3
Total Credits							23
Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)				4	0	0	4


Professional Elective - III	
Course Code	Course Title
21ITITP701A	Neural Networks and Soft Computing
21ITITP701B	Mobile Computing
21ITITP701C	Cloud Computing

Professional Elective - IV	
Course Code	Course Title
21ITITP702A	Software Testing Methodologies
21ITITP702B	IT Project Management
21ITITP702C	Software Architecture and Design Patterns

Professional Elective - V	
Course Code	Course Title
21ITITP703A	Deep Learning Techniques
21ITITP703B	Social Networks & Semantic Web
21ITITP703C	Intelligent Agents

Semester VIII (Fourth Year IV-II)

S. No.	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	Project	211ITTR8010	Project Work, Seminar and Internship in Industry	0	0	24	12
Total Credits							12


 Head of the Department
 Department of Information Technol.
 Sasi Institute of Technology & Engineering,
 TADEPALLIGUDEM, W.G.D., A.P.

Course Structure and Syllabus

SITE21 Regulations



sasi INSTITUTE OF
TECHNOLOGY &
ENGINEERING

Accredited by **NAAC** with "A" Grade
Recognised by **UGC** under section 2(f) & 12(B)
Approved by **AICTE - NEW Delhi**
Permanently Affiliated to **JNTUK, SBTET**
Ranked as "A" Grade by Govt. of A.P.

Department of Electronics & Communication Technology

Course Structure for SITE21

B.Tech. (Electronics and Communication Technology)

Course Structure for I B.Tech ECT Under the Regulations of SITE-21							
Semester -I							
S.No	Course Code	Subject Code	Course	L	T	P	C
1	BS	21CMMAT1010	Engineering Mathematics - I	3	0	0	3
2	BS	21ETPHT1020	Engineering Physics	3	0	0	3
3	BS	21CMCHT1030	Engineering Chemistry	3	0	0	3
4	ES	21CMCST1040	Programming for Problem Solving	3	0	0	3
5	ES	21ETMEL1050	Computer aided Engineering Graphics	2	0	2	3
6	BS LAB	21ETPHL1060	Engineering Physics Lab	0	0	3	1.5
7	BS LAB	21CMCHL1070	Engineering Chemistry Lab	0	0	3	1.5
8	ES LAB	21CMCSL1080	Programming for Problem Solving Lab	0	0	3	1.5
9	MC	21CMMSN1090	Constitution of India, Professional Ethics & Human Rights	2	0	0	0
TOTAL							19.5

Course Structure for I B.Tech ECT Under the Regulations of SITE-21							
Semester -II							
S.No	Course Code	Subject Code	Course	L	T	P	C
1	HS	21CMEGT2010	Technical English	3	0	0	3
2	BS	21CMMAT2020	Engineering Mathematics - II	3	0	0	3
3	ES	21CMEET2030	Basic Electrical Engineering	3	0	0	3
4	ES	21CMCST2040	Python Programming	1	0	4	3
5	ES	21ETETT2050	Network Analysis	3	0	0	3
6	HS LAB	21CMEGL2060	English Communication Skills Lab	0	0	3	1.5
7	ES LAB	21CMEEL2070	Basic Electrical Engineering Lab	0	0	3	1.5
8	ES LAB	21ETMEL2080	Engineering Workshop Lab	0	0	3	1.5
9	MC	21CMCHN2090	Environmental Science	2	0	0	0
TOTAL							19.5

Course Structure for II B.Tech ECT Under the Regulations of SITE-21							
Semester -III							
S.No	Course Code	Subject Code	Course	L	T	P	C
1	BS	21ECMAT3010	Engineering Mathematics - III	3	0	0	3
2	BS	21ETETT3020	Probability Theory & Stochastic Processes	3	0	0	3
3	PC	21ETETT3030	Semiconductor Devices	3	0	0	3

4	PC	21ETETT3040	Digital System Design	3	0	0	3
5	PC	21ETETT3050	Signals & Systems	3	0	0	3
6	PC	21ETETL3060	Semiconductor Devices Lab	0	0	3	1.5
7	PC	21ETETL3070	Digital System Design Lab	0	0	3	1.5
8	PC	21ETETL3080	Electrical circuits Lab	0	0	3	1.5
9	SOC	21ETETS3090	Skill Oriented Course –I (Data Science Using Python) OR (MATLAB FOR Engineers)	1	0	2	2
TOTAL							21.5

Course Structure for II B.Tech ECT Under the Regulations of SITE-21							
Semester -IV							
S.No	Course Code	Subject Code	Course	L	T	P	C
1	PC	21ETETT4010	Management Science	3	0	0	3
2	PC	21ETETT4020	EM Waves & Transmission Lines	3	0	0	3
3	PC	21ETETT4030	Principles of Communication Theory	3	0	0	3
4	PC	21ETETT4040	Electronic Circuit Analysis	3	0	0	3
5	HS	21CMMST4050	Control Systems	3	0	0	3
6	PC	21ETETL4060	Principles of Communication Lab	0	0	3	1.5
7	PC	21ETETL4070	Electronic Circuit Analysis Lab	0	0	3	1.5
8	PC	21ETETL4080	Signals and systems Lab	0	0	3	1.5
9	SOC	21ETETS4090	Skill Oriented Course -2 (Internet of Things (IOT)) OR (PCB Designing)	1	0	2	2
10	MC	21ETETN40A0	Pulse and Digital Circuits	2	0	0	0
Total							21.5
11		21ETETHXXX 21ETETMXXX	Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)	4	0	0	4

Course Structure for III B.Tech ECT Under the Regulations of SITE-21

Semester -V

S.No	Subject Code	Name of the subject	L	T	P	C
1	21ETETT5010	Digital Modulation and Coding	3	0	0	3
2	21ETETT5020	Microelectronics & VLSI Design	3	0	0	3
3	21ETETT5030	Linear IC Applications	3	0	0	3
4	21ETETP504X	Professional Elective-1	3	0	0	3
5	21ETXXO505X	Open Elective - 1	3	0	0	3
6	21ETETL5060	Digital Modulation and Coding Lab	0	0	3	1.5
7	21ETETL5070	Linear IC Applications Lab	0	0	3	1.5
8	21CMAHS5080	Skill advanced course/ soft skill course-3* (Soft Skills & Aptitude Builder-1).	1	0	2	2
10	21CMMSN5090	Biology for Engineers	2	0	0	0
11	21ETETR70A0	Summer Internship - 2 Months (Mandatory) after second year (to be evaluated during V semester	0	0	3	1.5
Total Semester Credits						21.5
12		Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)	4	0	0	4

