Appendix-4

Sant Gadge Baba Amravati University, Amravati

Scheme of Implementation for

Four Year Undergraduate Degree Programme inEngineering and Technology

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B.E. (Bachelor of Engineering), B.Tech. (Bachelor of Technology), B.Text.E. (Bachelor of Textile Engineering) and other similar undergraduate

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Engineering Degree Programmes

in the faculty of

Science and Technology

ACADEMIC EVALUATION SCHEME/CREDIT SYSTEM

Year: 2024-25

(Scheme of Teaching, Learning, Examination & Evaluation w.e.f. 2024-2025 and onwards)

	Scheme for First Year Four Year Undergraduate Engineering Degree Programme Semester I/II – [Common for all branches]												
Sr No.	**Course Name**	**Code**	**Course Plan per Week (Hrs.)**				**Credits**	**Theory Evaluation**		**Practical Evaluation**		**Total**	**ESE Time Hrs.)**
			L	**P**	**T**	**Hrs.**		**IE**	**ESE**	**INT**	**EXT**		
	Core Courses												
1	Applied Mathematics -I (BSC)	1AL100BS	3	0	0	3	3	40	60	--	--	100	3 Hrs.
2	Engineering Physics (BSC)	1AL101BS	3	0	0	3	3	40	60	--	--	100	3 Hrs.
3	Computer Programming (ESC)	1AL102ES	3	0	0	3	3	40	60	--	--	100	3 Hrs.
4	Engineering Mechanics (ESC)	1AL103 ES	3	0	0	3	3	40	60	--	--	100	3 Hrs.
	Laboratory Courses												
5	Engineering Physics Lab (BSC)	1AL104BS	0	2	0	2	1	----	-----	25	25	50	------
6	Computer Programming Lab (ESC)	1AL105 ES	0	2	0	2	1	----	-----	25	25	50	------
7	Engineering Mechanics Lab (ESC)	1AL106 ES	0	2	0	2	1	----	-----	25	25	50	------
8	Workshop (ESC)	1AL107 ES	0	2	0	2	1	----	-----	25	25	50	------
	Vocational and Skill Enhancement Courses (VSEC)												
9	Technical Department Specific (*)	I 108 VS	1	2	0	3	2	-----	------	50	----	50	-------
	Ability Enhancement Courses (AEC)												
10	Professional Communication	1AL109 AE	1	2	0	3	2	-------	-------	25	25	50	-------
	Co-curricular Course (CC)												
11	Co-curricular Course (CC)	1AL110 CC	0	4	0	4	2	-------	-------	50	-------	50	-------
	TOTAL		14	16	0	30	**22**					**750**	

Notes: (1) L: Lecture P: Practical T: Tutorial MSE: Mid Semester Exam ESE: End Semester Exam IE: Internal Evaluation INT: Internal EXT: External.

	Scheme for First Year Four Year Undergraduate Engineering Degree Programme Semester I/II – [Common for all branches]												
Sr No.	**Course Name**	**Code**	**Course Plan per Week (Hrs.)**				**Credits**	**Theory Evaluation**		**Practical Evaluation**		**Total**	**ESE Time Hrs.)**
			L	**P**	**T**	**Hrs.**		**IE**	**ESE**	**INT**	**EXT**		
	Core Courses												
1	Applied Mathematics -II (BSC)	2AL111 BS	3	0	0	3	3	40	60			100	3 Hrs.
2	Engineering Chemistry (BSC)	2AL112 BS	3	0	0	3	3	40	60			100	3 Hrs.
3	Basic Electrical Engineering (ESC)	2AL113 ES	3	0	0	3	3	40	60			100	3 Hrs.
4	Engineering Graphics (ESC)	2AL114 ES	2	0	0	2	2	40	60			100	3 Hrs.
	Laboratory Courses												
5	Engineering Chemistry Lab (BSC)	2AL115 BS	0	2	0	2	1			25	25	50	
6	Basic Electrical Engineering Lab (ESC)	2AL116 ES	0	2	0	2	1			25	25	50	
7	Engineering Graphics Lab (ESC)	2AL117 ES	0	2	0	2	1			25	25	50	
	Vocational and Skill Enhancement Courses (VSEC)												
8	**Technical Department Specific (*)**	2 118 VS	1	2	0	3	2			50	-	50	
	Programme Core Course (PCC)												
9	(**) Programme Core Course (PCC)	2 119 PC	2	0	0	2	2	20	30			50	2.00 Hrs.
	Indian Knowledge System (IKS)												
10	Indian Traditional Knowledge	2AL120 IK	2	0	0	2	2	20	30			50	2.00 Hrs.
	Co-curricular Course (CC)												
11	Co-curricular Course (CC)	2AL121 CC	0	4	0	4	2			50	-	50	
	TOTAL		16	12	0	28	**22**					**750**	

