JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech in COMPUTER SCIENCE AND ENGINEERING
COURSE STRUCTURE, I&IIYEAR SYLLABUS (R22Regulations)
Applicable from AY 2022-23 Batch

I Year I Semester

S. No.	Course Code	Course	L	T	P	Credits
1.	MA101BS	Matrices and Calculus	3	1	0	4
2.	CH102BS	Engineering Chemistry	3	1	0	4
3.	CS103ES	Programming for Problem Solving	3	0	0	3
4.	EE104ES	Basic Electrical Engineering	2	0	0	2
5.	ME105ES	Computer Aided Engineering Graphics	1	0	4	3
6.	CS106ES	Elements of Computer Science & Engineering	0	0	2	1
7.	CH107BS	Engineering Chemistry Laboratory	0	0	2	1
8.	CS108ES	Programming for Problem Solving Laboratory	0	0	2	1
9.	EE109ES	Basic Electrical Engineering Laboratory	0	0	2	1
		Induction Program				
		Total	**12**	**2**	**12**	**20**

I Year II Semester

S. No.	Course Code	Course	L	T	P	Credits
1.	MA201BS	Ordinary Differential Equations and Vector Calculus	3	1	0	4
2.	PH202BS	Applied Physics	3	1	0	4
3.	ME203ES	Engineering Workshop	0	1	3	2.5
4.	EN204HS	English for Skill Enhancement	2	0	0	2
5.	EC205ES	Electronic Devices and Circuits	2	0	0	2
6.	CS206ES	Python Programming Laboratory	0	1	2	2
7.	PH207BS	Applied Physics Laboratory	0	0	3	1.5
8.	EN208HS	English Language and Communication Skills Laboratory	0	0	2	1
9.	CS209ES	IT Workshop	0	0	2	1
10.	*MC210	Environmental Science	3	0	0	0
		Total	**13**	**4**	**12**	**20**

II YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1		Digital Electronics	3	0	0	3
2		Data Structures	3	0	0	3
3		Computer Oriented Statistical Methods	3	1	0	4
4		Computer Organization and Architecture	3	0	0	3
5		Object Oriented Programming through Java	3	0	0	3
6		Data Structures Lab	0	0	3	1.5
7		Object Oriented Programming through Java Lab	0	0	3	1.5
8		Data visualization -R Programming/Power BI	0	0	2	1
9	*MC	Gender Sensitization Lab	0	0	2	0
		Total	**15**	**1**	**10**	**20**

II YEAR II SEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1		Discrete Mathematics	3	0	0	3
2		Business Economics & Financial Analysis	3	0	0	3
3		Operating Systems	3	0	0	3
4		Database Management Systems	3	0	0	3
5		Software Engineering	3	0	0	3
6		Operating Systems Lab	0	0	2	1
7		Database Management Systems Lab	0	0	2	1
8		Real-time Research Project/ Societal Related Project	0	0	4	2
9		Node JS/ React JS /Django	0	0	2	1
10	*MC	Constitution of India	3	0	0	0
		Total	**18**	**0**	**10**	**20**

III YEARI SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1		Design and Analysis of Algorithms	3	1	0	4
2		Computer Networks	3	0	0	3
3		DevOps	3	0	0	3
4		Professional Elective-I	3	0	0	3
5		Professional Elective-II	3	0	0	3
6		Computer Networks Lab	0	0	2	1
7		DevOps Lab	0	0	2	1
8		Advanced English Communication Skills Lab	0	0	2	1
9		UI design-Flutter	0	0	2	1
10	*MC	Intellectual Property Rights	3	0	0	0
		Total	**18**	**1**	**8**	**20**

III YEAR II SEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1		Machine Learning	3	0	0	3
2		Formal Languages and Automata Theory	3	0	0	3
3		Artificial Intelligence	3	0	0	3
4		Professional Elective–III	3	0	0	3
5		Open Elective-I	3	0	0	3
6		Machine Learning Lab	0	0	2	1
7		Artificial Intelligence Laboratory	0	0	2	1
8		Professional Elective-III Lab	0	0	2	1
9		Industrial Oriented Mini Project/Internship/Skill Development Course(Bigdata-Spark)	0	0	4	2
10	*MC	Environmental Science	3	0	0	0
		Total	**18**	**0**	**8**	**20**

Environmental Science in III Yr II SEM Should b Registered by Lateral Entry Students Only.

