

Sapthagiri NPS University, BENGALURU – 560057. B.E. in Computer Science and Engineering Scheme of Teaching and Examinations 2024 batch Outcome Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2024-25)												
SNPSU Course Distribution - CSE Department												
Sl. No	CT	Course Type	I	II	III	IV	V	VI	VII	VIII	TOTAL CRDITS	NO. OF COURSES
1	BS	Basic Science	4	7	4	4	0	0	0	0	19	5
2	ES	Engineering Science Course	15	13	0	0	0	0	0	0	28	8
3	PC	Professional Core Course	0	0	19	16	13	13	0	0	61	19
4	PE	Professional Elective Course	0	0	0	3	6	6	0	0	15	5
5	OE	Open Elective	0	0	0	0	0	0	6	0	6	2
6	PW	Project Work/Mini Project	0	0	0	0	0	2	3	9	14	3
7	IS	Internship / Technical Seminar	0	0	0	0	0	0	3	0	3	2
8	HS	Humanities, Social Science & Management Course	3	0	0	0	0	3	3	0	9	5
9	AE	Ability Enhancement Course - Skill Development	0	2	1	1	0	0	0	0	4	4
10	UV	UHV Course	0	0	1	1	1	0	0	0	3	3
11	NC	Mandatory Course - non credit	0	0	0	0	Y	Y	0	0	0	2
TOTAL			22	22	25	25	20	24	15	9	162	58

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I SEMESTER - E Cycle												
Sl. No	Course	Course Code	Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week			Examination			Credits	
					Theory Lecture	Tutorial	Practical / Drawing	Duration in hours	CIE Marks	SEE Marks		Total Marks
					L	T	P					
1	HS	24BEELY101	Kali Kannada	TD: HS PSB: HS	1	0	0	01	50	50	100	1
2	BS	24BEELY102	Linear Algebra and Calculus	TD: BS PSB: BS	3	0	2	05	50	50	100	4
3	HS	24BEELY103	Environmental Science and Engineering	TD: HS PSB: HS	1	0	0	01	50	50	100	1
4	ES	24BEELY104	Basics of Electrical and Electronics Engineering	TD: ES PSB: ES	3	0	2	05	50	50	100	4
5	ES	24BEELY105	Problem Solving Using C	TD: ES PSB: ES	3	0	2	05	50	50	100	4
6	ES	24BEELY106	Fundamentals of Data Structure	TD: ES PSB: ES	3	0	2	05	50	50	100	4
7	ES	24BEELY107	Fundamentals of Data Science	TD: ES PSB: ES	3	0	0	03	50	50	100	3
8	HS	24BEELY108	Indian Constitution	TD: HS PSB: HS	1	0	0	01	50	50	100	1
TOTAL									400	400	800	22

PC: Professional Course, UV: Universal Human Value Course, MC: Mandatory Course (Non-credit), AE: Ability Enhancement Course, L: Lecture, T: Tutorial, P: Practical S= SDA: Skill Development Activity, CIE: Continuous Internal Evaluation, SEE: Semester End Evaluation.

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II SEMESTER - P Cycle

Sl. No	Course	Course Code	Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week			Examination				Credits
					Theory Lecture	Tutorial	Practical / Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	AE	24BEPHY201	Professional Communication-I	TD: AE PSB: AE	1	0	0	01	50	50	100	1
2	BS	24BEPHY202	Computational Mathematics	TD: BS PSB: BS	3	0	2	05	50	50	100	4
3	BS	24BEPHY203	Engineering Physics	TD: BS PSB: BS	2	0	2	04	50	50	100	3
4	ES	24BEPHY204	Programming in Python	TD: ES PSB: ES	3	0	2	05	50	50	100	4
5	ES	24BEPHY205	Computer Organization and Architecture	TD: ES PSB: ES	3	0	0	03	50	50	100	3
6	ES	24BEPHY206	Fundamentals of AI& ML	TD: ES PSB: ES	3	0	0	03	50	50	100	3
7	ES	24BEPHY207	Computer Aided Engineering and Graphics	TD: ES PSB: ES	2	0	2	04	50	50	100	3
8	AE	24BEPHY208	Intellectual Property Rights (IPR)	TD: AE PSB: AE	1	0	0	01	50	50	100	1
TOTAL									400	400	800	22

