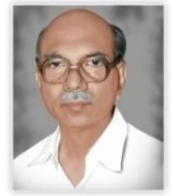




P.B.R. VISVODAYA INSTITUTE OF TECHNOLOGY & SCIENCE

(Affiliated to J.N.T.U.A, Approved by AICTE and Accredited by NAAC)

KAVALI – 524201, S.P.S.R Nellore Dist., A.P. India. Ph: 08626-243930



1.2.1.

Number of Programmes in which Choice Based Credit System (CBCS)/ elective course system has been implemented

Minutes of relevant Academic Council/ BOS meetings.

The college is affiliated to JNTUA and follows the curriculum given by the University.

B.Tech IV-I Semester(ECE)

S. No.	Course Code	Subject	L	T	P	C
1.	15A04701	Optical Fiber Communication	3	1	-	3
2.	15A04702	Embedded Systems	3	1	-	3
3.	15A04703	Microwave Engineering	3	1	-	3
4.	15A04704	Data Communications and Networking	3	1	-	3
5.	15A04705 15A04706 15A04707	CBCC-II a. Radar Systems b. Adaptive Signal Processing c. FPGA Design	3	1	-	3
6.	15A04708 15A04709 15A04710	CBCC-III a. Digital Image Processing b. Cellular & Mobile Communication c. Real Time Systems	3	1	-	3
7.	15A04711	Microwave and Optical Communication Laboratory	-	-	4	2
8.	15A04712	VLSI & Embedded Systems Laboratory	-	-	4	2
Total:			18	06	08	22

B.TechIV-II Semester(ECE)

S. No.	Course Code	Subject	L	T	P	C
1.	15A04801 15A04802	MOOCS-II* a. Advanced Digital Signal Processing- Multirate & Wavlet b. Low Power VLSI Circuits & Systems	3	1	-	3
2.	15A04803 15A04804	MOOCS-III * a. Pattern Recognition & Applications b. RF Integrated Circuits	3	1	-	3
3.	15A04805	Comprehensive Viva Voce	-	-	4	2
4.	15A04806	Technical Seminar	-	-	4	2
5.	15A04807	Project Work	-	-	24	12
Total:			6	02	32	22

2 Theory + 1 Comprehensive Viva voce + 1 Technical Seminar + 1 Project work

*Either by MOOCS manner or Self-study or Conventional manner

B.Tech III-II Semester (EEE)

S. No.	Course Code	Subject	L	T	P	C
1.	15A52601	Management Science	3	1	-	3
2.	15A02601	Power Semiconductor Drives	3	1	-	3
3.	15A02602	Power System Protection	3	1	-	3
4.	15A04601	Microprocessors & Microcontrollers	3	1	-	3
5.	15A02603	Power System Analysis	3	1	-	3
6.	15A02604 15A02605 15A02606 15A01608	CBCC -I 1) Neural Networks & Fuzzy Logic 2) Programmable Logic Controller & Its Applications 3) Optimization Techniques 4) Intellectual Property Rights	3	1	-	3
7.	15A04607	Microprocessors & Microcontrollers Laboratory	-	-	4	2
8.	15A02607	Power Electronics & Simulation Laboratory	-	-	4	2
9.	15A52602	Advanced English Language Communication Skills (AELCS) Laboratory (Audit Course)	-	-	2	-
10.	15A02608	Comprehensive Online Examination - II	-	-	-	1
Total:			18	6	12	23

B.Tech IV-I Semester (EEE)

S. No.	Course Code	Subject	L	T	P	C
1.	15A02701	Electrical Distribution Systems	3	1	-	3
2.	15A04603	Digital Signal Processing	3	1	-	3
3.	15A02702	Power System Operation and Control	3	1	-	3
4.	15A02703	Utilization of Electrical Energy	3	1	-	3
5.	15A02704 15A02705 15A02706	CBCC-II a) Modern Control Theory b) Switched Mode Power Converters c) Energy Auditing & Demand Side Management	3	1	-	3
6.	15A02707	CBCC-III a) Smart Grid	3	1	-	3

	15A02708 15A02709	b) Flexible AC Transmission Systems c) Power Quality				
7.	15A04608	Digital Signal Processing Laboratory	-		4	2
8.	15A02710	Power Systems & Simulation Laboratory	-		4	2
Total:			18	6	8	22

B.Tech IV-II Semester (EEE)

S. No.	Course Code	Subject	L	T	P	C
1.	15A02801 15A02802 15A02803	MOOCS – II 1. Instrumentation 2. Power System Dynamics and Control 3. Industrial Automation & Control	3	1	-	3
2.	15A02804 15A04702 15A02805	MOOCS – III 1. HVDC Transmission 2. Embedded Systems 3. Energy Resources & Technology	3	1	-	3
3.	15A02806	Comprehensive Viva Voce	-	-	4	2
4.	15A02807	Technical Seminar	-	-	4	2
5.	15A02808	Project Work	-		24	12
Total:			6	2	32	22

	15A03608	c. Mechatronics				
	15A01608	d. Intellectual Property Rights				
7.	15A03609	Heat Transfer Laboratory	-	-	4	2
8.	15A03610	Computer Aided Engineering Laboratory	-	-	4	2
9.	15A52602	Advanced English Language Communication Skills (AELCS) Laboratory (Audit Course)			2	-
10.	15A03611	Comprehensive Online Examination - II	-	-	-	1
Total:			18	6	11	23

There shall be a comprehensive online examination conducted by the respective colleges with 60 objective questions for 60 marks on the subjects studied in the third year (I & II semesters). The Principals of the respective colleges are given the responsibility of preparing question bank/ question paper and conducting the online examination maintaining confidentiality. A student shall acquire 1 credit assigned to the comprehensive online examination only when he/she secures 40% or more marks. In case, if a student fails in comprehensive online examination, he shall reappear/ re-register by following a similar procedure adopted for the lab examinations.