Professional Elective-I

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21ETETP504A	Computer Organization and Microprocessors	3	0	0	3
2	21ETETP504B	Radiation Systems	3	0	0	3
3	21ETETP504C	System Design through Verilog	3	0	0	3

Open Elective-I

Candidate should select the subject from list of subjects offered by other departments

III B.Tech VI Semester

S.No	Subject Code	Name of the subject	L	T	P	C
1	21ETETT6010	Digital Signal Processing	3	0	0	3
2	21ETETT6020	Data Communications and Networking	3	0	0	3
3	21ETETT6030	Microcontrollers and Applications	3	0	0	3
4	21ETETP604X	Professional Elective-II	3	0	0	3
5	21ETXXO605X	Open Elective - II	3	0	0	3
6	21ETETL6060	Digital Signal Processing Lab	0	0	3	1.5
7	21ETETL6070	VLSI Design Lab	0	0	3	1.5
8	21ETETL6080	Microcontroller and Applications Lab	0	0	3	1.5
9	21ETETS6090	Skill advanced course/ soft skill course-4* Soft Skills and Aptitude Builder-2	1	0	2	2
10	21ETETN60A0	Essentials of Indian Traditional Knowledge	2	0	0	0
Total Semester Credits						21.5
11	H/M	Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)	4	0	0	4

Professional Elective-2

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21ETETP604A	Spread Spectrum Techniques	3	0	0	3
2	21ETETP604B	Advanced VLSI Design	3	0	0	3
3	21ETETP604C	Microwave Engineering	3	0	0	3

Open Elective-II

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21XXETO605A	Electronic Measurements	3	0	0	3
2	21XXETO605B	Biomedical Electronics	3	0	0	3
3	21XXETO605C	Embedded C Programming	3	0	0	3

IV B.Tech VII Semester

S.No	Subject Code	Name of the subject	L	T	P	C
1	21ETETP701X	Professional Elective -III	3	0	0	3
2	21ETETP702X	Professional Elective -IV	3	0	0	3
3	21ETETP703X	Professional Elective -V	3	0	0	3
4	21ETXXO704X	Open Elective - III	3	0	0	3
5	21ETXXO705X	Open Elective - IV	3	0	0	3
6	21ETXXO706X	Humanities and Social Science Elective	3	0	0	3
7	21ETETS707A	Skill Advanced Course (Microwave Circuits and Antenna Design using HFSS)	1	0	2	2
	21ETETS707B	Skill Advanced Course (Deep Learning for Image Processing Applications)				

8	21ETETR7080	Research Internship - 2 Months (Mandatory) after Third year (to be evaluated during V semester)	0	0	6	3
Total Semester Credits						23
9	H/M	Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)	4	0	0	4

Professional Elective-3

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21ETETP701A	Digital Image Processing	3	0	0	3
2	21ETETP701B	Telecommunications and Switching Networks	3	0	0	3
3	21ETETP701C	CAD Tools for VLSI	3	0	0	3

Professional Elective-4

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21ETETP702A	Bio-Medical Signal Processing	3	0	0	3
2	21ETETP702B	Global Position Systems	3	0	0	3
3	21ETETP702C	Optical Communication	3	0	0	3

Professional Elective-5

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21ETETP703A	RF System Design	3	0	0	3
2	21ETETP703B	Internet of Things	3	0	0	3
3	21ETETP703C	Radar and Satellite Communications	3	0	0	3

Open Elective-3

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21XXECO704A	Introduction to Photonics	3	0	0	3
2	21XXECO704B	IC Applications	3	0	0	3
3	21XXECO704C	Nano Electronics	3	0	0	3

Open Elective-4

S.No	Subject Code	Name of the subject	L	T	P	Cr
1	21XXECO705A	Remote Sensing and GIS	3	0	0	3
2	21XXECO705B	Satellite Communications	3	0	0	3
3	21XXECO705C	Image Processing and Pattern Recognition	3	0	0	3

IV B.Tech. VIII-Semester

Si.No	Subject Code	Name of the subject	L	T	P	Cr
1	21ECECR8010	Project Project work, seminar and internship in industry	0	0	24	12
Total						12


 Head of the Department
 Head of the Dept-ECT
 Sasi Institute of Technology & Engineering

SITE21

COURSE STRUCTURE

for

Computer Science and Engineering -

Artificial Intelligence

&

Machine Learning

**COURSE STRUCTURE for B. Tech
Semester I (First year)**

S.No	Category	Subject Code	Course	Hours			Credits
				L	T	P	
1	HS	21CMEGT1010	Technical English	3	0	0	3
2	BS	21CMMAT1020	Engineering Mathematics – I	3	0	0	3
3	ES	21CMEET1030	Basic Electrical Engineering	3	0	0	3
4	ES	21CMCST1040	Programming for Problem Solving	3	0	0	3
5	ES	21CSNEL1050	Computer Aided Engineering Graphics	2	0	2	3
6	HS	21CMEGL1060	English Communication Skills Lab	0	0	3	1.5
7	ES	21CMEEL1070	Basic Electrical Engineering Lab	0	0	3	1.5
8	ES	21CMCSL1080	Programming for Problem Solving Lab	0	0	3	1.5
9	MC	21CMESN1090	Environmental Science	2	0	0	0
TOTAL				16	0	11	19.5

Category	CREDITS
Basic Science Courses	3.0
Humanities Science Courses	4.5
Engineering Science courses	12.0
TOTAL CREDITS	19.5

Semester II (First year I -II)

S. No	Category	Subject Code	Course	Hours			Credits
				L	T	P	
1	BS	21CMMAT2010	Engineering Mathematics - II	3	0	0	3
2	BS	21CSPHT2020	Engineering Physics	3	0	0	3
3	BS	21CMCHT2030	Engineering Chemistry	3	0	0	3
4	ES	21CMCST2040	Python Programming	1	0	4	3
5	ES	21CSCST2050	Data Structures	3	0	0	3
6	BS	21CSPHL2060	Engineering Physics Lab	0	0	3	1.5
7	BS	21CMEEL2070	Engineering Chemistry Lab	0	0	3	1.5
8	ES	21CSCSL2080	Data Structures Lab	0	0	3	1.5
9	MC	21CMMSN2090	Constitution of India, Professional Ethics & Human Rights	2	0	0	0
TOTAL				16	0	11	19.5

