

MALNAD COLLEGE OF ENGINEERING, HASSAN

Credits – It is proposed to have 160 Credits for a student to be eligible to get B.E. degree in Engineering/ Technology with an average of 20 credits per semester.

Scheme Structure for B. E. Program

Sl.No.	Category	AICTE Breakup of Credits (Total 160)	Proposed Breakup of Credits (Total 160)
1	Humanities and Social Sciences including Management courses	12*	10
2	Basic Science courses	25*	23
3	Engineering Science courses including workshop,drawing, basics of electrical/mechanical/computer etc	24*	20
4	Professional Core Courses	48*	43
5	Professional Elective courses relevant to chosen specialization/branch/Ability Enhancement Courses	18*	14
6	Open subjects – Electives from other technical, emerging, arts commerce and NCC/ NSS subjects/Ability Enhancement Courses	18*	14
7	Mini and Major Project work /seminar/ Summer Internship and Research /Industrial Internship	15*	32
8	Mandatory Non- Credit Courses [Environmental Sciences, Induction training, Indian Constitution, Universal Human Values, Kannada]	No credits	04
Total		160*	160

***Minor variation is allowed as per the need of the respective discipline**

Scheme of Teaching for the 2021-22 Admitted Batch

ODD Semester

Physics Cycle

Course Category	Course Code	Course Title	L-T-P	Credits	Contact hours
BS	21PH101	Engineering Physics	4-0-0	4	4
BS	21MA102	Calculus and Numerical Methods	3-1-0	4	5
ES	21EE103	Basic Electrical Engineering	3-0-0	3	3
ES	21MD104A/B	Engineering Drawing	1-0-2	3	6
ES	21CV105	Engineering Mechanics	3-0-0	3	3
BS	21PH106	Engineering Physics Laboratory	0-0-1	1	2
HS	21PE107	Physical Education Activity (PEA)	0-0-1	1	2
PR	21DT108	Design Thinking Laboratory	0-0-1	1	2
Total				20	27

Chemistry Cycle

Course Category	Course Code	Course Title	L-T-P	Credits	Contact hours
BS	21PH101	Engineering Chemistry	4-0-0	4	4
BS	21MA102	Calculus and Numerical Methods	3-1-0	4	5
ES	21EC103	Basic Electronics Engineering	3-0-0	3	3
ES	21ME104	Elements of Mechanical Engineering	3-0-0	3	3
ES	21CS105	Programming for Problem Solving	3-0-0	3	3
BS	21PH106	Engineering Chemistry Laboratory	0-0-1	1	2
HS	21PE107	Computer Programming Laboratory	0-0-1	1	2
PR	21DT108	Design Thinking Laboratory	0-0-1	1	2
Total				20	24

THIRD SEMESTER					
Course Category and Course Code		Course Title	L-T-P	Credits	Contact Hours
BSC	21MA301	Linear Algebra and Integral Transforms	3-1-0	4	5
PC	21CV302	Strength of Materials	2-1-0	3	4
PC	21CV303	Construction Materials & Technology	3-0-0	3	3
PC	21CV304	Surveying & Geomatics	2-1-0	3	4
PC	21CV305	Water Resources Engineering	3-0-0	3	3
PC	21CV306	Construction Materials Testing Laboratory	0-0-1	1	2
PC	21CV307	Survey Practise	0-0-1	1	2
PC	21CV308	Computer-Aided Building Planning & Drawing	0-0-1	1	2
HSMC	21UHV	Universal Human Values (Group B)	1-0-0	1	1
HSMC	21LSK	Language Skills	1-0-0	1	1
Total				21	27
PC: Professional Core; HS: Humanities and Social Science AE: Ability Enhancement Course; UH: Universal Human Value Courses					

FOURTH SEMESTER					
Course Category and Course Code		Course Title	L-T-P	Credits	Contact Hours
BSC	21MA401	Statistics and Complex Analysis	3-1-0	4	5
PC	21CV402	Basic Structural Analysis	2-1-0	3	4
PC	21CV403	Fluid Mechanics and Hydraulic Engineering	2-1-0	3	4
PC	21CV404	Highway Engineering	2-1-0	3	4
PC	21CV405	Geotechnical Engineering	2-1-0	3	4
PC	21CV406	Hydraulics Laboratory	0-0-1	1	2
PC	21CV407	Geotechnical Engineering Laboratory	0-0-1	1	2
PC	21CV408	Concrete & Highway Engineering Lab	0-0-1	1	2
AEC	21XXXX	Biology for Engineers	1-0-0	1	1
HSMC	21KNS/ KNB	Samskrutika Kannada/ Balake Kannada (Group B)	1-0-0	1	1
AEC	21SSK	Social Skills	0-1(A)-0	AUDIT	2
PI	21INT1	Summer Internship –I	0-0-1	1	-
Total				22	31
HS: Humanities and Social Science ; AE: Ability Enhancement Course					