B.Tech IV-I Semester (ME)

S. No.	Course Code	Subject	L	T	P	C
1.	15A52601	Management Science	3	1	-	3
2.	15A03701	Automobile Engineering	3	1	-	3
3.	15A03702	CAD/CAM	3	1	-	3
4.	15A03703	Metrology and Measurements	3	1	-	3
5.		CBCC-II		1	-	
	15A03704	a. Refrigeration and Air – Conditioning	3			3
	15A03705	b. Tool Design				
	15A03706	c. Modern Manufacturing Methods				
6.		CBCC-III		1	-	
	15A03707	a. Computational Fluid Dynamics	3			3
	15A03708	b. Automation and Robotics				
	15A03709	c. Production & Operations Management				
7.	15A03710	CAD/ CAM Laboratory	-	-	4	2
8.	15A03711	Metrology and Measurements Laboratory	-	-	4	2
Total:			18	6	8	22

B.Tech IV-II Semester (ME)

S. No.	Course Code	Subject	L	T	P	C
1.	15A03801 15A03802 15A03803	MOOCS-II a. Industrial Engineering b. Product Design c. Composite Materials	3	1	0	3
2.	15A03804 15A03805 15A03806	MOOCS -III a. Power Plant Engineering b. Gas Turbines and Jet Propulsion c. Energy Management	3	1	0	3
3.	15A03807	Comprehensive Viva Voce	0	0	4	2
4.	15A03808	Technical Seminar	0	0	4	2
5.	15A03809	Project work	0	0	24	12
Total:			6	2	32	22

B.Tech IV-I Semester (CSE)

S. No.	Course Code	Subject	L	T	P	C
1.	15A52601	Management Science	3	1	-	3
2.	15A05701	Grid & Cloud Computing	3	1	-	3
3.	15A05702	Information Security	3	1	-	3
4.	15A05703	Mobile Application Development	3	1	-	3
5.	15A05704 15A05705 15A05706	CBCC-II a. Software Architecture b. Computer Graphics c. Machine Learning	3	1	-	3
6.	15A05707 15A05708 15A05709	CBCC-III a. Software Project Management b. Distributed Systems c. Real Time Systems	3	1	-	3
7.	15A05710	Grid & Cloud Computing Laboratory	-	-	4	2
8.	15A05711	Mobile Application Development Laboratory	-	-	4	2
Total:			18	06	08	22

B.Tech IV-II Semester (CSE)

S. No.	Course Code	Subject	L	T	P	C
1.	15A05801 15A05802 15A05803	MOOCS-II a. Data Analytics b. Mobile Computing c. Innovations and IT Management	3	1	-	3
2.	15A05804 15A05805 15A05806	MOOCS-III a. Building Large Scale Software Systems b. Enabling Technologies for Data Science Analytics : IoT c. Cyber Security	3	1	-	3
3.	15A05807	Comprehensive Viva-Voce	-	-	4	2
4.	15A05808	Technical Seminar	-	-	4	2
5.	15A05809	Project Work	-	-	24	12
Total:			6	2	32	22

JNTUA Curriculum
Electronics and Communication Engineering B. Tech Course Structure

III & IV Year Course Structure and Syllabus

Semester - 5 (Theory - 6, Lab - 3)					
S.No	Course No	Course Name	Category	L-T-P	Credits
1.	19A04501T	Integrated Circuits and Applications	PC	2-0-0	2
2.	19A04502	Antennas and Wave Propagation	PC	3-0-0	3
3.	19A52601T	English Language Skills	HS	3-0-0	3
4.	19A04503T	Digital Communications	PC	3-0-0	3
5.	19A05403T 19A02403 19A05303T 19A04504a 19A04504b	Professional Elective-I Operating Systems Power Electronics Object Oriented Programming Data Communications and Networks Nano Electronics	PC	3-0-0	3
6.	19A01506a 19A01506b 19A02506a 19A03506a 19A03506b 19A04506a 19A04506b 19A05506a 19A05506b 19A27506a 19A27506b 19A54506a 19A52506a	Open Elective-I Experimental stress analysis. Building Technology Electrical Engineering Materials Introduction to Hybrid and Electric Vehicles Rapid Prototyping Analog Electronics Digital Electronics Free and Open Sources Systems Computer Graphics and Multimedia Animation Brewing Technology Computer Applications in Food Technology Optimization Techniques Technical Communication and Presentation Skills	OE	3-0-0	3
7.	19A04501P	Integrated Circuits and Applications Lab	PC	0-0-3	1.5
8.	19A52601P	English Language Skills Lab	HS	0-0-3	1.5
9.	19A04503P	Digital Communications Lab	PC	0-0-2	1
10.	19A04507	Socially Relevant Project		0-0-1	0.5
11.	19A99601	Research Methodology (Mandatory course)		3-0-0	0
Total					21.5