Category	CREDITS
Basic Science Courses	12.0
Engineering Science courses	7.5
TOTAL CREDITS	19.5

Semester III (Second year II-I)

S. No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	BS	21CAMAT3010	Probability Distributions & Statistical Methods	3	0	0	3
2	HS	21CMMST3020	Engineering Economics and Financial Management	3	0	0	3
3	ES	21CACAT3030	Digital Electronics & Computer Organization	3	0	0	3
4	PC	21CACAT3040	Java Programming	3	0	0	3
5	PC	21CACAT3050	Introduction to AI&ML	3	0	0	3
6	PC	21CACAL3060	Digital Electronics & Computer Organization Lab	0	0	3	1.5
7	PC	21CACAL3070	Java Programming Lab	0	0	3	1.5
8	ES	21CACAL3080	Introduction to AI&ML Lab	0	0	3	1.5
9	SOC	21CACAS3090	Web Application Development - I	0	0	3	2
10	MC	21CACAN3100	Intellectual Property Rights	2	0	0	0
			Total credits				21.5

Category	CREDITS
Basic Science Courses	3.0
Professional core Courses	9
Engineering Science Courses	4.5
Humanities and social sciences	3
Skill oriented course	2
TOTAL CREDITS	21.5

Semester IV (Second year II-II)

S.No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	BS	21CAMAT4010	Discrete Mathematics	3	0	0	3
2	PC	21CACAT4020	Data Base Management Systems	3	0	0	3
3	PC	21CACAT4030	Design and Analysis of Algorithms	3	0	0	3
4	PC	21CACAT4040	Automata Theory & Compiler Design	3	0	0	3
5	PC	21CACAT4050	Operating Systems	3	0	0	3
6	PC	21CACAL4060	Data Base Management Systems Lab	0	0	3	1.5
7	PC	21CACAL4070	Operating Systems and LINUX Lab	0	0	3	1.5
8	PC	21CACAL4080	Design and Analysis of Algorithms	0	0	3	1.5
9	SOC	21CACAS4090	Web Application Development-II	1	0	2	2
Total credits							21.5

Category	CREDITS
Basic Science Courses	3
Professional core Courses	16.5
Skill oriented course	2
Internship	
TOTAL CREDITS	21.5

Semester V (Third year III-I)

S.No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	PC	21CACAT5010	Software Engineering	3	0	0	3
2	PC	21CACAT5020	Data Warehousing and Mining	3	0	0	3
3	PC	21CACAT5030	Computer Networks	3	0	0	3
4	PE	21CACAP504X	Professional Elective -I	3	0	0	3
5	OE	21CAXXO505 X	Open Elective - I	3	0	0	3
6	PC	21CACAL5060	Software Engineering Lab	0	0	3	1.5
7	PC	21CACAL5070	Data Mining Lab	0	0	3	1.5
8	SOC	21CMAHS508 0	Soft Skills & Aptitude Builder – 1	2	0	0	2
9	PR	21CACAR509 0	Summer Internship (Mandatory) after II year (to be evaluated during V Semester)	0	0	0	1.5
10	MC	21CACAN510 00	Biology for Engineers	2	0	0	0
Total credits							21.5

Category	CREDITS
Professional core Courses	12
Open Electives	3
Professional Electives	3
Skill oriented course	2
Summer Internship	1.5
TOTAL CREDITS	21.5

Professional Elective – I	
Code	Course Title
21CACAP504A	Object Oriented Analysis and Design
21CACAP504B	Computer Vision
21CACAP504C	DevOps

Semester VI (Third year III-II)

S.No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	PC	21CACAT6010	Artificial Intelligence	3	0	0	3
2	PC	21CACAT6020	Machine Learning	3	0	0	3
3	PC	21CACAT6030	Hadoop & Big Data	3	0	0	3
4	PE	21CACAP604X	Professional Elective -II	3	0	0	3
5	PE	21CACAP605X	Professional Elective -III	3	0	0	3
6	OE	21CAXXO606 X	Open Elective – II	3	0	0	3
7	PC	21CACAL6070	Machine Learning Lab	0	0	3	1.5
8	SOC	21CMAHS608 0	Soft Skills & Aptitude Builder – 2	2	0	0	2
9	MC	21CACAN6090	Essence of Indian Traditional Knowledge	2	0	0	0
						Total credits	21.5

Category	CREDITS
Professional core Courses	10.5
Open Electives	3
Professional Electives	6
Skill oriented course	2
Research Internship	
TOTAL CREDITS	21.5

Professional Elective – II	
Code	Course Title
21CACAP604A	Software Project Management
21CACAP604B	Internet of Things
21CACAP604C	Network Programming

Professional Elective – III	
Code	Course Title
21CACAP605A	Software Quality Assurance
21CACAP605B	Distributed Systems
21CACAP605C	Semantic Web

Semester VII (Fourth year IV-I)

S.No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	HS	21CAMST7010	Management Science	3	0	0	3
2	PC	21CACAT7020	Deep Learning	3	0	0	3
3	PE	21CACAP703X	Professional Elective -IV	3	0	0	3
4	PE	21CACAP704X	Professional Elective -V	3	0	0	3
5	OE	21CAXXO705X	Open Elective – III	3	0	0	3
6	OE	21CAXXO706X	Open Elective – IV	3	0	0	3
7	SOC	21CACAS7070	Natural Language Processing with Python	1	0	2	2
8	PR	21CACAR7080	Industrial/ Research internship 2 months (Mandatory) after III year (to be evaluated during VII Semester)	0	0	0	3
Total credits							23

Category	CREDITS
Professional core Courses	3
Open Electives	6
Professional Electives	6
Humanities and social sciences	3
Skill oriented course	2
Research Internship	3
TOTAL CREDITS	23

Professional Elective – IV	
Code	Course Title
21CACAP703A	Software Testing Methodologies
21CACAP703B	Data Visualisation
21CACAP703C	Cloud Computing

Professional Elective – V	
Code	Course Title
21CACAP704A	Blockchain Technologies
21CACAP704B	NOSQL Databases
21CACAP704C	Reinforcement Learning