IV YEAR I SEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1		Cryptography and Network Security	3	0	0	3
2		Compiler Design	3	0	0	3
3		Professional Elective-IV	3	0	0	3
4		Professional Elective-V	3	0	0	3
5		Open Elective-II	3	0	0	3
6		Cryptography and Network Security Lab	0	0	2	1
7		Compiler Design Lab	0	0	2	1
8		Project Stage-I	0	0	6	3
		Total Credits	**15**	**0**	**10**	**20**

IVYEARII SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1		Organizational Behavior	3	0	0	3
2		Professional Elective–VI	3	0	0	3
3		Open Elective–III	3	0	0	3
4		Project Stage–II including Seminar	0	0	22	11
		Total Credits	**9**	**0**	**22**	**20**

*MC–Satisfactory/Unsatisfactory

#SkillCourse-1creditwith2PracticalHours

Professional Elective - I

	Quantum Computing
	Advanced Computer Architecture
	Data Analytics
	Image Processing
	Principles of Programming Languages

Professional Elective-II

	Computer Graphics
	Embedded Systems
	Information Retrieval Systems
	Distributed Databases
	Natural Language Processing

Professional Elective-III

	Full Stack Development
	Interne tof Things
	Scripting Languages
	Mobile Application Development
	Software Testing Methodologies

 # Courses in PE -IIIandPE-IIILabmustbein1-1 correspondence.

Professional Elective-IV

	Graph Theory
	Advanced Operating Systems
	Soft Computing
	Cloud Computing
	Adhoc & Sensor Networks

Professional Elective-V

	Advanced Algorithms
	Agile Methodology
	Robotic Process Automation
	Block chain Technology
	Software Process & Project Management

Professional Elective–VI

	Computational Complexity
	Distributed Systems
	Deep Learning & Lab
	Human Computer Interaction
	Cyber Forensics

OpenElective-1:
  1. Data Structures
  2. Database Management Systems

OpenElective-2:
  1. Operating Systems
  2. Software Engineering

OpenElective-3:
  1. Algorithms Design and Analysis
  2. Introduction to Computer Networks

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech in MECHANICAL ENGINEERING
COURSESTRUCTURE,I&IIYEAR SYLLABUS (R22Regulations)
Applicable from AY 2022-23 Batch

I YEARISEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1.	MA101BS	Matrices and Calculus	3	1	0	4
2.	PH102BS	Applied Physics	3	1	0	4
3.	ME103ES	C Programming and Data Structures	3	0	0	3
4.	ME104ES	Engineering Workshop	0	1	3	2.5
5.	EN105HS	EnglishforSkillEnhancement	2	0	0	2
6.	ME106ES	Element soft Mechanical Engineering	0	0	2	1
7.	PH107BS	Applied Physics Laboratory	0	0	3	1.5
8.	ME108ES	C Programming and Data Structures Laboratory	0	0	2	1
9.	EN109HS	English Language and Communication Skills Laboratory	0	0	2	1
10.	*MC110	Environmental Science	3	0	0	0
		Induction Program me				
		Total	**14**	**3**	**12**	**20**

IYEARIISEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1.	MA201BS	Ordinary Differential Equations and Vector Calculus	3	1	0	4
2.	CH202BS	Engineering Chemistry	3	1	0	4
3.	ME203ES	Computer Aided Engineering Graphics	1	0	4	3
4.	ME204ES	Engineering Mechanics	3	0	0	3
5.	ME205PC	Engineering Materials	2	0	0	2
6.	ME206ES	Python Programming Laboratory	0	1	2	2
7.	CH207BS	Engineering Chemistry Laboratory	0	0	2	1
8.	ME208PC	Fuels & Lubricants Laboratory	0	0	2	1
		Total	**12**	**3**	**10**	**20**

IIYEARI SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1.		Probability, Statistics &Complex Variables	3	1	0	4
2.		Mechanics of Solids	3	0	0	3
3.		Metallurgy &Material Science	3	0	0	3
4.		Production Technology	3	0	0	3
5.		Thermodynamics	3	1	0	4
6.		Production Technology Laboratory	0	0	2	1
7.		Material Science &Mechanics of Solids Laboratory	0	0	2	1
8.		Computer Aided Machine Drawing	0	0	2	1
9.	*MC	ConstitutionofIndia	3	0	0	0
		Total Credits	**18**	**2**	**6**	**20**