Semester - 6 (Theory - 6, Lab - 2)					
S.No	Course No	Course Name	Cat egor y	L-T-P	Credits
1.	19A04601T	Microprocessors and Microcontrollers	PC	3-0-0	3
2.	19A04602T	Digital Signal Processing	PC	3-0-0	3
3.	19A04603	Digital System Design through VHDL	PC	3-0-0	3
4.	19A04605a 19A04605b 19A04605c 19A04605d 19A04605e	Professional Elective-II Cellular & Mobile Communications Sensors and Actuators Digital Switching and Multiplexing Electronic Measurements and Instrumentation Radar Systems	PC	3-0-0	3
5.	19A01604a 19A01604b 19A02604a 19A02604b 19A03604a 19A03604b 19A04604a 19A04604b 19A05604a 19A05604b 19A27604a 19A27604b 19A54604a 19A52604a	Open Elective-II Industrial waste and waste water management. Building Services & Maintenance Industrial Automation System Reliability Concepts Introduction to Mechatronics Optimization techniques through MATLAB Basics of VLSI Principles of Communication Systems Fundamentals of VR/AR/MR Data Science Food Toxicology Food Plant Equipment Design Wavelet Transforms & its applications Soft Skills	OE	3-0-0	3
6.	19A52602a 19A52602b 19A52602c 19A52602d 19A52602e	Humanities Elective-I Entrepreneurship & Incubation Managerial Economics And Financial Analysis Business Ethics And Corporate Governance Enterprise Resource Planning Supply Chain Management	HS	3-0-0	3
7.	19A04602P	Digital Signal Processing Lab	PC	0-0-3	1.5
8.	19A04601P	Microprocessors and Microcontrollers Lab	PC	0-0-3	1.5
9.	19A04606	Socially Relevant Project		0-0-1	0.5
10.	19A99501	Constitution of India (Mandatory Course)		3-0-0	0
11.	19A04607	Industrial Training/Skill Development/Research Project*	PR	-----	-----
Total					21.5

JNTUA Curriculum
Mechanical Engineering B. Tech Course Structure

3rd Year Course Structure

Semester - 5 (Theory - 7, Lab - 3)					
S.No	Course No	Course Name	Category	L-T-P	Credits
1.	19A03501T	Applied Thermodynamics	PC	2-1-0	3
2.	19A03502T	Manufacturing Technology	PC	2-0-0	2
3.	19A03503T	Heat Transfer	PC	2-1-0	3
4.	19A03505	Dynamics of Machinery	PC	2-1-0	3
5.	19A03504a 19A03504b 19A03504c 19A03504d 19A03504e	Professional Elective 1 Automobile Engineering Manufacturing Methods in Precision Engineering Design of Transmission Systems Power Plant Engineering Ergonomics and Human Factors in Engineering	PE	3-0-0	3
6.	19A01506a 19A01506b 19A02506a 19A03506a 19A03506b 19A04506a 19A04506b 19A05506a 19A05506b 19A27506a 19A27506b 19A54506a 19A52506a	Open Elective-I Experimental stress analysis. Building Technology Electrical Engineering Materials Introduction to Hybrid and Electric Vehicles Rapid Prototyping Analog Electronics Digital Electronics Free and Open Sources Systems Computer Graphics and Multimedia Animation Brewing Technology Computer Applications in Food Technology Optimization Techniques Technical Communication and Presentation Skills	PE	3-0-0	3
7.	19A03501P	Applied Thermodynamics Lab	PC	0-0-3	1.5
8.	19A03502P	Manufacturing Technology Lab	PC	0-0-3	1.5
9.	19A03403P	Fluid Mechanics & Hydraulic Machinery Lab	PC	0-0-2	1
10.	19A03507	Socially Relevant Projects (15 Hrs/Sem)	PR	0-0-0.5	0.5
11.	19A99501	Mandatory Course: Constitution Of India	MC	3-0-0	0
Total					21.5

Semester - 6 (Theory - 7, Lab – 2)					
S.No	Course No	Course Name	Category	L-T-P	Credits
1.	19A03601	Design of Machine Elements	PC	2-1-0	3
2.	19A03602T	Introduction to CAD/CAM	PC	3-0-0	3
3.	19A52601T	English Language Skills	BS	3-0-0	3
4.	19A03603a 19A03603b 19A03603c 19A03603d 19A03603e	Professional Elective-II Alternative Fuels and Emission Control Simulation and Modeling of Manufacturing Systems Mechanical Behavior of Materials Refrigeration & Air Conditioning Production and Operations Management	PE	3-0-0	3
5.	19A01604a 19A01604b 19A02604a 19A02604b 19A03604a 19A03604b 19A04604a 19A04604b 19A05604a 19A05604b 19A27604a 19A27604b 19A54604a 19A52604a	Open Elective-II Industrial waste and waste water management. Building Services & Maintenance Industrial Automation System Reliability Concepts Introduction to Mechatronics Optimization techniques through MATLAB Basics of VLSI Principles of Communication Systems Fundamentals of VR/AR/MR Data Science Food Toxicology Food Plant Equipment Design Wavelet Transforms & its applications Soft Skills	OE	3-0-0	3
6.	19A52602a 19A52602b 19A52602c 19A52602d 19A52602e	Humanities Elective-I Entrepreneurship & Incubation Managerial Economics And Financial Analysis Business Ethics And Corporate Governance Enterprise Resource Planning Supply Chain Management	HS	3-0-0	3
7.	19A03503P	Heat Transfer Lab	PC	0-0-3	1.5
8.	19A52601P	English Language Skills Lab	BS	0-0-3	1.5
9.	19A03605	Socially Relevant Projects (15 Hrs/Sem)	PR	----	0.5
10.	19A99601	Research Methodology	MC	3-0-0	0
Total					21.5

