BRILLIANT INSTITUTE OF ENGINEERING & TECHNOLOGY

(Sponsored by: Brilliant Grammar School Educational Society)
(Approved by AICTE, New Delhi, Affiliated to JNTU-Hyderabad)
Abdullapur (V), Abdullapurmet (M), R.R. Dist – 501505, Telangana, India
Website: **www.b-iet.ac.in**, e-mail: principal@b-iet.ac.in Contact No.: +919652929786

1.3.2 - Number of courses that include experiential learning through project work/field work/internship during the year

S.No	Department	Number of Experimental Subjects	Number of Total Subjects
1	B.Tech Civil Engineering	36	68
2	B.Tech Electrical and Electronics Engineering	37	66
3	B.Tech Mechanical Engineering	35	70
4	B.Tech Electronics & Communication Engineering	43	68
5	B.Tech Computer Science Engineering	45	69
6	B.Tech Artificial Intelligence & Machine learning(CSE)	43	70
7	B.Tech- Data Science (CSE)	43	70
8	B.Tech-Cyber Security (CSE)	43	70
9	B.Tech Software Engineering(CSE)	43	70
10	B.Tech Artificial Intelligence & Data Science	43	70
11	Master of Business Administration	07	28
	Total	418	719
	Percentage	58.13%	

PRINCIPAL
BRILLIANT INSTITUTE OF
ENGINEERING AND TECHNOLOGY
Vill &Mdl: Abdullapurmet, R.R.Dist-501505.

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech. in MECHANICAL ENGINEERING
COURSE STRUCTURE & 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.	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.	ME106ES	Elements of 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 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.	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

II YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1.	MA301BS	Probability, Statistics & Complex Variables	3	1	0	4
2.	ME302PC	Mechanics of Solids	3	0	0	3
3.	ME303PC	Metallurgy & Material Science	3	0	0	3
4.	ME304PC	Production Technology	3	0	0	3
5.	ME305PC	Thermodynamics	3	1	0	4
6.	ME306PC	Production Technology Laboratory	0	0	2	1
7.	ME307PC	Material Science & Mechanics of Solids Laboratory	0	0	2	1
8.	ME308PC	Computer Aided Machine Drawing	0	0	2	1
9.	*MC309	Constitution of India	3	0	0	0
		Total Credits	18	2	6	20

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II YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1.	ME401PC	Basic Electrical and Electronics Engineering	3	0	0	3
2.	ME402PC	Kinematics of Machinery	3	0	0	3
3.	ME403PC	Fluid Mechanics & Hydraulic Machines	3	0	0	3
4.	ME404PC	IC Engines & Gas Turbines	3	0	0	3
5.	ME405PC	Instrumentation and Control Systems	3	0	0	3
6.	ME406PC	Basic Electrical and Electronics Engineering Laboratory	0	0	2	1
7.	ME407PC	Fluid Mechanics & Hydraulic Machines Laboratory	0	0	2	1
8.	ME408PC	Instrumentation and Control Systems Laboratory	0	0	2	1
9.	ME409PC	Real-time Research Project/ Field-Based Project	0	0	4	2
10.	*MC410	Gender Sensitization Lab	0	0	2	0
		Total Credits	15	0	12	20

III YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1.	ME501PC	Dynamics of Machinery	3	0	0	3
2.	ME502PC	Design of Machine Elements	3	0	0	3
3.	ME503PC	Metrology & Machine Tools	3	0	0	3
4.	SM504MS	Business Economics & Financial Analysis	3	0	0	3
5.	ME505PC	Steam Power & Jet Propulsion	3	0	0	3
6.	ME506PC	CAD/CAM	2	0	0	2
7.	ME507PC	Thermal Engineering Laboratory	0	0	2	1
8.	ME508PC	Metrology & Machine Tools Laboratory	0	0	2	1
9.	ME509PC	Kinematics & Dynamics Laboratory	0	0	2	1
10.	*MC510	Intellectual Property Rights	3	0	0	0
		Total Credits	20	0	6	20

III YEAR II SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1.	ME601PC	Machine Design	3	0	0	3
2.	ME602PC	Heat Transfer	3	0	0	3
3.	ME603PC	Finite Element Methods	3	0	0	3
4.		Professional Elective - I	3	0	0	3
5.		Open Elective - I	3	0	0	3
6.	ME604PC	Heat Transfer Lab	0	0	2	1
7.	ME605PC	Computer Aided Engineering Laboratory	0	0	2	1
8.	EN608HS	Advanced English Communication Skills Laboratory	0	0	2	1
9.	ME607PC	Industry Oriented Mini Project/ Internship	0	0	4	2
10.	*MC609	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.