Semester VIII (Fourth year IV-II)

S.No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	PR	21CACAR801 0	Major Project Work	0	0	24	12
Total credits							12

Category	CREDITS
Project	12
TOTAL CREDITS	12

SITE21

COURSE STRUCTURE

for

**Computer Science and Engineering –
Data Structures**

COURSE STRUCTURE for B. Tech**Semester I (First year)**

S.No	Category	Subject Code	Course	Hours			Credits
				L	T	P	
1	HS	21CMEGT1010	Technical English	3	0	0	3
2	BS	21CMMAT1020	Engineering Mathematics – I	3	0	0	3
3	ES	21CMEET1030	Basic Electrical Engineering	3	0	0	3
4	ES	21CMCST1040	Programming for Problem Solving	3	0	0	3
5	ES	21CSNEL1050	Computer Aided Engineering Graphics	2	0	2	3
6	HS	21CMEGL1060	English Communication Skills Lab	0	0	3	1.5
7	ES	21CMEEL1070	Basic Electrical Engineering Lab	0	0	3	1.5
8	ES	21CMCSL1080	Programming for Problem Solving Lab	0	0	3	1.5
9	MC	21CMESN1090	Environmental Science	2	0	0	0
TOTAL				16	0	11	19.5

Category	CREDITS
Basic Science Courses	3.0
Humanities Science Courses	4.5
Engineering Science courses	12.0
TOTAL CREDITS	19.5

Semester II (First year I -II)

S. No	Category	Subject Code	Course	Hours			Credits
				L	T	P	
1	BS	21CMMAT2010	Engineering Mathematics - II	3	0	0	3
2	BS	21CSPHT2020	Engineering Physics	3	0	0	3
3	BS	21CMCHT2030	Engineering Chemistry	3	0	0	3
4	ES	21CMCST2040	Python Programming	1	0	4	3
5	ES	21CSCST2050	Data Structures	3	0	0	3
6	BS	21CSPHL2060	Engineering Physics Lab	0	0	3	1.5
7	BS	21CMEEL2070	Engineering Chemistry Lab	0	0	3	1.5
8	ES	21CSCSL2080	Data Structures Lab	0	0	3	1.5
9	MC	21CMMSN2090	Constitution of India, Professional Ethics & Human Rights	2	0	0	0
TOTAL				16	0	11	19.5

Category	CREDITS
Basic Science Courses	12.0
Engineering Science courses	7.5
TOTAL CREDITS	19.5

Semester III (Second year II-I)

S. No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	BS	21CDMAT3010	Probability Distributions & Statistical Methods	3	0	0	3
2	HS	21CMMST3020	Engineering Economics and Financial Management	3	0	0	3
3	ES	21CDCDT3030	Digital Electronics & Computer Organization	3	0	0	3
4	PC	21CDDCT3040	Java Programming	3	0	0	3
5	PC	21CDCDT3050	Fundamentals of Data Science	3	0	0	3
6	ES	21CDCDL3060	Digital Electronics & Computer Organization Lab	0	0	3	1.5
7	PC	21CDCDL3070	Java Programming Lab	0	0	3	1.5
8	PC	21CDCDL3080	Fundamentals of Data Science Lab	0	0	3	1.5
9	SOC	21CDCDS3090	Web Application Development -I	0	0	3	2
10	MC	21CDCDN3100	Intellectual Property Rights	2	0	0	0
Total credits							21.5

Category	CREDITS
Basic Science Courses	3.0
Professional core Courses	9
Engineering Science Courses	4.5
Humanities and social sciences	3
Skill oriented course	2
TOTAL CREDITS	21.5

Semester IV (Second year II-II)

S.No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	BS	21CDMAT4010	Discrete Mathematics	3	0	0	3
2	PC	21CDCDT4020	Data Base Management Systems	3	0	0	3
3	PC	21CDCDT4030	Design and Analysis of Algorithms	3	0	0	3
4	PC	21CDCDT4040	Automata Theory & Compiler Design	3	0	0	3
5	PC	21CDCDT4050	Operating Systems	3	0	0	3
6	PC	21CDCDL4060	Data Base Management Systems Lab	0	0	3	1.5
7	PC	21CDCDL4070	Operating Systems And LINUX Lab	0	0	3	1.5
8	PC	21CDCDL4080	Design and Analysis of Algorithms Lab	0	0	3	1.5
9	SOC	21CDCDS4090	Web Application Development-II	2	0	0	2
10	PR		Summer Internship				
Total credits							21.5

Category	CREDITS
Basic Science Courses	3
Professional core Courses	16.5
Skill oriented course	2
Summer Internship	
TOTAL CREDITS	21.5

Semester V (Third year III-I)

S.No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	PC	21CDCDT5010	Software Engineering	3	0	0	3
2	PC	21CDCDT5020	Data Warehousing and Mining	3	0	0	3
3	PC	21CDCDT5030	Computer Networks	3	0	0	3
4	PE	21CDCDP504X	Professional Elective -I	3	0	0	3
5	OE	21CDXXO505X	Open Elective - I	3	0	0	3
6	PC	21CDCDL5060	Software Engineering Lab	0	0	3	1.5
7	PC	21CDCDL5070	Data Mining Lab	0	0	3	1.5
8	SOC	21CMAHS5080	Soft Skills & Aptitude Builder - 1	2	0	0	2
9	PR	21CDCDR5090	Summer Internship(Mandatory) after II year (to be evaluated during V Semester)	0	0	0	1.5
10	MC	21CDCDN5100	Biology for Engineers	2	0	0	0
Total credits							21.5

Category	CREDITS
Professional core Courses	12
Open Electives	3
Professional Electives	3
Skill oriented course	2
Summer Internship	1.5
TOTAL CREDITS	21.5

Professional Elective - I	
Code	Course Title
A	Object Oriented Analysis and Design
B	Social Networks & Semantic Web
C	Information Security System

Semester VI (Third year III-II)