Semester - 6 (Theory - 6, Lab - 2)					
S.No	Course No	Course Name	Category	L-T-P	Credits
1.	19A05601	Cryptography & Network Security	PC	2-1-0	3
2.	19A05602T	Big Data Analytics	PCC	3-0-0	3
3.	19A52601T	English Communication	HS	3-0-0	3
4.	19A05603a 19A05603b 19A05603c	Professional Elective-II Systems Software and Compiler Design Machine Learning Design Patterns	PE	3-0-0	3
5.	19A01604a 19A01604b 19A02604a 19A02604b 19A03604a 19A03604b 19A04604a 19A04604b 19A05604a 19A05604b 19A27604a 19A27604b 19A54604a 19A52604a	Open Elective-II Industrial waste and waste water management. Building Services & Maintenance Industrial Automation System Reliability Concepts Introduction to Mechatronics Optimization techniques through MATLAB Basics of VLSI Principles of Communication Systems Fundamentals of VR/AR/MR Data Science Food Toxicology Food Plant Equipment Design Wavelet Transforms & its applications Soft Skills	OE	3-0-0	3
6.	19A52602a 19A52602b 19A52602c 19A52602d 19A52602e	Humanities Elective-I Entrepreneurship & Incubation Managerial Economics And Financial Analysis Business Ethics And Corporate Governance Enterprise Resource Planning Supply Chain Management	HE	3-0-0	3
7.	19A05602P	Big Data Analytics Laboratory	PCC	0-0-3	1.5
8.	19A52601P	English Communication lab	HS	0-0-3	1.5
9.	19A05605	Socially Relevant Project	PR	-----	0.5
10.	19A99601	Mandatory Course: Research Methodology	MC	3-0-0	0
Total					21.5



R20 Regulations

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
(Established by Govt. of A.P., ACT No.30 of 2008)
ANANTHAPURAMU – 515 002 (A.P) INDIA

Electronics & Communication Engineering

II B.TECH.

Semester-III							
S.No.	Course Code	Course Name	Category	Hours per week			Credits
				L	T	P	
1.	20A54302	Complex Variables and Transforms	BS	3	0	0	3
2.	20A04301T	Signals and Systems	PC	3	0	0	3
3.	20A02303T	Electrical Engineering	ES	3	0	0	3
4.	20A04302T	Analog Circuits	PC	3	0	0	3
5.	20A52301 20A52302 20A52303	Humanities Elective– I Managerial Economics & Financial Analysis Organizational Behaviour Business Environment	HS	3	0	0	3
6.	20A04301P	Simulation Lab	PC	0	0	3	1.5
7.	20A02303P	Electrical Engineering Lab	ES	0	0	3	1.5
8.	20A04302P	Analog Circuits Lab	PC	0	0	3	1.5
9.	20A05305	Skill oriented course – I Application Development with Python	SC	1	0	2	2
10.	20A52201	Mandatory noncredit course – II Universal Human Values	MC	3	0	0	0
11.	20A99301	NSS/NCC/NSO Activities	MC	0	0	2	0
Total							21.5

Semester-IV							
S.No.	Course Code	Course Name	Category	Hours per week			Credits
				L	T	P	
1.	20A54403	Probability Theory & Stochastic Processes	BS	3	0	0	3
2.	20A04303T	Digital Logic Design	PC	3	0	0	3
3.	20A04401	EM Waves and Transmission Lines	PC	3	0	0	3
4.	20A04402T	Communication Systems	PC	3	0	0	3
5.	20A04403T	Linear and Digital IC Applications	PC	3	0	0	3
6.	20A04303P	Digital Logic Design Lab	PC	0	0	3	1.5
7.	20A04402P	Communication Systems Lab	PC	0	0	3	1.5
8.	20A04403P	Linear and Digital IC Applications Lab	PC	0	0	3	1.5
9.	20A52401	Skill Oriented Course –II Soft Skills	SC	1	0	2	2
10.	20A99401	Mandatory noncredit course – III Design Thinking for Innovation	MC	2	1	0	0
Total							21.5
Community Service Internship (Mandatory) for 6 weeks duration during summer vacation							



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ANANTHAPURAMU – 515 002 (A.P) INDIA

Computer Science & Engineering (Internet of Things)

II B.TECH.

Semester-III

S.No	Course Code	Course Name	Category	Hours per week			Credits
				L	T	P	
1.	20A54304	Discrete Mathematics & Graph Theory	BS	3	0	0	3
2.	20A04304T	Digital Electronics& Microprocessors	ES	3	0	0	3
3.	20A05303	Computer Organization	PC	3	0	0	3
4.	20A05301T	Advanced Data Structures & Algorithms	PC	3	0	0	3
5.	20A35301T	Sensor and IoT	PC	3	0	0	3
6.	20A04304P	Digital Electronics& Microprocessors Lab	ES	0	0	3	1.5
7.	20A05301P	Advanced Data Structures and Algorithms Lab	PC	0	0	3	1.5
8.	20A35301P	Sensor and IoT Lab					
9	20A35302	Skill Oriented Course – I Programming Arduino	SC	1	0	2	2
10	20A99201	Mandatory noncredit course - II Environmental Science	MC	3	0	0	0
Total							21.5

