

VEMU Institute of Technology **(UGC-Autonomous)**

Affiliated to
Jawaharlal Nehru Technological University
Anantapur



B.Tech **Course Structure** **(R23) Regulations**

Applicable for
B.Tech (Regular-Full time)
(Effective for the students admitted into I year from the Academic
Year **2023-2024** onwards)

and

B. Tech (Lateral Entry Scheme)
(Effective for the students getting admitted into II year through Lateral Entry
Scheme from the Academic Year **2024-2025** onwards)

B. Tech (R23) – Regulations – Breakup of Credits

S.No.	Category	Breakup of Credits (Total 160)	Percentage of total credits	AICTE Recommended %
1	Humanities and Social Science including Management (HM)	13	8%	8-9%
2	Basic Sciences (BS)	20	13%	12-16%
3	Engineering Sciences (ES)	23.5	14%	10-18%
4	Professional Core (PC)	54.5	34%	32-36%
5	Electives Professional Electives (PE) Open Electives (OE) Domain Specific Skill Enhancement Courses (SEC)	33	21%	19-23%
6	Internships & Project work (PR)	16	10%	8-11%
7	Mandatory Courses (MC)	Non-credit	Non-credit	-

Distribution of Credits B.Tech – R23 – Regulations

GROUP A: CSE, CSIT, CSE-AI, ME

S.No.	Year	Semester 1	Semester 2	Total
1	I Year	19.5	20.5	40
2	II Year	20	22	42
3	III Year	22	21	43
4	IV Year	23	12	35
Total				160

Distribution of Credits B.Tech – R23 – Regulations

GROUP B: CE, EEE, ECE

S.No.	Year	Semester 1	Semester 2	Total
1	I Year	20.5	19.5	40
2	II Year	20	22	42
3	III Year	22	21	43
4	IV Year	23	12	35
Total				160

B.TECH. - COURSE STRUCTURE – R23**(Applicable from the academic year 2023-24 onwards)****INDUCTION PROGRAMME**

S.No.	Course Name	Category	L-T-P-C
1	Physical Activities -- Sports, Yoga and Meditation, Plantation	MC	0-0-6-0
2	Career Counselling	MC	2-0-2-0
3	Orientation to all branches -- career options, tools, etc.	MC	3-0-0-0
4	Orientation on admitted Branch -- corresponding labs, tools and platforms	EC	2-0-3-0
5	Proficiency Modules & Productivity Tools	ES	2-1-2-0
6	Assessment on basic aptitude and mathematical skills	MC	2-0-3-0
7	Remedial Training in Foundation Courses	MC	2-1-2-0
8	Human Values & Professional Ethics	MC	3-0-0-0
9	Communication Skills -- focus on Listening, Speaking, Reading, Writing skills	BS	2-1-2-0
10	Concepts of Programming	ES	2-0-2-0

GROUP A: CSE, CSIT, CSE-AI, ME**B.Tech. – I Year I Semester**

S.No.	Category	Title	L/D	T	P	Credits
1	HM	Communicative English	2	0	0	2
2	BS	Engineering Chemistry/ Chemistry/Fundamental Chemistry	3	0	0	3
3	BS	Linear Algebra & Calculus	3	0	0	3
4	Engineering Science	Basic Civil & Mechanical Engineering	3	0	0	3
5	Engineering Science	Introduction to Programming	3	0	0	3
6	HM	Communicative English Lab	0	0	2	1
7	BS	Engineering Chemistry/ Chemistry Fundamental Chemistry Lab	0	0	2	1
8	Engineering Science	Engineering Workshop	0	0	3	1.5
9	Engineering Science	Computer Programming Lab	0	0	3	1.5
10	HM	Health and wellness, Yoga and Sports	-	-	1	0.5
Total			14	00	11	19.5

GROUP A: CSE, CSIT, CSE-AI, ME**B.Tech. – I Year II Semester**

S.No.	Category	Title	L/D	T	P	Credits
1	BS	Engineering Physics	3	0	0	3
2	BS	Differential Equations & Vector Calculus	3	0	0	3
3	Engineering Science	Basic Electrical and Electronics Engineering	3	0	0	3
4	Engineering Science	Engineering Graphics	1	0	4	3
5	Engineering Science	IT Workshop	0	0	2	1
6	Professional Core	Data Structures / Engineering Mechanics (Branch specific)	3	0	0	3
7	BS	Engineering Physics Lab	0	0	2	1
8	Engineering Science	Electrical and Electronics Engineering Workshop	0	0	3	1.5
9	Professional Core	Data Structures Lab / Engineering Mechanics Lab	0	0	3	1.5
10	HM	NSS/NCC/Scouts & Guides/Community Service	-	-	1	0.5
Total			13	0	15	20.5

