

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

CURRICULUM FOR I- VIII SEMESTER

2021 SCHEME

SEMESTER I

Physics Cycle

Sl no	Course Code	Course Name
1	21MAT11	Calculus & Linear Algebra
2	21CHE12	Engineering Chemistry
3	21CPS13	C – Programming
4	21ELN14	Basic Electronics
5	21EME15	Elements of mechanical Engineering
6	21PEI16	Professional English - I
7	21CHEL17	Engineering chemistry Lab
8	21CPL18	C – Programming Lab
		Communicative Enhancement Practice

SEMESTER II

Chemistry Cycle

Sl no	Course Code	Course Name
2	21PHY22	Engineering Physics
3	21FEE23	Fundamentals of Electrical Engineering
4	21CIV24	Elements of Civil Engineering
5	21EDL25	Computer Added Engineering Drawing
6	21PEI26	Professional English – 2
7	21PHYL27	Engineering Physics Lab
8	21BEL28	Basic Electrical Lab
9	21SSD29	Study Skill & Self Development

SEMESTER III

Sl no	Course Code	Course Name
2	21ME32	Production Technology-I
3	21ME33	Material Science & Metallurgy
4	21ME34	Mechanics of Materials
5	21MEL35	Material Testing Laboratory
6	21MEL36	Foundry & Forging Laboratory
7	21KSK37/47	Sanskritika Kannada
		Balake Kannada
	OR	
	21CIP37/47	Constitution of India and Professional Ethics
8	21AME381	Introduction to CAD
9	21DTI39	Design Thinking and social innovation
Course prescribed to lateral entry Diploma holders admitted to III semester B.E./B.Tech programs		
10	21MATDIP31	Additional Mathematics - I

SEMESTER IV

Sl no	Course Code	Course Name
01	21MAT41	Applied Engg. Mathematics-II
02	21ME42	Mechanical Measurements & Metrology
03	21ME43	Fluid Mechanics
04	21ME44	Engineering Thermodynamics
05	21MEL45	Computer Aided M/c Drawing
06	21MEL46	Fluids Mechanics Lab
07	21KSK37/47	Sanskritika Kannada
	21KBK37/47	Balake Kannada
	OR	
	21CIP37/47	Constitution of India and Professional Ethics

08	21SSA480	Soft skills and basic aptitude
09	21ACS48X	Biology for engineers / Department specific ability Enhancement Course
10	21UHV490	Universal Human Values
11	21INT491	Summer Internship - I
Course prescribed to lateral entry Diploma holders admitted to IV semester B.E./B. Tech. programs		
12	21MATDIP41	Additional Mathematics - II

ABILITY ENHANCEMENT COURSE		
1	21ABE481	Biology for Engineers
2	21AME482	Introduction to Computer Graphics

SEMESTER V

SL.NO.	Course Code	Course Name
01	21ME51	Thermo fluid Engineering
02	21ME52	Theory of Machines
03	21ME53	Production Technology-II
04	21ME54X	Professional Elective – 1
05	21ME55X	Open Elective - 1
06	21MEL56	Thermal Engineering Lab (FM+EC)
07	21MEL57	Machine shop Practice Lab
08	21ADA580	Advanced Aptitude
09	21XX581	Department Specific AEC
10	21ENV59	Environmental Studies

Professional Elective – 1		
1	21ME541	Composite Materials
2	21ME542	Production Operation Management
3	21ME543	Hydraulics and Pneumatics

Open Elective -1		
1	21ME551	Engineering Economics
2	21ME552	Energy and Environment
3	21ME553	Total Quality Management
4	21ME554	Non-Conventional Energy Sources

Department Specific AEC	
21ME581	3D Printing Lab

SEMESTER VI

Sl. No.	Course Code	Course
01	21ME61	Management and Entrepreneurship
02	21ME62	Machine Design
03	21ME63	Heat Transfer
04	21ME64X	Professional Elective – 2
05	21ME65X	Open Elective - 2
06	21MEL66	Design Lab
07	21MEL67	HT Lab
08	21MN68	Mini Project
09	21ME690/690A/ 690B	Ability Enhancement Course
10	21INT691	Summer Internship-II

Professional Elective – 2		
1	21ME641	Non-Traditional Machining
2	21ME642	Work Study and Ergonomics
3	21ME643	Mechatronics
4	21ME644	Additive Manufacturing

Open Elective -2		
1	21ME651	Autonomous Vehicles
2	21ME652	Supply Chain Management
3	21ME653	Industrial Safety
4	21ME654	Work Study and Ergonomics

Department Specific AEC		
1	21ME690	Finite Element Analysis Lab
2	21ME690A	Spread Sheets for Engineers
3	21ME690B	Introduction to MAT LAB

SEMESTER VII

SN.NO.	Course Code	Course Name
1	21ME71	Computer Integrated Manufacturing
2	21ME72	Control engineering
3	21ME73X	Professional Elective – 3
4	21ME74X	Open Elective - 3
5	21MEL75	CIM lab
6	21MEP76	Project Work