Semester-IV

S.No	Course Code	Course Name	Category	Hours per week			Credits
				L	T	P	
1.	20A54406	Mathematical Modeling and Simulation	BS	3	0	0	3
2.	20A05401T	Database Management Systems	PC	3	0	0	3
3.	20A05402T	Operating Systems	PC	3	0	0	3
4.	20A05403T	Software Engineering	PC	3	0	0	3
5.	20A52301 20A52302 20A52303	Humanities Elective– I Managerial Economics & Financial Analysis Organizational Behaviour Business Environment	HS	3	0	0	3
6.	20A05401P	Database Management SystemsLab	PC	0	0	3	1.5
7.	20A05402P	Operating SystemsLab	PC	0	0	3	1.5
8.	20A05403P	Software Engineering Lab	PC	0	0	3	1.5
9.	20A35401	Skill Oriented Course– II Python Programming for IoT	SC	1	0	2	2
10.	20A99401	Mandatory noncredit course – III Design Thinking for Innovation	MC	2	1	0	0
11.	20A99301	NSS/NCC/NSO Activities	MC	0	0	2	0
Total							21.5
Community Service Internship/Project(Mandatory) for 6 weeks duration during summer vacation							



ELECTRONICS AND COMMUNICATION ENGINEERING
(For the batches admitted from the academic year 2021-22)

INDUCTION PROGRAM (3 weeks duration)	
❖	Physical activity
❖	Creative Arts
❖	Universal Human Values
❖	Literary
❖	Proficiency Modules
❖	Lectures by Eminent People
❖	Visits to local Areas
❖	Familiarization to Dept./Branch & Innovations

Semester I (First Year)

S. No	Category	Course Code	Course Title	Hours per week			Credits	CIE	SEE	Total
				L	T	P	C			
1	BS	21A110101	Calculus and Special Functions	3	0	0	3	30	70	100
2	BS	21A110102	Mathematical Methods	3	0	0	3	30	70	100
3	ES	21A020301	Fundamentals of Electrical Circuits	3	0	0	3	30	70	100
4	ES	21A050302	C Programming & Data Structures	3	0	0	3	30	70	100
5	ES	21A030301	Engineering Drawing	1	0	4	3	30	70	100
6	ES	21A020302	Fundamentals of Electrical Circuits Lab	0	0	3	1.5	30	70	100
7	ES	21A050303	C Programming & Data Structures Lab	0	0	3	1.5	30	70	100
8	HSMC	21A110201	Communicative English Lab	0	0	2	1	30	70	100
Total							19			800



Semester II (First Year)

S. No	Category	Course Code	Course Title	Hours per week			Credits	CIE	SEE	Total
				L	T	P	C			
1	BS	21A110103	Differential Equations & Vector Calculus	3	0	0	3	30	70	100
2	BS	21A110104	Applied Physics	3	0	0	3	30	70	100
3	BS	21A110105	Applied Chemistry	3	0	0	3	30	70	100
4	HSMC	21A110202	English for Professionals	2	0	0	2	30	70	100
5	ES	21A040301	Electronic Devices & Circuits	3	0	0	3	30	70	100
6	BS	21A110108A	Applied Physics Lab	0	0	3	1.5	30	70	100
7	BS	21A110108B	Applied Chemistry Lab	0	0	3	1.5	30	70	100
8	ES	21A050301	Engineering & IT Workshop Lab	0	0	3	1.5	30	70	100
9	ES	21A040302	Electronic Devices & Circuits Lab	0	0	3	1.5	30	70	100
10	MC	21A000001	Environmental Science	2	0	0	0	30	---	---
Total							20			900



MECHANICAL ENGINEERING

(For the batches admitted from the academic year 2021-22)

INDUCTION PROGRAM (3 weeks duration)	
❖	Physical activity
❖	Creative Arts
❖	Universal Human Values
❖	Literary
❖	Proficiency Modules
❖	Lectures by Eminent People
❖	Visits to local Areas
❖	Familiarization to Dept./Branch & Innovations

Semester I (First Year)

S. No	Category	Course Code	Course Title	Hours per week			Credits	CIE	SEE	Total
				L	T	P	C			
1	BS	21A110101	Calculus and Special Functions	3	0	0	3	30	70	100
2	BS	21A110106	Engineering Physics	3	0	0	3	30	70	100
3	BS	21A110107	Engineering Chemistry	3	0	0	3	30	70	100
4	ES	21A050302	C-Programming & Data Structures	3	0	0	3	30	70	100
5	HSMC	21A110202	English for Professionals	2	0	0	2	30	70	100
6	BS	21A110109A	Engineering Physics Lab	0	0	3	1.5	30	70	100
7	BS	21A110109B	Engineering Chemistry Lab	0	0	3	1.5	30	70	100
8	ES	21A050303	C-Programming & Data Structures Lab	0	0	3	1.5	30	70	100
9	ES	21A050301	Engineering & IT Workshop Lab	0	0	3	1.5	30	70	100
Total							20			900



Semester II (First Year)

