

BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT, BALLARI
(AN AUTONOMOUS INSTITUTION AFFILIATED TO VISVESVARAYA TECHNOLOGICAL UNIVERSITY)
CIVIL 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	21PEII26	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	21MCM31	Integral Transforms & Numerical Methods
02	21CV32	Geodetic Engineering Survey
03	21CV33	Strength of materials
04	21CV34	Engg Geology
05	21CVL35	Building material Testing LAB
06	21CVL36	Computer Aided Drawing LAB
07	21KSK37/47	Samskrutika Kannada
	21KBK37/47	Balake Kannada
	OR	
	21CIP37/ 47	Constitution of India and Professional Ethics
08	21ACV381	Building materials & constructions
09	21DTI39	Ability Enhancement Course (Design Thinking and social innovation)
Course prescribed to lateral entry Diploma holders admitted to III semester B.E./B.Tech programs		
10	21MATDIP3	Additional Mathematics-1

SEMESTER IV

SL.NO	Course Code	Course Name
01	21MCM41	Complex Analysis, Probability & Statistical Methods
02	21CV42	Fluid mechanics & hydraulics
03	21CV43	Public Health Engineering
04	21CV44	Structural analysis-I
05	21CVL45	Total Station Lab
06	21CVL46	Geology 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	21AEC481/2	Ability enhancement course-II
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
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SEMESTER V

SL.NO.	Course Code	Course Name
01	21CV51	Design of RC structural elements
02	21CV52	Structural analysis -II
03	21CV53	Geotechnical Engineering
04	21CV541	Professional Elective-1
05	21CV552	Open Elective-1
06	21CVL56	Environmental Engg LAB
07	21CVL57	Concrete & Highway Lab
08	21ADA580	Advanced Aptitude
09	21CV581	Quality Control and Quality Assurance
10	21ENV59	Environmental Studies

Professional Elective - 1

01	21CV541	Hydrology and Irrigation Engineering
02	21CV543	Prefabricated Structures
03	21CV542	Alternative Building Materials
04	21CV544	Railway Harbors Tunnels & Airports
05	21CV545	Water Resources & Management

Open Elective -1

01	21CV551	Disaster Management and Mitigation
02	21CV552	Sustainable Materials & Green Buildings
03	21CV553	Photo grammetry & Remote Sensing

04	21CV554	Ecology & Environment
05	21CV555	Cartography & GIS concepts

SEMESTER VI

SL.NO.	Course Code	Course Name
01	21CV61	Construction Management & Entrepreneurship
02	21CV62	Design of steel structural elements
03	21CV63	Applied Geotechnical Engineering
04	21CV642	Professional Elective- 2
05	21CV651	Open Elective-2
06	21CVL66	Geotechnical Engg LAB
07	21CVL67	Software Application Lab
08	21CVE68	Extensive survey project
09	21CV690	Q GIS & Civil Software LAB
10	21INT691	Summer Internship-II

Professional Elective - 2

01	21CV641	Transportation Engineering
02	21CV642	Ground Improvement Techniques
03	21CV643	Solid Waste management
04	21CV644	Matrix method of Structural Analysis

Open Elective-2

01	21CV651	Occupation Health & Safety
02	21CV652	Traffic Engineering

03	21CV653	Remote sensing & GIS
04	21CV654	Intelligent Transportation Systems

SEMESTER VII

SN.NO.	Course Code	Course Name
1	21CV71	Quantity survey Contracts Management
2	21CV72	Design of RCC & steel elements
3	21CV73X	Professional Elective- 3
4	21CV74X	Open Elective-3
5	21CVL75	Computer-aided detailing of structures
6	21CVP76	Project Work

PROFESSIONAL ELECTIVE - 3

01	21CV731	Pavement Materials & Construction
02	21CV732	Repair, Retrofitting and Rehabilitation of Structures
03	21CV733	Groundwater Hydrology
04	21CV734	Masonry Structures

OPEN ELECTIVE -3

01	21CV741	Environmental Protection and Management
02	21CV742	Numerical Methods and Applications
03	21CV743	Finite Element Method
04	21CV744	Intelligent Transportation Systems

SEMESTER VIII

SN.NO.	Course Code	Course Name
1	21CV81	Design of Pre-stressed concrete Structures
2	21CVS82	Technical Seminar
3	21INT83	Industry Internship

