

BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT, BALLARI
 (AN AUTONOMOUS INSTITUTION AFFILIATED TO VISVESVARAYA TECHNOLOGICAL
 UNIVERSITY)
 ELECTRICAL & ELECTRONICS ENGINEERING

CURRICULUM FOR I- VIII SEMESTER

2021 SCHEME

SEMESTER I

Physics Cycle

SL.NO.	Course Code	Course Name
01	21MAT11	Calculus & Linear Algebra
02	21CHE12	Engineering Chemistry
03	21CPS13	C- Programming
04	21ELN14	Basic Electronics
05	21EME15	Elements of mechanical Engineering
06	21PEI16	Professional English- I
07	21CHEL17	Engineering chemistry Lab
08	21CPL18	C-Programming Lab
09	21CEP19	Communicative Enhancement Practice

SEMESTER II

Chemistry Cycle

SL.NO.	Course Code	Course Name
01	21MAT21	Advance Calculus & Numerical Methods
02	21PHY22	Engineering Physics
03	21FEE23	Fundamentals of Electrical Engineering
04	21CIV24	Elements of Civil Engineering
05	21EDL25	Computer Added Engineering Drawing
06	21PEI26	Professional English-2
07	21PHYL27	Engineering Physics Lab
08	21BEL28	Basic Electrical Lab
09	21SSD29	Study Skill & Self Development

SEMESTER III

SL.NO	Course Code	Course Name
01	21MEE31	Transform Calculus & Numerical Methods
02	21EE32	Electric Circuit Analysis
03	21EE33	Analog Electronic Circuits & Op - Amps
04	21EE34	Electrical Machines - I (Transformers & Generators)
05	21EEL35	AEC & Op-Amp Laboratory
06	21EEL36	Electrical Machines Laboratory - I
07	21KSK37/47	Samskrutika Kannada
	21KBK37/47	Balake Kannada

SEMESTER
IV

	21CIP37/47	Constitution of India and Professional Ethics
08	21AEE38	Ability Enhancement Course - Circuit Laboratory Using Pspice
09	21DTI39	Ability Enhancement Course - Design Thinking& Innovation
10	21MATDIP31	Additional Mathematics - I

SL	Course Code	Course
01	21MCE41	Linear Algebra, Probability and Statistical Methods
02	21EE42	Digital Circuits and Design
03	21EE43	Power Electronics
04	21EE44	Electrical Machines - II (Electric Motors)
05	21EEL45	Power Electronics Laboratory
06	21EEL46	Electrical Machine Laboratory - II
07	21KSK37/47	Samskrutika Kannada
	21KKBK37/47	Balake Kannada
	21CIP37/47	Constitution of India and Professional Ethics
08	21SSA480	Soft skills and basic aptitude
09	21AXX48X	Biology for Engineers /Ability Enhancement Course - II
10	21UHV490	Universal Human Values
11	21INT491	Summer Internship - I
12	21MATDIP41	Additional Mathematics - I

SEMESTER V

Sl. No.	Course Code	Course
01	21EE51	Control Systems
02	21EE52	Generation Transmission & Distribution
03	21EE53	Microcontroller
04	21EE54X	Professional Elective – 1
05	21EE55X	Open Elective - 1
06	21EEL56	Control System Laboratory
07	21EEL57	Microcontroller Laboratory
08	21ADA580	Advanced Aptitude
09	21AEC581	Department Specific AEC T & D using Scilab
10	21EE59	Environmental Studies

Professional Elective – 1

01	21EE541	Electrical Machine Design
02	21EE542	Electro Magnetic Field Theory
03	21EE543	Electrical Engineering Materials
04	21EE544	Sensors & Transducers

Open Elective -1

01	21EE551	Electric Vehicle Technology
02	21EE552	Renewable Energy Resource
03	21EE553	Sensors and Transducers
04	21EE554	Solar & wind Energy

Sl. No.	Course Code	Course
01	21EE61	Management & Entrepreneurship
02	21EE62	Power System Analysis – 1
03	21EE63	Signals & Digital Signal Processing
04	21EE64X	Professional Elective – 2
05	21EE65X	Open Elective - 2
06	21EEL66	Digital Signal Processing Laboratory
07	21EEL67	Computer Aided Electrical Drawing
08	21MN68	Mini Project
09	21AEC691	Modelling and Simulation of Electric Vehicle system Using MATLAB.
10	21INT691	Summer Internship-II

Professional Elective –2

01	21EE641	Utilization of Electrical Power
02	21EE642	Renewable Energy Sources
03	21EE643	Electrical Vehicle Technology
04	21EE644	Energy Storage Systems

Open Elective -2

01	21EE651	Energy storage technologies for EV.
02	21EE652	Utilization of Electrical Power
03	21EE653	Industrial Servo Control Systems
04	21EE654	Advanced Control Systems

SEMESTER VII

SN.NO.	Course Code	Course Name
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1	21EE71	Power System Analysis - 2
2	21EE72	High Voltage & Power System Protection
3	21EE73X	Professional Elective – 3
4	21EE74X	Open Elective - 3
5	21EEL75	Power System Analysis Laboratory
6	21EEP76	Project Work

PROFESSIONAL ELECTIVE – 3

01	21EE731	Industrial Drives and Applications
02	21EE732	Utilization of Electrical Power
03	21EE733	FACTS and HVDC
04	21EE734	Smart Grid
05	21EE735	Electric Power Quality