II YEARII SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1.		Basic Electrical and Electronics Engineering	3	0	0	3
2.		Kinematics of Machinery	3	0	0	3
3.		Fluid Mechanics &Hydraulic Machines	3	0	0	3
4.		IC Engines &Gas Turbines	3	0	0	3
5.		Instrumentation and Control Systems	3	0	0	3
6.		Basic Electrical and Electronics Engineering Laboratory	0	0	2	1
7.		Fluid Mechanics & Hydraulic Machines Laboratory	0	0	2	1
8.		Instrumentation and Control Systems Laboratory	0	0	2	1
9.		Real-time Research Project/Field-Based Project	0	0	4	2
10.	*MC	Gender Sensitization Lab	0	0	2	0
		Total Credits	15	0	12	20

III YEARI SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1.		Dynamics of Machinery	3	0	0	3
2.		Design of Machine Elements	3	0	0	3
3.		Metrology & Machine Tools	3	0	0	3
4.		Business Economics &Financial Analysis	3	0	0	3
5.		Steam Power &Jet Propulsion	3	0	0	3
6.		CAD/CAM	2	0	0	2
7.		Thermal Engineering Laboratory	0	0	2	1
8.		Metrology &Machine Tools Laboratory	0	0	2	1
9.		Kinematics &Dynamics Laboratory	0	0	2	1
10.	*MC	Intellectual Property Rights	3	0	0	0
		Total Credits	20	0	6	20

III YEARIISEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1.		Machine Design	3	0	0	3
2.		Heat Transfer	3	0	0	3
3.		Finite Element Methods	3	0	0	3
4.		Professional Elective-I	3	0	0	3
5.		Open Elective-I	3	0	0	3
6.		Heat Transfer Lab	0	0	2	1
7.		Computer Aided Engineering Laboratory	0	0	2	1
8.		Advanced English Communication Skills Laboratory	0	0	2	1
9.		Industry Oriented Mini Project/Internship	0	0	4	2
10.	*MC	Environmental Science	3	0	0	0
		Total Credits	18	0	10	20

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IV YEARISEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1.		Industrial Management	2	0	0	2
2.		Refrigeration &Air Conditioning	3	0	0	3
3.		Professional Elective–II	3	0	0	3
4.		Professional Elective–III	3	0	0	3
5.		Professional Elective-IV	3	0	0	3
6.		Open Elective-II	3	0	0	3
7.		Project Stage-I	0	0	6	3
		Total Credits	**17**	**0**	**6**	**20**

IVYEARII SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1.		Professional Elective–V	3	0	0	3
2.		Professional Elective-VI	3	0	0	3
3.		Open Elective-III	3	0	0	3
4.		Project Stage–I including seminar	0	0	22	11
		Total Credits	**9**	**0**	**22**	**20**

*MC–Satisfactory/Unsatisfactory

PROFESSIONAL ELECTIVES OFFERED IN R22

Professional Elective-I

	Unconventional Machining Processes
	Power Plant Engineering
	Mechanical Vibrations
	Microprocessors in Automation

Professional Elective–II

	Artificial Intelligence in Mechanical Engineering
	Automobile Engineering
	Industrial Robotics
	Mechatronics

Professional Elective–III

	Production Planning &Control
	Computational Fluid Dynamics
	Composite Materials
	Solar energy technology

Professional Elective–IV

	Re-Engineering
	Non-Conventional Energy Sources
	Operations Research
	Electric and Hybrid Vehicles

Professional Elective– V

	Automation in Manufacturing
	Turbo Machinery
	Additive Manufacturing
	Energy Conservation and Management

Professional Elective–VI

	Industry4.0
	Fluid Power System
	Fuzzy Logic and ANN
	Total Quality Management

List of Open Electives

Open Elective (OE–I)
 1. Basic Mechanical Engineering
 2. Renewable energy Sources

Open Elective (OE–II)
 1. Quantitative Analysis for Business Decisions
 2. Industrial Engineering & Management

Open Elective (OE–III)
 1. Entrepreneurship Development
 2. Elements of Electric and Hybrid vehicles

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech. In ELECTRONICS AND COMMUNICATION ENGINEERING
COURSE STRUCTURE, I & II YEAR SYLLABUS (R22 Regulations)
Applicable from AY 2022-23 Batch