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IV YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1.	ME701PC	Industrial Management	2	0	0	2
2.	ME702PC	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.	ME703PC	Project Stage - I	0	0	6	3
		Total Credits	17	0	6	20

IV YEAR II 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.	ME801PC	Project Stage – II including seminar	0	0	22	11
		Total Credits	9	0	22	20

*MC – Satisfactory/Unsatisfactory

PROFESSIONAL ELECTIVES OFFERED IN R22

Professional Elective - I

ME611PE	Unconventional Machining Processes
ME612PE	Production Planning & Control
ME613PE	Operations Research
ME614PE	Microprocessors in Automation

Professional Elective – II

ME721PE	Additive Manufacturing
ME722PE	Automation in Manufacturing
ME723PE	Artificial Intelligence in Mechanical Engineering
ME724PE	Mechatronics

Professional Elective – III

ME731PE	Power plant Engineering
ME732PE	Automobile Engineering
ME733PE	Non-Conventional Energy Sources
ME734PE	Solar Energy Technology

Professional Elective – IV

ME741PE	Re-Engineering
ME742PE	Computational Fluid Dynamics
ME743PE	Turbo Machinery
ME744PE	Fluid Power System

Professional Elective – V

ME851PE	Industrial Robotics
ME852PE	Mechanical Vibrations
ME853PE	Composite Materials
ME854PE	Energy Conservation and Management

Professional Elective – VI

ME861PE	Industry 4.0
ME862PE	Fuzzy Logic and ANN
ME863PE	Electric and Hybrid Vehicles
ME864PE	Total Quality Management

IV YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1		Professional Elective	3	0	0	3
2		Professional	3	0	0	3
3		Open Elective	3	0	0	3
4	ME802PC	Project Review	0	0	2	1
		Total Credits	9	0	22	10

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech. in CIVIL ENGINEERING
COURSE STRUCTURE & 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.	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

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.	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

II YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1.	MA301BS	Probability and Statistics	3	1	0	4
2.	CE302PC	Building Materials, Construction and Planning	3	0	0	3
3.	CE303PC	Engineering Geology	3	0	0	3
4.	CE304PC	Strength of Materials – I	3	0	0	3
5.	CE305PC	Fluid Mechanics	3	0	0	3
6.	CE306PC	Surveying Laboratory - II	0	1	2	2
7.	CE307PC	Strength of Materials Laboratory	0	0	2	1
8.	CE308PC	Computer Aided Drafting Laboratory	0	0	2	1
9.	*MC309	Constitution of India	3	0	0	0
		Total Credits	18	2	6	20

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II YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1.	CE401PC	Basic Electrical and Electronics Engineering	3	0	0	3
2.	CE402PC	Concrete Technology	3	0	0	3
3.	CE403PC	Strength of Materials – II	3	0	0	3
4.	CE404PC	Hydraulics and Hydraulics Machinery	3	0	0	3
5.	CE405PC	Structural Analysis - I	3	0	0	3
6.	CE406PC	Fluid Mechanics and Hydraulics Machinery Laboratory	0	0	2	1
7.	CE407PC	Basic Electrical and Electronics Engineering Laboratory	0	0	2	1
8.	CE408PC	Concrete Technology Laboratory	0	0	2	1
9.	CE409PC	Real-time Research Project/ Field-Based Project	0	0	4	2
10.	*MC410	Gender Sensitization Laboratory	0	0	2	0
		Total Credits	**15**	**0**	**12**	**20**

III YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1.	CE501PC	Structural Analysis - II	3	0	0	3
2.	CE502PC	Geotechnical Engineering	3	0	0	3
3.	CE503PC	Structural Engineering -I (RCC)	3	0	0	3
4.	SM504MS	Business Economics & Financial Analysis	3	0	0	3
5.	CE505PC	Transportation Engineering	3	0	0	3
6.	CE506PC	Hydrology and Water Resources Engineering	3	0	0	3
7.	CE507PC	Transportation Engineering Laboratory	0	0	2	1
8.	CE508PC	Geotechnical Engineering Laboratory	0	0	2	1
9.	*MC509	Intellectual Property Rights	3	0	0	0
		Total Credits	**21**	**0**	**4**	**20**

III YEAR II SEMESTER

S. No	Course Code	Course Title	L	T	P	Credits
1.	CE601PC	Environmental Engineering	3	0	0	3
2.	CE602PC	Foundation Engineering	3	0	0	3
3.	CE603PC	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.	CE604PC	Environmental Engineering Laboratory	0	0	2	1
7.	CE605PC	Computer Aided Design Laboratory	0	0	2	1
8.	EN508HS	Advanced English Communication Skills Laboratory	0	0	2	1
9.	CE607PC	Industry Oriented Mini Project/ Internship	0	0	4	2
10.	*MC609	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.

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IV YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1.	CE701PC	Quantity Survey & Valuation	2	0	0	2
2.	CE702PC	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.	CE703PC	Civil Engineering Software Laboratory	0	0	2	1
8.	CE704PC	Project Stage - I	0	0	6	3
		Total Credits	**16**	**0**	**8**	**20**

IV YEAR II 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.	CE801PC	Project Stage – II including seminar	0	0	22	11
		Total Credits	**9**	**0**	**22**	**20**

*MC – Satisfactory/Unsatisfactory

Professional Elective – I

CE611PE	Green Building Technologies
CE612PE	Geomatic Applications in Civil Engineering
CE613PE	Smart Cities Planning and Management

Professional Elective – II

CE721PE	Prestressed Concrete
CE722PE	Elements of Earthquake Engineering
CE723PE	Advanced Structural Analysis

Professional Elective-III

CE731PE	Earth Retaining Structures
CE732PE	Ground Improvement Techniques
CE733PE	Stability Analysis of Slopes

Professional Elective -IV

CE741PE	Design of Hydraulic Structures
CE742PE	Advanced Water Resources Engineering
CE743PE	Ground Water Hydrology

Professional Elective –V

CE851PE	Solid Waste Management
CE852PE	Environmental Impact Assessment
CE853PE	Air pollution

Professional Elective -VI

CE861PE	Airports, Railways and Waterways
CE862PE	Pavement Asset Management
CE863PE	Pavement Analysis & Design

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech. in ELECTRONICS AND COMMUNICATION ENGINEERING
COURSE STRUCTURE & 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	English for Skill Enhancement	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

II YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	MA301BS	Numerical Methods and Complex Variables	3	1	0	4
2	EC302PC	Analog Circuits	3	0	0	3
3	EC303PC	Network analysis and Synthesis	3	0	0	3
4	EC304PC	Digital Logic Design	3	0	0	3
5	EC305PC	Signals and Systems	3	1	0	4
6	EC306PC	Analog Circuits Laboratory	0	0	2	1
7	EC307PC	Digital logic Design Laboratory	0	0	2	1
8	EC308PC	Basic Simulation Laboratory	0	0	2	1
9	*MC309	Constitution of India	3	0	0	0
		Total Credits	18	2	6	20

II YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	EC401PC	Probability Theory and Stochastic Processes	3	0	0	3
2	EC402PC	Electromagnetic Fields and Transmission Lines	3	0	0	3
3	EC403PC	Analog and Digital Communications	3	0	0	3
4	EC404PC	Linear and Digital IC Applications	3	0	0	3
5	EC405PC	Electronic Circuit Analysis	3	0	0	3
6	EC406PC	Analog and Digital Communications Laboratory	0	0	2	1
7	EC407PC	Linear and Digital IC Applications Laboratory	0	0	2	1
8	EC408PC	Electronic Circuit Analysis Laboratory	0	0	2	1
9	EC409PC	Real Time Project/ Field Based Project	0	0	4	2
10	*MC410	Gender Sensitization Lab	0	0	2	0
		Total Credits	15	0	12	20

III YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	EC501PC	Microcontrollers	3	1	0	4
2	EC502PC	IoT Architectures and Protocols	3	0	0	3
3	EC503PC	Control Systems	3	1	0	4
4	SM504MS	Business Economics & Financial Analysis	3	0	0	3
5		Professional Elective – I	3	0	0	3
6	EC505PC	Microcontrollers Laboratory	0	0	2	1
7	EC506PC	IoT Architectures and Protocols Laboratory	0	0	2	1
8	EN508HS	Advanced English Communication Skills Laboratory	0	0	2	1
9	*MC510	Intellectual Property Rights	3	0	0	0
		Total Credits	18	2	6	20

III YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	EC601PC	Antennas and Wave Propagation	3	0	0	3
2	EC602PC	Digital Signal Processing	3	0	0	3
3	EC603PC	CMOS VLSI Design	3	0	0	3
4		Professional Elective - II	3	0	0	3
5		Open Elective – I	3	0	0	3
6	EC604PC	Digital Signal Processing Laboratory	0	0	2	1
7	EC605PC	CMOS VLSI Design Laboratory	0	0	2	1
8	EC606PC	Advanced Communication Laboratory	0	0	2	1
9	EC607PC	Industry Oriented Mini Project/ Internship	0	0	4	2
10	*MC609	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.

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Hyd. Abdullapurmet, R.R.Dist - 505.

IV YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	EC701PC	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	EC702PC	Professional Practice, Law & Ethics	2	0	0	2
6	EC703PC	Microwave and Optical Communications Laboratory	0	0	4	2
7	EC704PC	Project Stage – I	0	0	6	3
		Total Credits	**15**	**1**	**10**	**20**

IV YEAR II 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	EC801PC	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 Computer Networks
EC513PE	Electronic Measurements and Instrumentation

Professional Elective – II

EC621PE	Digital Image Processing
EC622PE	Mobile Communications and Networks
EC623PE	Embedded System Design

Professional Elective – III

EC731PE	Radar Systems
EC732PE	CMOS Analog IC Design
EC733PE	Artificial Neural Networks

Professional Elective – IV

EC741PE	Network Security and Cryptography
EC742PE	Satellite Communications
EC743PE	Biomedical Instrumentation

Professional Elective – V

EC851PE	Artificial Intelligence
EC852PE	5G and beyond Communications
EC853PE	Machine learning

Professional Elective – VI

EC861PE	Multimedia Database Management Systems
EC862PE	System on Chip Architecture
EC863PE	Wireless sensor Networks

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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 Health Care 3. Telecommunications for Society	1. Measuring Instruments 2. Communication Technologies 3. Fundamentals of Social Networks

IV YEAR II 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	EC801PC	Project Stage – II including Seminar	0	0	22	11
		Total Credits	9	0	22	20

MC – Satisfactory/Unsatisfactory

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech. in COMPUTER SCIENCE AND ENGINEERING
COURSE STRUCTURE & SYLLABUS (R22 Regulations)

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	CS301PC	Digital Electronics	3	0	0	3
2	CS302PC	Data Structures	3	0	0	3
3	CS303PC	Computer Oriented Statistical Methods	3	1	0	4
4	CS304PC	Computer Organization and Architecture	3	0	0	3
5	CS305PC	Object Oriented Programming through Java	3	0	0	3
6	CS306PC	Data Structures Lab	0	0	3	1.5
7	CS307PC	Object Oriented Programming through Java Lab	0	0	3	1.5
8	CS308PC	Data visualization- R Programming/ Power BI	0	0	2	1
9	*MC309	Gender Sensitization Lab	0	0	2	0
		Total	15	1	10	20