S.No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	PC	21CDCDT6010	Artificial Intelligence	3	0	0	3
2	PC	21CDCDT6020	Machine Learning	3	0	0	3
3	PC	21CDCDT6030	Data Wrangling in Data Science	3	0	0	3
4	PE	21CDCDP604X	Professional Elective -II	3	0	0	3
5	PE	21CDCDP605X	Professional Elective -III				3
6	OE	21CDXXO606X	Open Elective - II	3	0	0	3
7	PC	21CDCDL6070	Machine Learning Lab	0	0	3	1.5
8	SOC	21CMAHS6080	Soft Skills & Aptitude Builder - 2	0	0	3	2
9	PR		Research Internship				
10	MC	21CDCDN6090	Essence of Indian traditional Knowledge	2	0	0	0
Total credits							21.5

Category	CREDITS
Professional core Courses	10.5
Open Electives	3
Professional Electives	6
Skill oriented course	2
TOTAL CREDITS	21.5

Professional Elective - II	
Code	Course Title
A	Software Project Management
B	Information Retrieval System
C	Block Chain Technologies

Professional Elective - III	
Code	Course Title
A	Software Quality Assurance
B	Mining Massive Datasets
C	Mobile Application Development

Semester VII (Fourth year IV-I)

S.No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	HS	21CDMST7010	Management Science	3	0	0	3
2	PC	21CDCDT7020	ETL Principles	3	0	0	3
3	PE	21CDCDP703X	Professional Elective – IV	3	0	0	3
4	PE	21CDCDP704X	Professional Elective -V	3	0	0	3
5	OE	21CDXXO705X	Open Elective – III	3	0	0	3
6	OE	21CDXXO706X	Open Elective – IV	3	0	0	3
7	SOC	21CDCDS7070	ETL Design Procedures - Spark	2	0	0	2
8	PR	21CDCDR7080	Industrial/ Research internship 2 months(Mandatory) after III year (to be evaluated during VII Semester)	0	0	0	3
Total credits							23

Category	CREDITS
Professional core Courses	3
Humanities & social Sciences	3
Open Electives	6
Professional Electives	6
Skill oriented course	2
Research Internship	3
TOTAL CREDITS	23

Professional Elective – IV	
Code	Course Title
A	Software Testing Methodologies
B	Data Visualization
C	Cloud Computing

Professional Elective – V	
Code	Course Title
A	Agile Software Development
B	Deep Learning
C	Introduction to Cyber Security

Semester VIII (Fourth year IV-II)

S.No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	PR	21CDCDR8010	Major Project Work	0	0	24	12
Total credits							12

Category	CREDITS
Project	12
TOTAL CREDITS	12

OPEN ELECTIVES COURSES OFFERED BY CSE (DATA SCIENCE)
TO
OTHER DEPARTMENTS

V SEM OPEN ELECTIVE COURSES

S. No	Subject Code	Name of the subject	L	T	P	CREDITS
1.	21XXCSO50XA	Data Structures through C	3	0	0	3
2.	21XXCSO50XB	Operating Systems Concepts	3	0	0	3
3.	21XXCSO50XC	Java Programming	3	0	0	3

VI SEM OPEN ELECTIVE COURSES

S. No	Subject Code	Name of the subject	L	T	P	CREDITS
1.	21XXCSO60XA	R Programming	3	0	0	3
2.	21XXCSO60XB	Designing Data Base Management Systems	3	0	0	3
3.	21XXCSO60XC	APP Technologies	3	0	0	3

VII SEM OPEN ELECTIVE COURSES

S. No	Subject Code	Name of the subject	L	T	P	CREDITS
1.	21XXCSO70XA	Web Technologies	3	0	0	3
2.	21XXCSO70XB	Artificial Intelligence	3	0	0	3
3.	21XXCSO70XC	Software Engineering	3	0	0	3

SITE21

COURSE STRUCTURE

for

Sem-IV to Sem-VIII

**Computer Science and Engineering - IoT
& Cyber Security with Block Chain
Technology**

1. The first part of the report is a general introduction to the subject of the study. It discusses the importance of the research and the objectives of the study. It also provides a brief overview of the methodology used in the study.

2. The second part of the report is a detailed description of the methodology used in the study. It discusses the data collection methods, the sample size, and the statistical methods used to analyze the data.

3. The third part of the report is a discussion of the results of the study. It discusses the findings of the study and compares them to the results of previous studies. It also discusses the implications of the findings for practice and policy.

4. The fourth part of the report is a conclusion and recommendations. It summarizes the findings of the study and provides recommendations for further research and practice.

Semester IV (Second year II-II)

S.No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	BS	21CIMAT4010	Discrete Mathematics	3	0	0	3
2	PC	21CICIT4020	Data Base Management Systems	3	0	0	3
3	PC	21CICIT4030	Design and Analysis of Algorithms	3	0	0	3
4	PC	21CICIT4040	Automata Theory & Compiler Design	3	0	0	3
5	PC	21CICIT4050	Operating Systems	3	0	0	3
6	PC	21CICIL4060	Data Base Management Systems Lab	0	0	3	1.5
7	PC	21CICIL4070	Operating Systems & LINUX LAB	0	0	3	1.5
8	PC	21CICIL4080	Design and Analysis of Algorithms Lab	0	0	3	1.5
9	SOC	21CICIS4090	Web Application Development-II	2	0	0	2
10	PR	21CICIR4100	Summer Internship				
Total credits							21.5

Category	CREDITS
Basic Science Courses	3
Professional core Courses	16.5
Skill oriented course	2
Summer Internship	
TOTAL CREDITS	21.5

Semester V (Third year III-I)

S.No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	PC	21CICIT5010	Software Engineering	3	0	0	3
2	PC	21CICIT5020	Introduction to Cybersecurity	3	0	0	3
3	PC	21CICIT5030	Computer Networks	3	0	0	3
4	PE	21CICIP504X	Professional Elective -I	3	0	0	3
5	OE	21CIXXO505 X	Open Elective - I	3	0	0	3
6	PC	21CICIL5060	Software Engineering Lab	0	0	3	1.5
7	PC	21CICIL5070	Cybersecurity Lab	0	0	3	1.5
8	SOC	21CICIS5080	Soft Skills & Aptitude Builder - 1	2	0	0	2
9	PR	21CICIR5090	Summer Internship (Mandatory) after II year (to be evaluated during V Semester)	0	0	0	1.5
9	MC	21CICIN5100	Biology for Engineers	2	0	0	0
Total credits							21.5

Category	CREDITS
Professional core Courses	12
Open Electives	3
Professional Electives	3
Skill oriented course	2
Summer Internship	1.5
TOTAL CREDITS	21.5