OPEN ELECTIVE -3

01	21EE741	Programmable Logic Control
02	21EE742	Energy Audit and Demand Side Management
03	21EE743	Energy Management in Electric Vehicles
04	21EE744	Solar and Wind Energy Conversion Systems

SEMESTER VIII

SN.NO.	Course Code	Course Name
1	21EE81	Power System Operation and Control
2	21EES82	Technical Seminar
3	21INT83	Industry Internship

2022 SCHEME

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CURRICULUM FOR I- VI SEMESTER

SEMESTER I

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Sl.No	Coursecode	Course Name
1	**22MATS11	MathematicsforCSEStream-I
2	22PHYS12	PhysicsforCSEstream
3	22POP13	PrinciplesofProgrammingUsingC
4	22ESC14x	EngineeringScienceCourse-I
5	22ETC15x	EmergingTechnologyCourse-I
	OR	
	22PLC15x	ProgrammingLanguagesCourse-I
6	22ENG16	CommunicativeEnglish
7	22KSK17 22KBK17	SanskrutikaKannada/BalakeKannada
	OR	
	20ICO17	IndianConstitution
8	22IDT18	InnovationandDesignThinking
		OR
	22SFH18	ScientificFoundationsofHealth

SEMESTER II

Sl.No	Course Code	Course Name
1	**22MATS21	MathematicsforCSEStream-II
2	22PHYS22	PhysicsforCSEStream
3	22POP23	PrinciplesofProgrammingUsingC
4	22ESC24x	EngineeringScienceCourse-II
5	22ETC25x	ProgrammingLanguageCourse-II
	OR	
	22PLC25x	EmergingTechnologyCourse-II
6	22PWS26	ProfessionalWritingSkillsinEnglish
7	22KSK27	SanskrutikaKannada/BalakeKannada
	22KBK27	
	OR	
	20ICO27	IndianConstitution
8	22IDT28	InnovationandDesignThinking
		OR
	22SFH28	ScientificFoundationsofHealth

SEMESTER III

Sl.No	CourseCode	CourseTitle
1	22XX31/ 22BB31	Applied Mathematics for The Program / Biology for Engineers
2	22EE32	Digital Electronics
3	22EE33	Analog Electronic Circuits
4	22EE34	Electrical Machines - I
5	22EEL35	Electrical Machines Lab - I
6	22ESC361	Electric Circuit Analysis
7	22SC37	Social Connect and Responsibility
8	22AEE381	Ability Enhancement Course Circuit Laboratory using Pspice
9	22NS39	National Service Scheme (NSS)
	22PE39	Physical Education (PE) (Sports and Athletics)
	22YO39	Yoga
10	22MATDIP31	Additional Mathematics - I Mathematics

Engineering Science Course (ESC/ETC/PLC)
Electrical Circuit Analysis

Ability Enhancement Course - III
1. Circuit Laboratory Using Pspice
2. Electrical Machines - I using SCILAB

SEMESTER IV

Sl.No	Course Code	Course Title
1	22XX41/ 22BB41	Applied Mathematics for The Program / Biology for Engineers
2	22EE42	Power Electronics
3	22EE43	Electrical Machines - II
4	22EE44	Microcontrollers
5	22EEL45	Electrical Machines Lab - II
6	22ESC461	Electrical and Electronics Measurements
7	22ASS471	Soft skills and Basic Aptitude
8	22UH48	Universal human values course
9	22NS49	National Service Scheme (NSS)

	22PE49	Physical Education (PE) (Sports and Athletics)
	22YO49	Yoga

10	NCMC	22MATDIP41	Additional Mathematics - II
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SEMESTER V

SN	Course Code	Course
01	22EE51	Management, Entrepreneurship and Engineering Economics
02	22EE52	Generation Transmission & Distribution
03	22EE53	Control Systems
04	22EEL54	Control Systems Laboratory
05	22EE55X	Professional Elective Course
06	22EE56	Mini Project
08	22ES58	Environmental Studies
09	22NS59	National Service Scheme (NSS)
	22PE59	Physical Education (PE) (Sports and Athletics)
	22YO59	Yoga

PROFESSIONAL ELECTIVE COURSES

01	22EE551	Operational Amplifiers and Linear IC's
02	22EE552	Electro Magnetic Field Theory
03	22EE553	Electrical Machine Design
04	22EE554	Fundamentals of VLSI Design

Ability Enhancement Course

01	22EE571	IOT Laboratory
02	22EE572	PCB Design Laboratory

SEMESTER VI

SN	Course Code	Course
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01	22EE61	Power System Analysis-1
02	22EE62	Signals & Digital Signal Processing
03	22E63X	Professional Elective Course
04	22EE64X	Open Elective Course
05	22PEE65	Project Phase -I
06	22EEL66	Signals and Digital Signal ProcessingLab
07	22RM67	Research Methodology and IPR
08	22NS59	NationalServiceScheme(NSS)
	22PE59	PhysicalEducation(PE)(SportsandAthletics)
	22YO59	Yoga

PROFESSIONALELECTIVECOURSES

01	22EE631	Computer Aided Engineering Drawing
02	22EE632	Utilization of Electrical Power
03	22EE633	Electric Vehicle Technology
04	22EE634	Sensors and Transducers

OPENELECTIVECOURSES

01	22EE641	Fundamentals of Electric Vehicle Technology
02	22EE642	Utilization of Electrical Power
03	22EE643	Solar & Wind Energy
04	22EE644	Sensors and Transducers