Notes: (1) L: Lecture P: Practical T: Tutorial MSE: Mid Semester Exam ESE: End Semester Exam IE: Internal Evaluation INT: Internal EXT: External

Sample Scheme for Multiple Entry and Exit

Exit option -1 (L5): Award of UG Certificate in Major with 44 credits and an additional 8 credits			
Exit Courses			
1	Electronics Servicing and Maintenance	**Online/offline certification Course**	**8**
2	Assembly & Maintenance of Personal Computer		**8**
3	One Month Internship at Industry		**8**

Board of Studies in each subject is expected to specify different courses (combined of total 08 credits for the award of UGCertificate related with the major of respective discipline.

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The long forms of the Abbreviations in the shceme of Semester I/II common to all the branches of Engineering & Technology are as under :

(I) AL- All (Common for all branches) BS- Basic Science Course ES- Engineering Science Course VS- Vocational & Skill Enhancement Course
CC – Co Curricular Course PC-Programme Core Course AE- Ability Enhancement Course IK-Indian Knowledge System.

(II) (*) Technical Department Specific (VSEC) : Semester I Branch wise subjects under the vertical **Vocational and Skill Enhancement Courses** (VSEC) are as under:
(i) Civil Engg (CE): Surveying Skills Lab. (ii) **Mechanical Engg (MF)**: Design Thinking & Idea Lab. (iii) **Electronics & Tele. Engg**. (ET): Electrical Measurements & Measuring Instruments lab.
(iv) [CSE/I.T. A.I.D.S./CSE(D.S.)] (CS) : Introduction to Web Technology (v) **Electrical/ Electrical (Electronics & Power**) {EE/ET}: Electrical Workshop
(vi) Textile Tech.: Fabric Structure & Design (TX) – I lab. (vii) **Chemical Engg.(CH) / Chemical Technologyb(CT)** : Basics of Chemical Processes.

(III) (**) Technical Department Specific (VSEC): Semester II Branch wise subjects under the vertical **Vocational and Skill Enhancement Courses** (VSEC) are as under:

(i) Civil (CE) : Safety Practices at Construction Cite (ii)**Mechanical (MF)** : Computer aided Design & Drafting (iii) **Extc Engg (ET)** : Electronic Workshop
(iv) CSE/I.T/A.I.D.S. / CSE (DS) .: Computer Hardware & Networking (v) **Electrical/ Electrical (Electronics & Power**) {EE/ET}: Electronics Workshop
(vi) Textile (TX): Fabric Structure & Design- II (vii) **Chemical (CH) / Chemical Technology (CT)** : Computer Applications for Chemical Engineering.

(IV) (+) Programme Core Course (PCC): Branch wise subjects under the vertical **Programme Core Course** are as under:

(i) Civil: Fundamentals of Civil Engg. (**ii**) **Mech**: Elements of Mechanical Engg. (**iii**) **Extc Engg**.: Introduction to Digital Electronics
(iv) CSE/I.T.: Computer Fundamentals **(v) Electrical Engg. / Electrical (Electronics & Power**) **Engg**.: Generation of Electrical Energy
(vi) Textile: Introduction to Textile Materials & Products (**Practical**) (**vii**) **Chemical Engg. (CH) / Chemical Technology (CT)** : Introduction to Chemical Engineering

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Scheme for First Year Four Year Undergraduate Engineering Degree Programme [NEP-2020]
Semester – I/II – [Common for all branches of Engg. & Tech.]