FIFTH SEMESTER					
Course Category and Course Code		Course Title	L-T-P	Credits	Contact Hours
PC	21CV501	Advanced Structural Analysis	2-1-0	3	4
PC	21CV502	Design & Detailing of RC Structures (Lab Integrated)	2-1-1	4	6
PC	21CV503	Applied Geotechnical Engineering	2-1-0	3	4
PC	21CV504	Environmental Engineering-Theory and Practice (Lab Integrated)	2-1-1	4	6
PC	21CV505	Irrigation Engineering	2-1-0	3	4
PC	21CV506	Programming in Civil Engineering	0-0-1	1	2
PI	21INT2	Summer Internship -II	0-0-2	2	-
UHV	21SCR	Social Connect and Responsibility	0-0-2	1	2
HSMC	21CIP	Constitution of India and Professional Ethics (Mandate non-credit course) (Group-B)	0-0-0	AUDIT	2
Total				21	30
PC: Professional Core; AEC: Ability Enhancement Course; HSMC: Humanities and Social Science					

SIXTH SEMESTER					
Course Category and Course Code		Course Title	L-T-P	Credits	Contact Hours
PC	21CV601	Construction Planning & Management	3-0-0	3	3
PC	21CV602	Design & Detailing of Steel Structures (Lab Integrated)	2-1-1	4	6
PC	21CV603	Design of Bridges & Flyovers	2-1-0	3	4
PC	21CV604	Advanced Survey Training Camp	0-0-1	1	2
PE	21CV64X	Professional Elective – 1	3-0-0	3	3
PE	21CV65X	Professional Elective – 2	3-0-0	3	3
OE	21OECV66X	Open Elective –I	3-0-0	3	3
OEC	21SWY	SWAYAM (NPTEL only)	2-0-0	2	4
AEC	21ASK	Analytical Ability and Soft Skills	0-1-0	1	2
HSMC	21EVS	Environmental Studies (Mandate non-credit course) (Group – B)	0-0-0	AUDIT	2
Total				23	34
PC: Professional Core; AEC: Ability Enhancement Course; HSMC: Humanities and Social Science					

PROFESSIONAL ELECTIVES – 1

Sl. No.	Course Category and Course Code		Course Title	L-T-P	Credits	Contact Hours
1.	PE	21CV641	Alternative Building Materials & Technology	3-0-0	3	3
2.	PE	21CV642	Matrix Methods of Structural Analysis	3-0-0	3	3
3.	PE	21CV643	Ground Improvement Techniques	3-0-0	3	3
4.	PE	21CV644	Industrial Waste Water Treatment	3-0-0	3	3
5.	PE	21CV645	Traffic Engineering	3-0-0	3	3

PROFESSIONAL ELECTIVES – II

Sl. No.	Course Category and Course Code		Course Title	L-T-P	Credits	Contact Hours
1.	PE	21CV651	Theory of Elasticity	3-0-0	3	3
2.	PE	21CV652	Design of Masonry Structures	3-0-0	3	3
3.	PE	21CV653	Modern Construction Methods & Mechanization	3-0-0	3	3
4.	PE	21CV654	Urban Transportation Planning	3-0-0	3	3
5.	PE	21CV655	Ground Water Hydraulics	3-0-0	3	3
6.	PE	21CV656	Solid Waste Management	3-0-0	3	3

OPEN ELECTIVES

Sl. No.	Course Category and Course Code		Course Title	L-T-P	Credits	Contact Hours
1.	OE	21OECV661	Remote Sensing & GIS	3-0-0	3	3
2.	OE	21OECV662	Engineering Optimization	3-0-0	3	3
3.	OE	21OECV663	Composite & Smart Materials	3-0-0	3	3
4.	OE	21OECV664	Urban Design & Regeneration	3-0-0	3	3
5.	OE	21OECV665	Railway Engineering	3-0-0	3	3
6.	OE	21OECV666	Water Supply & Sanitation	3-0-0	3	3

SEVENTH SEMESTER					
Course Category and Course Code		Course Title	L-T-P	Credits	Contact Hours
PC	21CV701	Specifications & Quantity Surveying	2-1-0	3	4
PC	21CV702	Prestressed Concrete Structures	2-1-0	3	4
PE	21CV74X	Professional Elective – 3	3-0-0	3	3
PE	21CV75X	Professional Elective – 4	3-0-0	3	3
OE	21OECV76X	Open Elective –II	3-0-0	3	3
AEC	21RIP	Research Methodology & Intellectual Property rights (Mandatory non-credit)	0-1-0	AUDIT	2
Total				15	19

AE: Ability Enhancement Course; OE: Open Elective

EIGHTH SEMESTER					
Course Category and Course Code		Course Title	L-T-P	Credits	Contact Hours
PC	21CV801	Technical Seminar	0-0-0	0	0
PI	21PROJ	Project work	6-0-0	6	6
PI	21INT3	Research / Industry Internship -III	0-0-12	12	24
Total				18	30

Grouping of Departments :

Group-A	Group-B
ECE	CV
CSE	MECH
ISE	EEE
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Credit Distribution

Sl. No.	Semester	Credits
1.	I	20
2.	II	20
3.	III	21
4.	IV	22
5.	V	21
6.	VI	23
7.	VII	15
8.	VIII	18
	Total	160