I Year I Semester

S.No.	Course Code	Course Title	L	T	P	Credits
1.	MA101BS	Matrices and Calculus	3	1	0	4
2.	PH102BS	Applied Physics	3	1	0	4
3.	EC103ES	C Programming for Engineers	3	0	0	3
4.	ME104ES	Engineering Workshop	0	1	3	2.5
5.	EN105HS	EnglishforSkillEnhancement	2	0	0	2
6.	EC106ES	Elements of Electronics and Communication Engineering	0	0	2	1
7.	PH107BS	Applied Physics Laboratory	0	0	3	1.5
8.	EC108ES	C Programming for Engineers Laboratory	0	0	2	1
9.	EN109HS	English Language and Communication Skills Laboratory	0	0	2	1
10.	*MC110	Environmental Science	3	0	0	0
		Induction Programme				
		Total	**14**	**3**	**12**	**20**

I Year II Semester

S. No.	Course Code	Course Title	L	T	P	Credits
1.	MA201BS	Ordinary Differential Equations and Vector Calculus	3	1	0	4
2.	CH202BS	Engineering Chemistry	3	1	0	4
3.	ME203ES	Computer Aided Engineering Graphics	1	0	4	3
4.	EE204ES	Basic Electrical Engineering	2	0	0	2
5.	EC205ES	Electronic Devices and Circuits	2	0	0	2
6.	EC206ES	Applied Python Programming Laboratory	0	1	2	2
7.	CH207BS	Engineering Chemistry Laboratory	0	0	2	1
8.	EE208ES	Basic Electrical Engineering Laboratory	0	0	2	1
9.	EC209ES	Electronic Devices and Circuits Laboratory	0	0	2	1
		Total	**11**	**3**	**12**	**20**

IIYEARI SEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1		Numerical Methods and Complex Variables	3	1	0	4
2		Analog Circuits	3	0	0	3
3		Network analysis and Synthesis	3	0	0	3
4		Digital Logic Design	3	0	0	3
5		Signals and Systems	3	1	0	4
6		Analog Circuits Laboratory	0	0	2	1
7		Digital logic Design Laboratory	0	0	2	1
8		Basic Simulation Laboratory	0	0	2	1
9	*MC	ConstitutionofIndia	3	0	0	0
		Total Credits	**18**	**2**	**6**	**20**

II YEARII SEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1		Probability Theory and Stochastic Processes	3	0	0	3
2		Electromagnetic Fields and Transmission Lines	3	0	0	3
3		Analog and Digital Communications	3	0	0	3
4		Linear and Digital IC Applications	3	0	0	3
5		Electronic Circuit Analysis	3	0	0	3
6		Analog and Digital Communications Laboratory	0	0	2	1
7		Linear and Digital IC Applications Laboratory	0	0	2	1
8		Electronic Circuit Analysis Laboratory	0	0	2	1
9		Real Time Project/Field Based Project	0	0	4	2
10	*MC	Gender Sensitization Lab	0	0	2	0
		Total Credits	**15**	**0**	**12**	**20**

III YEARI SEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1		Microcontrollers	3	1	0	4
2		IoT Architectures and Protocols	3	0	0	3
3		Control Systems	3	1	0	4
4		Business Economics & Financial Analysis	3	0	0	3
5		Professional Elective–I	3	0	0	3
6		Microcontrollers Laboratory	0	0	2	1
7		IoT Architectures and Protocols Laboratory	0	0	2	1
8		Advanced English Communication Skills Laboratory	0	0	2	1
9	*MC	Intellectual Property Rights	3	0	0	0
		Total Credits	**18**	**2**	**6**	**20**

III YEARIISEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1		Antennas and Wave Propagation	3	0	0	3
2		Digital Signal Processing	3	0	0	3
3		CMOS VLSI Design	3	0	0	3
4		Professional Elective-II	3	0	0	3
5		Open Elective–I	3	0	0	3
6		Digital Signal Processing Laboratory	0	0	2	1
7		CMOS VLSI Design Laboratory	0	0	2	1
8		Advanced Communication Laboratory	0	0	2	1
9		Industry Oriented Mini Project/Internship	0	0	4	2
10	*MC	Environmental Science	3	0	0	0
		Total Credits	**18**	**0**	**10**	**20**

Environmental Science in III Yr II Sem Should be Registered by Lateral Entry Students Only.