SN	Course Name	Code	Course Plan per Week (Hrs.)				Credits	Theory Evaluation				Theory (Total)		Practical Evaluation				Practical (Total)		ESE Time (Hours)
								External		Internal				External		Internal				
			L	P	T	Hrs.		Max Marks	Min Marks	Max Marks	Min Marks	Max Marks	Min Marks	Max Marks	Min Marks	Max Marks	Min Marks	Max Marks	Min Marks	
	Core Courses																			
1	Applied Mathematics -I (BSC)		3	0	0	3	3	60	18	40	12	100	40	.....	.....	....	....	....	...	3 Hrs.
2	Engineering Physics (BSC)		3	0	0	3	3	60	18	40	12	100	40	.....	.....	....	....	....	...	3 Hrs.
3	Computer Programming (ESC)		3	0	0	3	3	60	18	40	12	100	40	.....	.....	....	....	....	...	3 Hrs.
4	Engineering Mechanics (ESC)		3	0	0	3	3	60	18	40	12	100	40	.....	.....	....	....	....	...	3 Hrs.
	Laboratory Courses																			
5	Engineering Physics (BSC)		0	2	0	2	1	.....	.....	....	....	....	...	25	10	25	10	50	25	
6	Computer Programming (ESC)		0	2	0	2	1	.....	.....	....	....	....	...	25	10	25	10	50	25	
7	Engineering Mechanics (ESC)		0	2	0	2	1	.....	.....	....	....	....	...	25	10	25	10	50	25	
8	Workshop (ESC)		0	2	0	2	1	.....	.....	....	....	....	...	25	10	25	10	50	25	
	Vocational and Skill Enhancement Courses (VSEC)																			
9	Technical Department Specific		1	2	0	3	2									50	--	50	25	
	Ability Enhancement Courses (AEC)																			
10	Professional Communication		1	2	0	3	2							25	10	25	10	50	25	
	Co-curricular course **(CC)**																			
11	Co-curricular Course		0	4	0	4	2									50	--	50	25	
	TOTAL		14	16	0	30	**22**					**400**	**160**					**350**	**175**	

Scheme for First Year Four Year Undergraduate Engineering Degree Programme [NEP-2020]
Semester – I / II – [Common for all branches of Engg. & Tech.]

SN	Course Name	Code	Course Plan per Week (Hrs.)				Credits	Theory Evaluation				Theory (Total)		Practical Evaluation				Practical (Total)		ESE Time (Hours)
								External		Internal				External		Internal				
			L	P	T	Hrs.		Max Marks	Min Marks	Max Marks	Min Marks	Max Marks	Min Marks	Max Marks	Min Marks	Max Marks	Min Marks	Max Marks	Min Marks	
	Core Courses																			
1	Applied Mathematics -II (BSC)		3	0	0	3	3	60	18	40	12	100	40	---	---	--	--	--	--	3 Hrs.
2	Engineering Chemistry (BSC)		3	0	0	3	3	60	18	40	12	100	40	---	---	--	--	--	--	3 Hrs.
3	Basic Electrical Engineering (ESC)		3	0	0	3	3	60	18	40	12	100	40	---	---	--	--	--	--	3 Hrs.
4	Engineering Graphics (ESC)		2	0	0	2	2	60	18	40	12	100	40	---	---	--	--	--	--	3 Hrs.
	Laboratory Courses																			
5	Engineering Chemistry (BSC)		0	2	0	2	1	---	---	--	--	--	--	25	10	25	10	50	25	
6	Basic Electrical Engineering (ESC)		0	2	0	2	1	---	---	--	--	--	--	25	10	25	10	50	25	
7	Engineering Graphics (ESC)		0	2	0	2	1	---	---	--	--	--	--	25	10	25	10	50	25	
	Vocational and Skill Enhancement Courses (VSEC)																			
8	Technical Department Specific		1	2	0	3	2							--	--	50	-	50	25	
	Programme Core Course (PCC)																			
9	Programme Core Course		1	2	0	3	2	30	12	20	08	50	20	--	--	--	--	--	2 Hrs	
	Indian Knowledge System (IKS)																			
10	Indian Traditional Knowledge		2	0	0	2	2	30	12	20	08	50	20	--	--	--	--	--	2 Hrs	
	Co-curricular Course (CC)																			
11	Co-curricular Course		0	4	0	4	2	---	---	--	--	--	--	--	-	50	--	50	25	
	TOTAL		14	16	0	30	**22**					**400**	**160**					**350**	**175**	