GROUP B: CE, EEE, ECE**B.Tech. – I Year I Semester**

S.No.	Category	Title	L/D	T	P	Credits
1	BS	Engineering Physics	3	0	0	3
2	BS	Linear Algebra & Calculus	3	0	0	3
3	Engineering Science	Basic Electrical & Electronics Engineering	3	0	0	3
4	Engineering Science	Engineering Graphics	1	0	4	3
5	Engineering Science	Introduction to Programming	3	0	0	3
6	Engineering Science	IT Workshop	0	0	2	1
7	BS	Engineering Physics Lab	0	0	2	1
8	Engineering Science	Electrical & Electronics Engineering Workshop	0	0	3	1.5
9	Engineering Science	Computer Programming Lab	0	0	3	1.5
10	HM	NSS/NCC/Scouts & Guides/Community Service	-	-	1	0.5
Total			13	00	15	20.5

GROUP B: CE, EEE, ECE**B.Tech. – I Year II Semester**

S.No	Category	Title	L	T	P	Credits
1	HM	Communicative English	2	0	0	2
2	BS	Engineering Chemistry / Chemistry / Fundamental Chemistry	3	0	0	3
3	Engineering Science	Differential Equations & Vector Calculus	3	0	0	3
4	Engineering Science	Basic Civil & Mechanical Engineering	3	0	0	3
5	Professional Core	Engineering Mechanics/ Electrical Circuit Analysis – I / Network Analysis/ (Branch specific)	3	0	0	3
6	HS	Communicative English Lab	0	0	2	1
7	BS	Engineering Chemistry / Chemistry / Fundamental Chemistry Lab	0	0	2	1
8	Engineering Science	Engineering Workshop	0	0	3	1.5
9	Professional Core	Engineering Mechanics & Building Practices Lab/ Electrical Circuit Analysis – I Lab/ Network Analysis Lab	0	0	3	1.5
10	HS	Health and wellness, Yoga and Sports	-	-	1	0.5
Total			14	0	11	19.5

B.Tech. – II Year I Semester

S.No.	Category	Title	L	T	P	Credits
1	BS	Engineering Mathematics (Branch specific)	3	0	0	3
2	HM	Universal Human Values – Understanding Harmony	2	1	0	3
3	Engineering Science		2	0	0	2
4	Professional Core		3	0	0	3
5	Professional Core		3	0	0	3
6	Engineering Science		0	0	2	1
7	Professional Core		0	0	3	1.5
8	Professional Core		0	0	3	1.5
9	Skill Enhancement Course		0	1	2	2
10	Audit Course	Environmental Science	2	0	0	-
Total			15	2	10	20

B.Tech. – II Year II Semester

S.No.	Category	Title	L	T	P	Credits
1	Management Course - I		2	0	0	2
2	Engineering Science		3	0	0	3
3	Professional Core		3	0	0	3
4	Professional Core		3	0	0	3
5	Professional Core		3	0	0	3
6	Professional Core		0	0	2	1
7	Professional Core		0	0	3	1.5
8	Professional Core		0	0	3	1.5
9	Skill Enhancement course		0	1	2	2
10	BS	Design Thinking & Innovation	1	0	2	2
Total			15	1	12	22
Mandatory Community Service Project Internship of 08 weeks duration during summer vacation						

B.Tech. – III Year I Semester

S.No.	Category	Title	L	T	P	Credits
1	Professional Core		3	0	0	3
2	Professional Core		3	0	0	3
3	Professional Elective - I		2	0	0	2
4	Open Elective - I		3	0	0	3
5	Open Elective - II		3	0	0	3
6	Professional Core		0	0	3	1.5
7	Professional Core		0	0	3	1.5
8	Skill Enhancement course		0	1	2	2
9	BS	Tinkering Lab	0	0	2	1
10	Evaluation of Community Service Internship		-	-	-	2
Total			14	1	10	22

B.Tech. – III Year II Semester

S.No.	Category	Title	L	T	P	Credits
1	Professional Core		3	0	0	3
2	Professional Core		3	0	0	3
3	Professional Core		3	0	0	3
4	Professional Elective - II		3	0	0	3
5	Professional Elective - III		2	0	0	2
6	Open Elective - III		3	0	0	3
7	Professional Core		0	0	2	1
8	Professional Core		0	0	2	1
9	Skill Enhancement course		0	1	2	2
10	Audit Course	Technical Paper Writing & IPR	2	0	0	-
Total			19	1	06	21
Mandatory Industry Internship of 08 weeks duration during summer vacation						

B.Tech. – IV Year I Semester

S.No.	Category	Title	L	T	P	Credits
1	Professional Core		3	0	0	3
2	Professional Core		3	0	0	3
3	Management Course - II		2	0	0	2
4	Professional Elective - IV		3	0	0	3
5	Professional Elective - V		3	0	0	3
6	Open Elective - IV		3	0	0	3
7	Professional Core		0	0	2	1
8	Professional Core		0	0	2	1
9	Skill Enhancement Course		0	1	2	2
10	Audit Course	Constitution of India	2	0	0	-
11	Internship	Evaluation of Industry Internship	-	-	-	2
Total			19	1	06	23

B.Tech. – IV Year II Semester

S.No.	Category	Title	L	T	P	Credits
1	Internship & Project Work	Full semester Internship & Project Work	0	0	24	12