IV YEARISEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1		Microwave and Optical Communications	3	1	0	4
2		Professional Elective–III	3	0	0	3
3		Professional Elective–IV	3	0	0	3
4		Open Elective–II	3	0	0	3
5		Professional Practice, Law &Ethics	3	0	0	2
6		Microwave and Optical Communications Laboratory	0	0	4	2
7		Project Stage–I	0	0	6	3
		Total Credits	**15**	**1**	**10**	**20**

IVYEARII SEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1		Professional Elective–V	3	0	0	3
2		Professional Elective–VI	3	0	0	3
3		Open Elective–III	3	0	0	3
4		Project Stage–II including Seminar	0	0	22	11
		Total Credits	**9**	**0**	**22**	**20**

*MC–Satisfactory/Unsatisfactory Professional

Elective – I

EC511PE	Computer Organization & Operating Systems
EC512PE	Data Communications and Compute rNetworks
EC513PE	Electronic Measurements and Instrumentation

Professional Elective–II

EC611PE	Digital Image Processing
EC612PE	Mobile Communications and Networks
EC613PE	Embedded System Design

Professional Elective–III

EC711PE	Radar Systems
EC712PE	CMOS Analog IC Design
EC713PE	Artificial Neural Networks

Professional Elective–IV

EC721PE	Network Security and Cryptography
EC722PE	Satellite Communications
EC723PE	Biomedical Instrumentation

Professional Elective– V

EC811PE	Artificial Intelligence
EC812PE	5 Gand beyond Communications
EC813PE	Machine learning

Professional Elective–VI

EC821PE	Multimedia Database Management Systems

| EC822PE | System on Chip Architecture |
| EC823PE | Wireless sensor Networks |

Open Electives

Open Elective(OE–I)	Open Elective(OE–II)	Open Elective(OE–III)
1. Fundamentals of Internet of Things 2. Principles of Signal Processing 3. Digital Electronics for Engineering	1. Electronic Sensors 2. Electronics for HealthCare 3. Telecommunications for Society	1. Measuring Instruments 2. Communication Technologies 3. Fundamentals of Social Networks

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech in CIVILENGINEERING
COURSE STRUCTURE,I&II YEAR SYLLABUS (R22Regulations)
Applicable from AY 2022-23Batch

I YEARISEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1.	MA101BS	Matrices and Calculus	3	1	0	4
2.	PH102BS	Applied Physics	3	1	0	4
3.	ME103ES	C Programming and Data Structures	3	0	0	3
4.	ME104ES	Engineering Workshop	0	1	3	2.5
5.	EN105HS	English for Skill Enhancement	2	0	0	2
6.	CE106ES	Elements of Civil Engineering	0	0	2	1
7.	PH107BS	Applied Physics Laboratory	0	0	3	1.5
8.	ME108ES	C Programming and Data Structures Laboratory	0	0	2	1
9.	EN109HS	English Language and Communication Skills Laboratory	0	0	2	1
10.	*MC110	Environmental Science	3	0	0	0
		Induction Programme				
		Total	**14**	**3**	**12**	**20**

IYEARIISEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1.	MA201BS	Ordinary Differential Equations and Vector Calculus	3	1	0	4
2.	CH202BS	Engineering Chemistry	3	1	0	4
3.	ME203ES	Computer Aided Engineering Graphics	1	0	4	3
4.	CE204ES	Applied Mechanics	3	0	0	3
5.	CE205PC	Surveying	2	0	0	2
6.	CE206ES	Python Programming Laboratory	0	1	2	2
7.	CH207BS	Engineering Chemistry Laboratory	0	0	2	1
8.	CE208PC	Surveying Laboratory-I	0	0	2	1
		Total	**12**	**3**	**10**	**20**

IIYEARI SEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1.		Probability and Statistics	3	1	0	4
2.		Building Materials ,Construction and Planning	3	0	0	3
3.		Engineering Geology	3	0	0	3
4.		Strength of Materials–I	3	0	0	3
5.		Fluid Mechanics	3	0	0	3
6.		Surveying Laboratory-II	0	1	2	2
7.		Strength of Materials Laboratory	0	0	2	1
8.		Computer Aided Drafting Laboratory	0	0	2	1
9.	*MC	Constitution of India	3	0	0	0
		Total Credits	**18**	**2**	**6**	**20**