PROFESSIONAL ELECTIVE – 3

01	21ME 731	Experimental Stress Analysis
02	21 ME 732	Tribology
03	21 ME 733	TQM
04	21 ME 734	Design of IC Engines

OPEN ELECTIVE -3

01	21 ME 741	Automatic Control Systems (ACS)
02	21 ME 742	Production Planning & Control (PPC)
03	21 ME 743	Statistical Quality Control (SQC)
04	21 ME 744	Operations Research (OR)

SEMESTER VIII

SN.NO	Course Code	Course Name
1	21ME81	Operations Research
2	21MES82	Technical Seminar
3	21INT83	Internship

2022 SCHEME

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CURRICULUM FOR I- VI
SEMESTER

SEMESTER I

Sl. No	Course code	Course Name
1	**22MATS11	Mathematics for CSE Stream-I
2	22PHYS12	Physics for CSE stream
3	22POP13	Principles of Programming Using C
4	22ESC14x	Engineering Science Course-I
5	22ETC15x	Emerging Technology Course-I
	OR	
	22PLC15x	Programming Languages Course-I
6	22ENG16	Communicative English
7	22KSK17	Samskrutika Kannada/ Balake Kannada
	22KBK17	
	OR	
	20ICO17	Indian Constitution
8	22IDT18	Innovation and Design Thinking
	OR	
	22SFH18	Scientific Foundations of Health

SEMESTER II

Sl.No	Course Code	Course Name
1	**22MATS21	Mathematics for CSE Stream -II
2	22PHYS22	Physics for CSE Stream
3	22POP23	Principles of Programming Using C
4	22ESC24x	Engineering Science Course-II
5	22ETC25x	Programming Language Course-II
	OR	

	22PLC25x	Emerging Technology Course-II
6	22PWS26	Professional Writing Skills in English
7	22KSK27	Samskrutika Kannada/ Balake Kannada
	22KBK27	
	OR	
	20ICO27	Indian Constitution
8		Innovation and Design Thinking
	22IDT28	
	OR	
	22SFH28	Scientific Foundations of Health

SEMESTER III

Sl.No	Course Code	Course Title
1	22XX31/22B B31	Biology for Engineers / Applied Mathematics
2	22ME32	PTI+F&F Lab
3	22ME33	MSM + Lab
4	22ME34	MOM
5	22MEL35	CAMD
6	22ME361	ESC/ETC/PLC BTD
7	22SC37	Social Connect and Responsibility
8	22AME381	Ability Enhancement Course/Skill Enhancement Course – III Introduction to Electric Vehicle
9	22NS39	National Service Scheme (NSS)
	22PE39	Physical Education (PE) (Sports and Athletics)
	22YO39	Yoga

Engineering Science Course (ESC/ETC/PLC)

22ME361	BTD
22AME381	Introduction to Electric Vehicle

SEMESTER IV

Sl.No	Course Code	Course Title
1	22XX41/ 22BB41	Applied Mathematics for The Program /Biology for Engineers
2	22ME42	MMM + Lab
3	22ME43	FM + Lab
4	22ME44	PT II
5	22MEL45	M/c Shop Lab
6	22ME462	ESC/ETC/PLC ATD
7	22SS47	Ability Enhancement Course/Skill Enhancement Course- IV Soft Skills
8	22UH48	Universal human values course
9	22NS49	National Service Scheme (NSS)
	22PE49	Physical Education (PE) (Sports and Athletics)
	22YO49	Yoga

Ability Enhancement Course

22SS47	Softy Skills
Engineering Science Course (ESC/ETC/PLC)	
22ME462	ATD

SEMESTER V

SL.NO	Course and Course Code	Course Title
1	22ME51	Industrial Management & Entrepreneur-ship
2	22ME52	Turbo machines
3	22ME53	DME 1
4	22MEL54	Design lab

5	22ME55X	Professional elective - 1
6	22MEMN56	MINI Project Work Advanced Aptitude
7	22ADA57	
8	22ES58	Environmental Studies
9	22NS/PE/ YO59	NSS/ PE/YOGA

PROFESSIONAL ELECTIVE COURSES

01	22ME551	Theory of Machines
02	22ME552	Fluid Power Engineering
03	22ME553	Composite Materials
04	22ME554	Non Traditional methods

SEMESTER VI

Sl No	Course Code	Course Name
1	22ME61	Heat Transfer
2	22ME62	DME 2
3	21ME63X	Professional Elective - 2
4	21ME64X	Open Elective
5	22MEP65	Project Phase 1
6	22MEL66	Engine Lab
7	22RM67	Research Methodology
8	22NS/PE/YO68	MC

Professional Elective – 2

01	22ME631	Mechatronics
02	22ME632	Refrigeration & air conditioning
03	22ME633	Additive manufacturing
04	22ME634	Production & operation management

Open Elective

01	21ME641	Energy Engineering
02	21ME642	Additive Manufacturing
03	21ME643	Supply Chain Management
04	21ME644	Financial Management