Professional Elective - I	
Code	Course Title
21CICIP504A	Data Warehousing and Mining
21CICIP504B	Wireless AD-HOC Networks
21CICIP504C	Computer Graphics

Semester VI (Third year III-II)

S.No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	PC	21CICIT6010	Privacy and Security in IOT	3	0	0	3
2	PC	21CICIT6020	Cryptography & Network Security	3	0	0	3
3	PC	21CICIT6030	Block chain Technologies	3	0	0	3
4	PE	21CICIP604X	Professional Elective -II	3	0	0	3
5	PE	21CICIP605X	Professional Elective - III				
6	OE	21CIXXO606X	Open Elective - II	3	0	0	3
7	PC	21CICIL6070	Cryptography & Network Security Lab	0	0	3	1.5
8	SOC	21CMASH6080	Soft Skills & Aptitude Builder - 2	0	0	3	2
9	PR	21CICIR6090	Research Internship				
10	MC	21CICIN6100	Essence Of Indian Traditional Knowledge	2	0	0	0
Total credits							21.5

Category	CREDITS
Professional core Courses	10.5
Open Electives	3
Professional Electives	6
Skill oriented course	2
Research Internship	
TOTAL CREDITS	21.5

Professional Elective - II	
Code	Course Title
21CICIP604A	Software Project Management
21CICIP604B	Mining massive datasets
21CICIP604C	Intrusion Detection Systems

Professional Elective - III	
Code	Course Title
21CICIP605A	Software Quality Assurance
21CICIP605B	Machine Learning
21CICIP605C	Mobile Application Development

Semester VII (Fourth year IV-I)

S.No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	PC	21CICIT7010	Cyber Crime Investigation and DigitalForensics	3	0	0	3
2	HS	21CMMST7020	Management Science	3	0	0	3
3	PE	21CICIP703X	Professional Elective - IV	3	0	0	3
4	PE	21CICIP704X	Professional Elective - V	3	0	0	3
5	OE	21CIXXO705X	Open Elective - III	3	0	0	3
6	OE	21CIXXO706X	Open Elective - IV	3	0	0	3
7	SOC	21CICIS7070	IoT Lab	2	0	0	2
8	PR		Industrial/ Research internship 2 months(Mandatory) after III year (to be evaluated during VII Semester)	0	0	0	0
Total credits							23

Category	CREDITS
Professional core Courses	6
Open Electives	6
Professional Electives	6
Skill oriented course	2
Research Internship	3
TOTAL CREDITS	23

Professional Elective - IV	
Code	Course Title
21CICIP703A	Software Testing
21CICIP703B	Deep Learning
21CICIP703C	Cloud Computing

Professional Elective - V	
Code	Course Title
21CICIP704A	Agile Software Development
21CICIP704B	Artificial Intelligence
21CICIP704C	Data Science

Semester VIII (Fourth year IV-II)

S.No	Category	Code	Course Title	Hours			Credits
				L	T	P	
1	PR	21CICIR8010	Major Project Work	0	0	24	12
Total credits							12

Category	CREDITS
Project	12
TOTAL CREDITS	12


COURSE STRUCTURE AND DETAILED SYLLABUS

SITE 21 REGULATIONS

for

**Artificial Intelligence and
Machine Learning**

**With Effective from the
academic year 2021-22**

A handwritten signature in black ink, appearing to be 'John', located in the bottom right corner of the page.



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Recognised by **UGC** under section 2(f) & 12(B)
Approved by **AICTE** - NEW Delhi
Permanently Affiliated to **JNTUK, SBTET**
Ranked as "**A**" Grade by Govt. of A.P.

Department of Artificial Intelligence & Machine Learning

Course Structure for I B.Tech AIML Under the Regulations of SITE-21							
Semester -I							
S.No	Course Code	Subject Code	Course	L	T	P	C
1	HS	21CMMAT1010	Engineering Mathematics – I	3	0	0	3
2	BS	21AMPHT1020	Engineering Physics	3	0	0	3
3	ES	21CMCHT1030	Engineering Chemistry	3	0	0	3
4	ES	21CMCST1040	Programming for Problem Solving	3	0	0	3
5	ES	21AMMEL1050	Computer Aided Engineering Graphics	2	0	2	3
6	HS	21AMPHL1060	Engineering Physics Lab	0	0	3	1.5
7	ES	21CMCHL1070	Engineering Chemistry Lab	0	0	3	1.5
8	ES	21CMCSL1080	Programming for Problem Solving Lab	0	0	3	1.5
9	MC	21CMMSN1090	Constitution of India, Professional Ethics & Human Rights	2	0	0	0
TOTAL				16	0	11	19.5

Course Structure for I B.Tech AIML Under the Regulations of SITE-21							
Semester -II							
S.No	Course Code	Subject Code	Course	L	T	P	C
1	BS	21CMEGT2010	Technical English	3	0	0	3
2	BS	21CMMAT2020	Engineering Mathematics - II	3	0	0	3
3	BS	21CMEET2030	Basic Electrical Engineering	3	0	0	3
4	ES	21CMCST2040	Python Programming	1	0	4	3
5	ES	21AMAMT2050	Data Structures	3	0	0	3
6	BS	21CMEGL2060	English Communication Skills Lab	0	0	3	1.5
7	BS	21CMEEL2070	Basic Electrical Engineering Lab	0	0	3	1.5
8	ES	21AMAML2080	DS Lab	0	0	3	1.5
9	MC	21CMCHN2090	Environmental Science	2	0	0	0
TOTAL				16	0	11	19.5



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Department of Artificial Intelligence & Machine Learning

Proposed Course Structure for II B.Tech AIML Under the Regulations of SITE-21

Semester -III

S.No	Subject Code	Course Code	Course	L	T	P	C
1	BS	21AMMAT3010	Probability and statistics	3	0	0	3
2	PC	21AMAMT3020	Foundations of Artificial Intelligence	3	0	0	3
3	PC	21AMAMT3030	Database Management Systems	3	0	0	3
4	PC	21AMAMT3040	Operating Systems	3	0	0	3
5	PC	21AMAMT3050	Analog & Digital Electronics	3	0	0	3
6	PC	21AMAMT3060	Artificial Intelligence Lab	0	0	3	1.5
7	PC	21AMAMT3070	Operating Systems Lab	0	0	3	1.5
8	PC	21AMAMT3080	Database Management Systems Lab	0	0	3	1.5
9	SOC	21AMAMC3090	Python for Data Science	1	0	2	2
10	MC	21CMBIN3100	MC: Biology for Engineers	3	0	0	0
TOTAL							21.5