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CIVIL ENGINEERING****CURRICULUM FOR I- VI SEMESTER
SEMESTER I**

Sl. No	Course code	Course Name
1	** 22MATC11	Mathematics for Civil Engg stream-I
2	22PHYC12	Physics for Civil Engg Stream
3	22CIV13	Engineering Mechanics
4	22ESC14x	Engineering Science Course-I
5	22ETC15x	Emerging Technology Course-I
	OR	
	22PLC15x	Programming Language Course-I
6	22ENG16	Communicative English
7	22KSK17/ 22KKBK17	Sanskrutika Kannada/ Balake Kannada
	OR	
	22ICO17	Indian Constitution
8	22IDT18	Innovation and Design Thinking
	OR	
	22SFH18	Scientific Foundations of Health

SEMESTER II

Sl. No	Course Code	Course Name
1	**22MATC21	Mathematics for Civil Engineering-II
2	22CHEC22	Chemistry for Civil Engg Stream
3	22CED23	Computer-Aided Engineering Drawing
4	22ESC24x	Engineering Science Course-II
5	22PLC25x	Programming Language Course-II
	OR	

	OR	
	22ETC25x	Emerging Technology Course-II
6	22PWS26	Professional Writing Skills in English
7	22ICO27	Indian Constitution
	OR	
	22KSK27 22KBK27	Sanskrutika Kannada/ Balake Kannada
8	22SFH18	Scientific Foundations of Health
	OR	
	22ITD18	Innovation and Design Thinking

SEMESTER III

SN	Course Code	Course Name
1	22BB31	Biology for Engineers
2	22CV32	Engineering Survey
3	22CV33	Engineering Geology
4	22CV34	Strength of Materials
5	22CVL35	Computer Aided Drawing Lab
6	22CV36x	Engineering Science Course
7	22SC37	Social Connect and Responsibility
8	22CV38x	Departmental Specific Ability Enhancement Course
9	22NS39	National Service Scheme (NSS)
	22PE39	Physical Education (PE) (Sports and Athletics)
	22YO39	Yoga

SEMESTER IV

SL.NO.	Course Code	Course Name
1	22MCV41	Applied Mathematics for Civil Engg
2	22CV42	Fluid Mechanics and Hydraulics
3	22CV43	Concrete Technology
4	22CV44	Analysis of structures
5	22CVL45	Building Materials Testing Lab
6	22CV46X	ESC/ETC/PLC
7	22PSW47	Professional Skills for the Work Place
8	22UH48	Universal Human Values course
9	22UH48	National Service Scheme (NSS)
	22PE49	Physical Education (PE) (Sports and Athletics)
	22YO49	Yoga

SEMESTER V

SL.NO	Course and Course Code	Course Title
1	22CV51	Construction Management and Entrepreneurship
2	22CV52	Design of RCC Structures
3	22CV53	Geotechnical Engineering
4	22CVL54	Software Application Laboratory
5	22CV55X	Professional Elective Course
6	22CVE56	Extensive survey Project

7	22ADA57	Advanced Aptitude
8	22ES58	Environmental Studies
9	22NS59	National Service Scheme (NSS) Physical Education (PE) (Sports and Athletics)
	22PE59	
	22YO59	Yoga

PROFESSIONAL ELECTIVE COURSES

22CV551	Advanced Concrete Technology
22CV552	Repair, Retrofitting and Rehabilitation of Structures
22CV553	Remote Sensing and GIS
22CV554	Fire safety in buildings

SEMESTER VI

SL.NO.	Course Code	Course Name
1	22CV61	Water Supply and Waste Water Engineering
2	22CV62	Transportation Engineering
3	22CV63X	Professional Elective Course
4	22CV64X	Open Elective Course
5	22CVP65	Project Phase I
6	22CVL66	Geotechnical Engineering Laboratory
7	22RM67	Research Methodology and IPR
8	22NS68	National Service Scheme (NSS)
	22PE68	Physical Education (PE) (Sports and Athletics)
	22YO68	Yoga

PROFESSIONAL ELECTIVE COURSES

22CV631	Applied Geotechnical Engineering
22CV632	Hydrology and Irrigation Engineering
22CV633	Solid waste management
22CV634	Design of Formwork and Scaffolding

OPEN ELECTIVE COURSES

22CV641	Water conservation and Rainwater Harvesting
22CV642	Geographic Information Systems
22CV643	Integrated Waste Management for a Smart City
22CV644	Occupational Health and Safety

Ability Enhancement Course / Skill Enhancement Course-V

22RM67	Research Methodology and IPR
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