S. No	Category	Course Code	Course Title	Hours per week			Credits	CIE	SEE	Total
				L	T	P	C			
1	BS	21A110110	Probability and Statistics	3	0	0	3	30	70	100
2	ES	21A030303	Material Science and Engineering	3	0	0	3	30	70	100
3	ES	21A030301	Engineering Drawing	1	0	4	3	30	70	100
4	ES	21A030302	Engineering Mechanics	3	0	0	3	30	70	100
5	ES	21A020303	Basic Electrical and Electronics Engineering	3	0	0	3	30	70	100
6	ES	21A020304	Basic Electrical and Electronics Engineering Lab	0	0	3	1.5	30	70	100
7	ES	21A030304	Material science and Engineering Lab	0	0	3	1.5	30	70	100
8	HSMC	21A110201	Communicative English Lab	0	0	2	1	30	70	100
9	MC	21A000001	Environmental Science	2	0	0	0	30	-	-
Total							19			800



CIVIL ENGINEERING

(For the batches admitted from the academic year 2022-23)

INDUCTION PROGRAM (3 weeks duration)	
❖	Physical activity
❖	Creative Arts
❖	Universal Human Values
❖	Literary
❖	Proficiency Modules
❖	Lectures by Eminent People
❖	Visits to local Areas
❖	Familiarization to Dept./Branch & Innovations

Semester I (First Year)

S. No	Category	Course Code	Course Title	Hours per week			Credits	CIE	SEE	Total
				L	T	P	C			
1	BS	21A110101	Calculus and Special Functions	3	0	0	3	30	70	100
2	ES	21A050302	C Programming & Data Structures	3	0	0	3	30	70	100
3	ES	21A010301	Applied Mechanics	3	0	0	3	30	70	100
4	ES	21A030301	Engineering Drawing	1	0	4	3	30	70	100
5	ES	21A020303	Basic Electrical & Electronics engineering	3	0	0	3	30	70	100
6	HSMC	21A110201	Communicative English Lab	0	0	2	1	30	70	100
7	ES	21A050303	C Programming & Data Structures Lab	0	0	3	1.5	30	70	100
8	ES	21A020304	Basic Electrical & Electronics engineering Lab	0	0	3	1.5	30	70	100
Total							19			800



Semester II (First Year)

S. No	Category	Course Code	Course Title	Hours per week			Credits	CIE	SEE	Total
				L	T	P	C			
1	BS	21A110103	Differential Equations & Vector Calculus	3	0	0	3	30	70	100
2	BS	21A110106	Engineering Physics	3	0	0	3	30	70	100
3	BS	21A110107	Engineering Chemistry	3	0	0	3	30	70	100
4	HSMC	21A110202	English for Professionals	2	0	0	2	30	70	100
5	ES	21A010302	Building materials, Construction and Planning	3	0	0	3	30	70	100
6	BS	21A110109A	Engineering Physics Lab	0	0	3	1.5	30	70	100
7	BS	21A110109B	Engineering Chemistry Lab	0	0	3	1.5	30	70	100
8	ES	21A010303	Basic Civil Engineering Lab	0	0	3	1.5	30	70	100
9	ES	21A050301	Engineering & IT Workshop Lab	0	0	3	1.5	30	70	100
10	MC	21A000001	Environmental Science	2	0	0	0	30	---	---
Total							20			900



ELECTRICAL AND ELECTRONICS ENGINEERING
(For the batches admitted from the academic year 2021-22)

INDUCTION PROGRAM (3 weeks duration)	
❖	Physical activity
❖	Creative Arts
❖	Universal Human Values
❖	Literary
❖	Proficiency Modules
❖	Lectures by Eminent People
❖	Visits to local Areas
❖	Familiarization to Dept./Branch & Innovations

Semester I (First year)

S. No	Category	Course Code	Course Title	Hours per week			Credits	CIE	SEE	Total
				L	T	P	C			
1	BS	21A110101	Calculus and Special Functions	3	0	0	3	30	70	100
2	BS	21A110102	Mathematical Methods	3	0	0	3	30	70	100
3	ES	21A020301	Fundamentals of Electrical Circuits	3	0	0	3	30	70	100
4	ES	21A050302	C Programming & Data Structures	3	0	0	3	30	70	100
5	ES	21A030301	Engineering Drawing	1	0	4	3	30	70	100
6	ES	21A020302	Fundamentals of Electrical Circuits Lab	0	0	3	1.5	30	70	100
7	ES	21A050303	C Programming & Data Structures Lab	0	0	3	1.5	30	70	100
8	HSMC	21A110201	Communicative English Lab	0	0	2	1	30	70	100
Total							19			800



Semester II (First year)

S. No	Category	Course Code	Course Title	Hours per week			Credits	CIE	SEE	Total
				L	T	P	C			
1	BS	21A110103	Differential Equations & Vector Calculus	3	0	0	3	30	70	100
2	BS	21A110104	Applied Physics	3	0	0	3	30	70	100
3	BS	21A110105	Applied Chemistry	3	0	0	3	30	70	100
4	HSMC	21A110202	English for Professionals	2	0	0	2	30	70	100
5	ES	21A040301	Electronic Devices & Circuits	3	0	0	3	30	70	100
6	BS	21A110108A	Applied Physics Lab	0	0	3	1.5	30	70	100
7	BS	21A110108B	Applied Chemistry Lab	0	0	3	1.5	30	70	100
8	ES	21A050301	Engineering & IT Workshop Lab	0	0	3	1.5	30	70	100
9	ES	21A040302	Electronic Devices & Circuits Lab	0	0	3	1.5	30	70	100
10	MC	21A000001	Environmental Science	2	0	0	0	30	-	-
Total							20			900