II YEARII SEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1.		Basic Electrical and Electronics Engineering	3	0	0	3
2.		Concrete Technology	3	0	0	3
3.		Strength of Materials–II	3	0	0	3
4.		Hydraulics and Hydraulics Machinery	3	0	0	3
5.		Structural Analysis-I	3	0	0	3
6.		Fluid Mechanics and Hydraulics Machinery Laboratory	0	0	2	1
7.		Basic Electrical and Electronics Engineering Laboratory	0	0	2	1
8.		Concrete Technology Laboratory	0	0	2	1
9.		Real-time Research Project/Field-Based Project	0	0	4	2
10.	*MC	Gender Sensitization Laboratory	0	0	2	0
		Total Credits	**15**	**0**	**12**	**20**

III YEARI SEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1.		Structural Analysis-II	3	0	0	3
2.		Geotechnical Engineering	3	0	0	3
3.		Structural Engineering-I(RCC)	3	0	0	3
4.		Business Economics & Financial Analysis	3	0	0	3
5.		Transportation Engineering	3	0	0	3
6.		Water Resources Engineering-I	3	0	0	3
7.		Transportation Engineering Laboratory	0	0	2	1
8.		Geotechnical Engineering Laboratory	0	0	2	1
9.	*MC	Intellectual Property Rights	3	0	0	0
		Total Credits	**21**	**0**	**4**	**20**

III YEARIISEMESTER

S.No	Course Code	Course Title	L	T	P	Credits
1.		Environmental Engineering	3	0	0	3
2.		Foundation Engineering	3	0	0	3
3.		Structural Engineering-II(Steel Structures)	3	0	0	3
4.		Professional Elective–I	3	0	0	3
5.		Open Elective-I	3	0	0	3
6.		Environmental Engineering Laboratory	0	0	2	1
7.		Computer Aided Design Laboratory	0	0	2	1
8.		Advanced English Communication Skills Laboratory	0	0	2	1
9.		Industry Oriented Mini Project/Internship	0	0	4	2
10.	*MC	Environmental Science	3	0	0	0
		Total Credits	**18**	**0**	**10**	**20**

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IV YEARISEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1.		Quantity Survey &Valuation	2	0	0	2
2.		Project Management	2	0	0	2
3.		Professional Elective–II	3	0	0	3
4.		Professional Elective–III	3	0	0	3
5.		Professional Elective-IV	3	0	0	3
6.		Open Elective-II	3	0	0	3
7.		Civil Engineering Software Laboratory	0	0	2	1
8.		Project Stage-I	0	0	6	3
		Total Credits	**16**	**0**	**8**	**20**

IVYEARII SEMESTER

S.No.	Course Code	Course Title	L	T	P	Credits
1.		Professional Elective–V	3	0	0	3
2.		Professional Elective-VI	3	0	0	3
3.		Open Elective-III	3	0	0	3
4.		Project Stage–I Including seminar	0	0	22	11
		Total Credits	**9**	**0**	**22**	**20**

*MC–Satisfactory/Unsatisfactory Professional

Elective – I

CE511PE	Green Building Technologies
CE512PE	Geo matic Applications in Civil Engineering
CE513PE	Smart Cities Planning and Management

Professional Elective–II

CE611PE	Prestressed Concrete
CE612PE	Elements of Earthquake Engineering
CE613PE	Advanced Structural Analysis

Professional Elective-III

CE711PE	Earth Retaining Structures
CE712PE	Ground Improvement Techniques
CE713PE	Stability Analysis of Slopes

Professional Elective-IV

CE721PE	Design of Hydraulic Structures
CE722PE	Advanced Water Resources Engineering
CE723PE	Ground Water Hydrology

Professional Elective–V

CE811PE	Solid Waste Management
CE812PE	Environmental Impact Assessment for Civil Engineers
CE813PE	Air pollution

Professional Elective-VI

CE821PE	Airports, Railways and Waterways
CE822PE	Pavement Asset Management
CE823PE	Pavement Analysis &Design

III Yr II SEM Open Elective (OE –I)
1. Disaster Preparedness &Planning Management
2. Building Management Systems
3. Environmental Impact Assessment
4. Hydrogeology

IV Yr I SEM Open Elective (OE–II)
1. Remote Sensing &Geographical Information Systems
2. Sustainable Infrastructure Development
3. Solid Waste Management
4. Smart Cities

IV Yr II SEM Open Elective (OE –III)
1. Energy Efficient Buildings
2. Multi Criterion Decision Making
3. Environmental Pollution