Proposed Course Structure for II B.Tech AIML Under the Regulations of SITE-21

Semester -IV

S. No	Subject Code	Course Code	Course	L	T	P	C
1	BS	21AMMAT4010	Discrete Mathematics	3	0	0	3
2	PC	21AMAMT4020	Introduction to Machine Learning	3	0	0	3
3	PC	21AMAMT4030	Design and Analysis of Algorithms	3	0	0	3
4	ES	21AMAMT4040	Java Programming	3	0	0	3
5	PC	21AMAMT4050	Optimization Techniques for AI	3	0	0	3
6	PC	21AMAML4060	Machine Learning Lab	0	0	3	1.5
7	PC	21AMAML4070	Design and Analysis of Algorithms Lab	0	0	3	1.5
8	ES	21AMAML4080	Java Programming Lab	0	0	3	1.5
9	SOC	21AMAMC4090	SOC: Fundamentals of Programming and Simulation using MATLAB for AI	1	0	2	2
TOTAL							21.5

Internship 2 Months (Mandatory) during summer vacation



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Proposed Course Structure for III B.Tech AIML Under the Regulations of SITE-21
Semester -V

S. No	Subject Code	Course Code	Course	L	T	P	C
1	HSS	21CMMST5010	Engineering Economics & Financial Management	3	0	0	3
2	PC	21AMAMT5020	Computer Networks	3	0	0	3
3	PC	21AMAMT5030	Software Engineering	3	0	0	3
4	PE	21AMAMT504X	Professional Elective-1	3	0	0	3
5	OE	21AMXXT5050	Open Elective-1	3	0	0	3
6	PC	21AMAML5060	Computer Networks Lab	0	0	3	1.5
7	PC	21AMAML5070	Software Engineering Lab	0	0	3	1.5
8	SOC	21CMAHS5080	Soft Skills & Aptitude builder I	1	0	2	2
9	MC	21AMAMN5090	MC: Intellectual Property Rights	2	0	0	0
10		21AMAMR5100	Summer Internship (Mandatory) after second year (to be evaluated during V semester)	0	0	0	1.5
TOTAL							21.5
Honors/Minor courses (The hours distribution can be 3-0-2 or 3-1-0 also)				4	0	0	4

Professional Electives I

S.No.	Course Code	Course
1.	21AMAMT504A	Graph Theory
2.	21AMAMT504B	Web Programming
3.	21AMAMT504C	Computer Vision & Robotics
4.	21AMAMT504D	Computer Graphics



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Department of Artificial Intelligence & Machine Learning

**Proposed Course Structure for III B.Tech AIML Under the Regulations of SITE-21
 Semester -VI**

S.No	Subject Code	Course Code	Course	L	T	P	C
1	BS	21AMAMT6010	Deep learning	3	0	0	3
2	BS	21AMAMT6020	Compiler Design	3	0	0	3
3	PC	21AMAMT6030	Natural Language Processing	3	0	0	3
4	PC	21AMAMT604X	Professional Elective -2	3	0	0	3
5	PC	21AMAMT6050	Open Elective -2	3	0	0	3
6	PC	21AMAMT6060	Deep learning Lab	0	0	3	1.5
7	PC	21AMAMT6070	Compiler Design Lab	0	0	3	1.5
8	PC	21AMAMT6080	Natural Language Processing Lab	0	0	3	1.5
9	SOC	21AMAMC6090	Soft Skills & Aptitude builder II	2	0	0	2
10	MC	21AMAMC6100	Mandatory Course : Essence of Indian Traditional Knowledge	2	0	0	0
TOTAL							21.5

Professional Electives II

S.No.	Course Code	Course
1.	21AMAMT604A	Software Testing Methodologies
2.	21AMAMT604B	Information Retrieval Systems
3.	21AMAMT604C	Cryptography and Network Security
4.	21AMAMT604D	Pattern Recognition



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Department of Artificial Intelligence & Machine Learning

**Proposed Course Structure for IV B.Tech AIML Under the Regulations of SITE-21
Semester -VII**

S.No	Subject Code	Course Code	Course	L	T	P	C
1	PC	21AMAMT701X	Professional Elective-3	3	0	0	3
2	PC	21AMAMT702X	Professional Elective-4	3	0	0	3
3	PC	21AMAMT703X	Professional Elective-5	3	0	0	3
4	PC	21AMXXT704X	Open Elective-3	3	0	0	3
5	PC	21AMXXT705X	Open Elective-4	3	0	0	3
6	HS	21AMMST7060	Management Science	3	0	0	3
7	SOC	21AMAMC7070	Skill Oriented Course	1	0	2	2
		21AMAMR7080	Industrial/Research Internship 2 Months (Mandatory) after third year (to be evaluated during VII semester	0	0	0	3
TOTAL							23

Professional Electives III

S.No.	Course Code	Course
1.	21AMAMT701A	Internet of Things
2.	21AMAMT701B	Reinforcement Learning
3.	21AMAMT701C	DevOps
4.	21AMAMT701D	Block Chain Technologies

Professional Electives IV

S.No.	Course Code	Course
1.	21AMAMT702A	Robotic Process Automation
2.	21AMAMT702B	Expert Systems
3.	21AMAMT702C	Big Data Analytics
4.	21AMAMT702D	Soft Computing

Professional Electives V

S.No.	Course Code	Course
1.	21AMAMT703A	Cloud Computing
2.	21AMAMT703B	Data Mining & Data Warehousing
3.	21AMAMT703C	AI chatbots
4.	21AMAMT703D	Semantic Web



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Department of Artificial Intelligence & Machine Learning

Proposed Course Structure for IV B.Tech AIML Under the Regulations of SITE-21							
Semester -VIII							
S.No	Subject Code	Course Code	Course	L	T	P	C
1	PC	21AMMAT5010	Project Work	3	0	0	12
TOTAL							12

Open Electives: (Offered by AI&ML Department for other department students)