COMPUTER SCIENCE AND ENGINEERING
(For the batches admitted from the academic year 2021-22)

INDUCTION PROGRAM (3 weeks duration)	
❖	Physical activity
❖	Creative Arts
❖	Universal Human Values
❖	Literary
❖	Proficiency Modules
❖	Lectures by Eminent People
❖	Visits to local Areas
❖	Familiarization to Dept. / Branch & Innovations

Semester I (First year)

S.No	Category	Course Code	Course Title	Hours per week			Credits	CIE	SEE	Total
				L	T	P	C			
1	BS	21A110101	Calculus and Special Functions	3	0	0	3	30	70	100
2	BS	21A110105	Applied Chemistry	3	0	0	3	30	70	100
3	ES	21A050302	C-Programming & Data Structures	3	0	0	3	30	70	100
4	BS	21A110104	Applied Physics	3	0	0	3	30	70	100
5	HSMC	21A110202	English for Professionals	2	0	0	2	30	70	100
6	ES	21A050301	Engineering & IT Workshop	0	0	3	1.5	30	70	100
7	BS	21A110108A	Applied Physics Lab	0	0	3	1.5	30	70	100
8	BS	21A110108B	Applied Chemistry Lab	0	0	3	1.5	30	70	100
9	ES	21A050303	C-Programming & Data Structures Lab	0	0	3	1.5	30	70	100
Total							20			900



Semester II (First year)

S.No	Category	Course Code	Course Title	Hours per week			Credits	CIE	SEE	Total
				L	T	P	C			
1	BS	21A110102	Mathematical Methods	3	0	0	3	30	70	100
2	BS	21A110110	Probability and Statistics	3	0	0	3	30	70	100
3	ES	21A030301	Engineering Drawing	1	0	4	3	30	70	100
4	ES	21A050304	Advanced Data Structures through C++	3	0	0	3	30	70	100
5	ES	21A020303	Basic Electrical and Electronics Engineering	3	0	0	3	30	70	100
6	HSMC	21A110201	Communicative English Lab	0	0	2	1	30	70	100
7	ES	21A020304	Basic Electrical and Electronics Engineering Lab	0	0	3	1.5	30	70	100
8	ES	21A050305	Advanced Data Structures through C++ Lab	0	0	3	1.5	30	70	100
9	MC	21A000001	Environmental Science	2	0	0	0	30	--	--
Total							19			800



CSE - ARTIFICIAL INTELLIGENCE

(For the batches admitted from the academic year 2021-22)

INDUCTION PROGRAM (3 weeks duration)	
❖	Physical activity
❖	Creative Arts
❖	Universal Human Values
❖	Literary
❖	Proficiency Modules
❖	Lectures by Eminent People
❖	Visits to local Areas
❖	Familiarization to Dept./Branch & Innovations

Semester I (First year)

S. No	Category	CourseCode	Course Title	Hours per week			Credits	CIE	SEE	Total
				L	T	P	C			
1	BS	21A110101	Calculus and Special Functions	3	0	0	3	30	70	100
2	BS	21A110105	Applied Chemistry	3	0	0	3	30	70	100
3	ES	21A050302	C-Programming & Data Structures	3	0	0	3	30	70	100
4	BS	21A110106	Engineering Physics	3	0	0	3	30	70	100
5	HSMC	21A110202	English for Professionals	2	0	0	2	30	70	100
6	ES	21A050301	Engineering & IT Workshop	0	0	3	1.5	30	70	100
7	BS	21A110109A	Engineering Physics Lab	0	0	3	1.5	30	70	100
8	BS	21A110108B	Applied Chemistry Lab	0	0	3	1.5	30	70	100
9	ES	21A050303	C-Programming & Data Structures Lab	0	0	3	1.5	30	70	100
Total							20			900



Semester II (First year)

S. No	Category	Course Code	Course Title	Hours per week			Credits	CIE	SEE	Total
				L	T	P	C			
1	BS	21A110102	Mathematical Methods	3	0	0	3	30	70	100
2	BS	21A110110	Probability and Statistics	3	0	0	3	30	70	100
3	ES	21A030301	Engineering Drawing	1	0	4	3	30	70	100
4	ES	21A050304	Advanced Data Structures through C++	3	0	0	3	30	70	100
5	ES	21A020303	Basic Electrical and Electronics Engineering	3	0	0	3	30	70	100
6	HSMC	21A110201	Communicative English Lab	0	0	3	1	30	70	100
7	ES	21A020304	Basic Electrical and Electronics Engineering Lab	0	0	3	1.5	30	70	100
8	ES	21A050305	Advanced Data Structures through C++ Lab	0	0	3	1.5	30	70	100
9	MC	21A000005	Biology for Engineers	2	0	0	0	30	0	0
Total							19			800



CSE - INTERNET OF THINGS

(For the batches admitted from the academic year 2021-22)

INDUCTION PROGRAM (3 weeks duration)	
❖	Physical activity
❖	Creative Arts
❖	Universal Human Values
❖	Literary
❖	Proficiency Modules
❖	Lectures by Eminent People
❖	Visits to local Areas
❖	Familiarization to Dept./Branch & Innovations

Semester I (First year)