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II YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	CS401PC	Discrete Mathematics	3	0	0	3
2	SM402MS	Business Economics & Financial Analysis	3	0	0	3
3	CS403PC	Operating Systems	3	0	0	3
4	CS404PC	Database Management Systems	3	0	0	3
5	CS405PC	Software Engineering	3	0	0	3
6	CS406PC	Operating Systems Lab	0	0	2	1
7	CS407PC	Database Management Systems Lab	0	0	2	1
8	CS408PC	Real-time Research Project/ Societal Related Project	0	0	4	2
9	CS409PC	Node JS/ React JS/ Django	0	0	2	1
10	*MC410	Constitution of India	3	0	0	0
		Total	18	0	10	20

III YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	CS501PC	Design and Analysis of Algorithms	3	1	0	4
2	CS502PC	Computer Networks	3	0	0	3
3	CS503PC	DevOps	3	0	0	3
4		Professional Elective-I	3	0	0	3
5		Professional Elective -II	3	0	0	3
6	CS504PC	Computer Networks Lab	0	0	2	1
7	CS505PC	DevOps Lab	0	0	2	1
8	EN508HS	Advanced English Communication Skills Lab	0	0	2	1
9	CS506PC:	UI design- Flutter	0	0	2	1
10	*MC510	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	CS601PC	Machine Learning	3	0	0	3
2	CS602PC	Formal Languages and Automata Theory	3	0	0	3
3	CS603PC	Artificial Intelligence	3	0	0	3
4		Professional Elective – III	3	0	0	3
5		Open Elective-I	3	0	0	3
6	CS604PC	Machine Learning Lab	0	0	2	1
7	CS605PC	Artificial Intelligence Laboratory	0	0	2	1
8		Professional Elective-III Lab	0	0	2	1
9	CS606PC	Industrial Oriented Mini Project/ Internship/ Skill Development Course (Big data-Spark)	0	0	4	2
10	*MC609	Environmental Science	3	0	0	0
		Total	18	0	8	20

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

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IV YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	CS701PC	Cryptography and Network Security	3	0	0	3
2	CS702PC	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	CS703PC	Cryptography and Network Security Lab	0	0	2	1
7	CS704PC	Compiler Design Lab	0	0	2	1
8	CS705PC	Project Stage - I	0	0	6	3
		Total Credits	15	0	10	20

IV YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	CS801PC	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

#Skill Course - 1 credit with 2 Practical Hours

Professional Elective - I

CS511PE	Quantum Computing
CS512PE	Advanced Computer Architecture
CS513PE	Data Analytics
CS514PE	Image Processing
CS515PE	Principles of Programming Languages

Professional Elective - II

CS521PE	Computer Graphics
CS522PE	Embedded Systems
CS523PE	Information Retrieval Systems
CS524PE	Distributed Databases
CS525PE	Natural Language Processing

Professional Elective - III

CS631PE	Full Stack Development
CS632PE	Internet of Things
CS633PE	Scripting Languages
CS634PE	Mobile Application Development
CS635PE	Software Testing Methodologies

 # Courses in PE - III and PE - III Lab must be in 1-1 correspondence.

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Professional Elective -IV

CS741PE	Graph Theory
CS742PE	Cyber Security
CS743PE	Soft Computing
CS744PE	Cloud Computing
CS745PE	Ad hoc & Sensor Networks

Professional Elective -V

CS751PE	Advanced Algorithms
CS752PE	Agile Methodology
CS753PE	Robotic Process Automation
CS754PE	Blockchain Technology
CS755PE	Software Process & Project Management

Professional Elective – VI

CS861PE	Computational Complexity
CS862PE	Distributed Systems
CS863PE	Deep Learning
CS864PE	Human Computer Interaction
CS865PE	Cyber Forensics

Open Elective -1:
1. CS611OE: Data Structures
2. CS612OE: Database Management Systems

Open Elective -2:
1. CS721OE: Operating Systems
2. CS722OE: Software Engineering

Open Elective -3:
1. CS831OE: Algorithms Design and Analysis
2. CS832OE: Introduction to Computer Networks

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