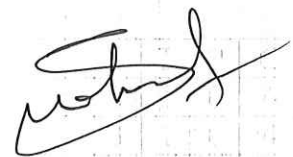
S. No	Subject Code	Name of the subject	L	T	P	C
1.	21XXAMOXXXA	Artificial Intelligence	3	0	0	3
2.	21XXAMOXXXB	Operating Systems Concepts	3	0	0	3
3.	21XXAMOXXXC	Designing Database Management Systems	3	0	0	3
4.	21XXAMOXXXD	R Programming	3	0	0	3
5.	21XXAMOXXXE	Java Programming	3	0	0	3
6.	21XXAMOXXXF	Introduction to Machine Learning	3	0	0	3
7.	21XXAMOXXXG	Internet of Things	3	0	0	3
8.	21XXAMOXXXH	Optimization Techniques for AI	3	0	0	3

Minor Courses

S.No	Course Code	Name of the Course	L	T	P	C
01	21YYAMMXXXX	Soft Computing	3	1	0	4
02	21YYAMMXXXX	Introduction to AI & Machine Learning	3	1	0	4
3	21YYAMMXXXX	Introduction to Data Science	3	1	0	4
4	21YYAMMXXXX	Deep Learning	3	1	0	4
5	21YYAMMXXXX	IOT	3	1	0	4
6	21YYAMMXXXX	EXPERT SYSTEMS	3	1	0	4
Total Credits (Any 4 Courses)						16

NOTE:

- TWO, NPTEL courses of minimum 12-week duration covering a total of 4 credits (offered by AI & ML Department) should be completed, Student can register at any time after the completion of II B.Tech. I Sem.





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Department of Management Science

MBA I Semester Proposed Course structure for the Academic Year 2021-2022

S. No	Subject Code	Title of the Course	L	P	C	Internal	External	Total
1.	21MS11T1	Principles of Management	4	-	4	40	60	100
2.	21MS11T2	Managerial Economics	4	-	4	40	60	100
3.	21MS11T3	Accounting for Managers	4	-	4	40	60	100
4.	21MS11T4	Managerial Communication & Soft Skills	4	-	4	40	60	100
5.	21MS11T5	Quantitative Analysis for Business Decisions	4	-	4	40	60	100
6.	21MS11T6	Business Environment	4	-	4	40	60	100
7.	21CS11L7	Information Technology Lab	-	3	2	40	60	100
8.	21MS11C8	Case Study – I	2	-	1	-	-	-
Total Credits for I Semester (A)					27	280	420	700

Head of the Department
Department of Management Science,
Sasi Institute of Technology & Engineering
Tadepalligudem, W.G. Dist., A.P.



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MBA II Semester Proposed Course structure for the Academic Year 2021-2022

S. No	Subject Code	Title of the Course	L	P	C	Internal	External	Total	
1.	21MS12T1	Financial Management	4	-	4	40	60	100	
2.	21MS12T2	Marketing Management	4	-	4	40	60	100	
3.	21MS12T3	Human Resource Management	4	-	4	40	60	100	
4.	21MS12T4	Production & Operations Management	4	-	4	40	60	100	
5.	21MS12T5	Research Methodology	4	-	4	40	60	100	
6.	21MS12T6	Organisational Behaviour	4	-	4	40	60	100	
7.	21MS12P7	Mini Project	2	-	2	-	-	100	
8.	21MS12C8	Case Study – II	2	-	1	-	-	-	
Total Credits for II Semester (B)						27	240	360	700

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MBA III Semester Proposed Course structure for the Academic Year 2021-2022

S. No	Subject Code	Title of the Course	L	P	C	Internal	External	Total
1.	21MS13T1	Strategic Management	4	-	4	40	60	100
2.	21MS13T2	Legal Aspects of Business	4	-	4	40	60	100
3.	21MS13T3	Business Ethics & Corporate Governance	4	-	4	40	60	100
4.	21MS13F4/ M4/H4	Elective – I	4	-	4	40	60	100
5.	21MS13F5/ M5/H5	Elective – II	4	-	4	40	60	100
6.	21MS13F6/ M6/H6	Elective – III	4	-	4	40	60	100
7.	21MS13F7/ M7/H7	Elective – IV	4	-	4	40	60	100
8.	21MS13B8	Startup Business Plan	2	-	1	-	-	-
Total Credits for III Semester (C)					29	280	420	700

The students may choose **ONE** Specialization among the following:

Subject code	Finance	Subject code	Marketing	Subject Code	HR
21MS13F4	Security Analysis & Portfolio Management	21MS13M4	Consumer Behaviour	21MS13H4	Leadership Management
21MS13F5	Banking & Insurance Management	21MS13M5	Retail Management	21MS13H5	Compensation and Reward Management
21MS13F6	Project Management	21MS13M6	Customer Relationship Management	21MS13H6	Performance Management
21MS13F7	Strategic Financial Management	21MS13M7	Digital & Social Media Marketing	21MS13H7	Strategic Human Resource Management

MBA IV Semester Proposed Course structure for the Academic Year 2021-2022

S.No	Subject Code	Title of the Course	L	P	C	Internal	External	Total
1.	21MS14T1	Logistics & Supply Chain Management	4	-	4	40	60	100
2.	21MS14T2	Entrepreneurship Development	4	-	4	40	60	100
3.	21MS14F3/ M3/H3	Elective -- V	4	-	4	40	60	100
4.	21MS14F4/ M4/H4	Elective - VI	4	-	4	40	60	100
5.	21MS14F5/ M5/H5	Elective -- VII	4	-	4	40	60	100
6.	21MS14/F6 / M6/H6	Elective - VIII	4	-	4	40	60	100
7.	21MS14P7	Internship/Project and Viva Voce	-	-	5	-	-	100
Total Credits for IV Semester (D)					29	240	360	700

The students may choose **ONE** Specialization among the following:

Subject Code	Finance	Subject Code	Marketing	Subject code	HR
21MS14F3	Financial Markets & Services	21MS14M3	Services Marketing	21MS14H3	Global HRM
21MS14F4	Global Financial Management	21MS14M4	Promotion & Distribution Management	21MS14H4	Organizational Development and Change Management
21MS14F5	Financial Risk Management	21MS14M5	Global Marketing Management	21MS14H5	Labour Welfare Legislation
21MS14F6	Tax Management	21MS14M6	Rural Marketing	21MS14H6	Management of Industrial Relations