S.No	Category	Course Code	Course Title	Hours per week			Credits	CIE	SEE	Total
				L	T	P	C			
1	BS	21A110101	Calculus and Special Functions	3	0	0	3	30	70	100
2	BS	21A110105	Applied Chemistry	3	0	0	3	30	70	100
3	ES	21A050302	C-Programming & Data Structures	3	0	0	3	30	70	100
4	BS	21A110106	Engineering Physics	3	0	0	3	30	70	100
5	HSMC	21A110202	English for Professionals	2	0	0	2	30	70	100
6	ES	21A050301	Engineering & IT Workshop	0	0	3	1.5	30	70	100
7	BS	21A110109A	Engineering Physics Lab	0	0	3	1.5	30	70	100
8	BS	21A110108B	Applied Chemistry Lab	0	0	3	1.5	30	70	100
9	ES	21A050303	C-Programming & Data Structures Lab	0	0	3	1.5	30	70	100
Total							20			900



Semester II (First year)

S. No	Category	Course Code	Course Title	Hours per week			Credits	CIE	SEE	Total
				L	T	P	C			
1	BS	21A110102	Mathematical Methods	3	0	0	3	30	70	100
2	BS	21A110110	Probability and Statistics	3	0	0	3	30	70	100
3	ES	21A030301	Engineering Drawing	1	0	4	3	30	70	100
4	ES	21A050304	Advanced Data Structures through C++	3	0	0	3	30	70	100
5	ES	21A020303	Basic Electrical and Electronics Engineering	3	0	0	3	30	70	100
6	HSMC	21A010201	Communicative English Lab	0	0	2	1	30	70	100
7	ES	21A020304	Basic Electrical and Electronics Engineering Lab	0	0	3	1.5	30	70	100
8	ES	21A050305	Advanced Data Structures through C++ Lab	0	0	3	1.5	30	70	100
9	MC	21A000001	Environmental Science	2	0	0	0	30	--	--
Total							19			800

Semester – V (Theory - 6, Lab – 3, MC-1)					
S.No	Course No	Course Name	Category	L-T-P	Credits
1.	19A02501T	AC Machines	PCC	2-1-0	3
2.	19A02502	Control Systems	PCC	2-1-0	3
3.	19A52601T	English Language Skills	PCC	3-0-0	3
4.	19A02504	Electrical Machine Design	PCC	1-1-0	2
5.	19A02503a 19A02503b 19A02503c 19A04508 19A02503d	Professional Elective-I HVDC and FACTS DC Drives Programmable Logic Controllers Analog and digital IC applications Wind Energy Systems	PEC-I	2-1-0	3
6.	19A01506a 19A01506b 19A03506a 19A03506b 19A04506a 19A04506b 19A05506a 19A05506b 19A27506a 19A27506b 19A54506a 19A52506a 19A51506a	Open Elective-I Experimental stress analysis. Building Technology Introduction to Hybrid and Electric Vehicles Rapid Prototyping Analog Electronics Digital Electronics Free and Open Sources Systems Computer Graphics and Multimedia Animation Brewing Technology Computer Applications in Food Industry Optimization Techniques Technical Communication and Presentation Skills Chemistry of Energy Materials	OEC-I	2-1-0	3
7.	19A02501P	AC Machines Lab	PCC	0-0-3	1.5
8.	19A52601P	English Language Skills Lab	PCC	0-0-3	1.5
9.	19A02506	Power Electronics & Simulation Lab	PCC	0-0-2	1
10.	19A02507	Socially Relevant Project	PR	0-0-0.5	0.5
11.	19A99601	Research Methodology	MC	3-0-0	0
				Total	21.5

Semester – VI (Theory - 6, Lab – 2)					
S.No	Course No	Course Name	Category	L-T-P	Credits
1.	19A04301	Signals & Systems	PCC	2-1-0	3
2.	19A02601T	Digital Computer Platforms	PCC	2-1-0	3
3.	19A02602	Power System Analysis	PCC	2-1-0	3
4.	19A02603a	Professional Elective-II (MOOC) Power Quality	PEC-II	2-1-0	3
	19A02603b	Fundamentals of Semiconductor Devices			
	19A02603c	Nonlinear System Analysis			
	19A04703c	Introduction to Embedded System Design			
	19A02603d	Design of Photovoltaic Systems			
5.	19A01604a	Open Elective-II Industrial waste and wastewater management.	OEC-II	2-1-0	3
	19A01604b	Building Services & Maintenance			
	19A03604a	Introduction to Mechatronics			
	19A03604b	Optimization techniques through MATLAB			
	19A04604a	Basics of VLSI			
	19A04604b	Principles of Communication Systems			
	19A05604a	Fundamentals of VR/AR/MR			
	19A05604b	Data Science			
	19A27604a	Food Toxicology			
	19A27604b	Food Plant Equipment Design			
	19A54604a	Wavelet Transforms & its applications			
	19A52604a	Soft Skills			
	19A51604a	Chemistry of Polymers and Its Applications			
6.	19A52602a	Humanities Elective-I Entrepreneurship & Incubation	HSMC	3-0-0	3
	19A52602b	Managerial Economics And Financial Analysis			
	19A52602c	Business Ethics and Corporate Governance			
	19A52602d	Enterprise Resource Planning			
	19A52602e	Supply Chain Management			
7.	19A02605	Control Systems & Simulation Lab	PCC	0-0-3	1.5
8.	19A02601P	Digital Computer Platforms Lab	PCC	0-0-3	1.5
9.	19A02606	Socially Relevant Project	PR	0-0-0.5	0.5
10.	19A99501	Constitution of India	MC	3-0-0	0
11	19A02607	Comprehensive online examination		-	0
				Total	21.5