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III SEMESTER

Sl. No	Course	Course Code	Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week			Examination				Credits
					Theory Lecture	Tutorial	Practical / Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	BS	24BECSE301	Discrete Mathematical Structures	TD: Maths PSB: Maths	4	0	0	03	50	50	100	4
2	PC	24BECSE302	Object Oriented Programming	TD: CS PSB: CS	2	0	2	04	50	50	100	3
3	PC	24BECSE303	Operating Systems	TD: CS PSB: CS	3	0	0	03	50	50	100	3
4	PC	24BECSE304	Web Technology	TD: CS PSB: CS	3	0	2	05	50	50	100	4
5	PC	24BECSE305	Software Engineering	TD: CS PSB: CS	3	0	0	03	50	50	100	3
6	PC	24BECSE306	Computer Networks	TD: CS PSB: CS	3	0	0	03	50	50	100	3
7	PC	24BECSE307	Internet of Things	TD: CS PSB: CS	2	0	2	04	50	50	100	3
8	AE	24BECSE308	Cyber Laws and Ethics	TD: CS PSB: CS	1	0	0	01	50	50	100	1
9	UV	24BECSE309	Out Reach Activity - I	Any Department	0	0	0	01	100	---	100	1
Total									500	400	900	25
1	BS	24BECSE310	Maths-Dip(for Lateral entry)	TD: Maths PSB: Maths	3	0	0	03	50	--	50	-

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IV SEMESTER

Sl. No	Course	Course Code	Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week			Examination				Credits
					Theory Lecture	Tutorial	Practical / Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	BS	24BECSE401	Probability and Statistical Methods	TD: Maths PSB: Maths	4	0	0	03	50	50	100	4
2	PC	24BECSE402	Data Analysis & Visualization	TD: CS PSB: CS	2	0	2	04	50	50	100	3
3	PC	24BECSE403	Design and Analysis of Algorithms	TD: CS PSB: CS	3	0	0	03	50	50	100	3
4	PC	24BECSE404	Database Management Systems	TD: CS PSB: CS	3	0	2	05	50	50	100	4
5	PC	24BECSE405	Unix Shell Programming	TD: CS PSB: CS	2	0	2	04	50	50	100	3
6	PC	24BECSE406	Cryptography and Network Security	TD: CS PSB: CS	3	0	0	03	50	50	100	3
7	PE	24BECSE41x	Professional Elective I	TD: CS PSB: CS	3	0	0	03	50	50	100	3
8	AE	24BECSE407	Life Skills for Engineers	TD: CS PSB: CS	1	0	0	01	50	50	100	1
9	UV	24BECSE408	Out Reach Activity - II	Any Department	0	0	0	01	100	---	100	1
								Total	500	400	900	25

Professional Elective I

24BECSE411	Distributed Computing	24BECSE412	Computer Graphics	24BECSE413	Multimedia Computing
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V SEMESTER												
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					Theory Lecture	Tutorial	Practical / Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	PC	24BECSE501	Formal Languages and Automata Theory	TD: CS PSB: CS	3	0	0	03	50	50	100	3
2	PC	24BECSE502	Full Stack Development using Java	TD: CS PSB: CS	3	0	2	05	50	50	100	4
3	PC	24BECSE503	Machine Learning	TD: CS PSB: CS	2	0	2	04	50	50	100	3
4	PC	24BECSE504	Big Data Analytics	TD: CS PSB: CS	3	0	0	03	50	50	100	3
5	PE	24BECSE52X	Professional Elective-II	TD: CS PSB: CS	3	0	0	03	50	50	100	3
6	PE	24BECSE53X	Professional Elective-III	TD: CS PSB: CS	3	0	0	03	50	50	100	3
7	HS	24BECSE505	Digital Marketing	TD: CS PSB: CS	3	0	0	03	50	50	100	3
8	UV	24BECSE506	Professional Ethics and Human Values	TD: CS PSB: CS	1	0	0	01	50	50	100	1
9	NC	24BECSE507	Value Added Program-I	Any Department	0	0	0	01	100	---	100	0
Total									500	400	900	23

Professional Elective II & III

II	24BECSE521	Advanced Algorithms	24BECSE522	Software Testing	24BECSE523	Fog and Edge Computing
III	24BECSE531	Data Mining and Data Warehousing	24BECSE532	Principles of UI / UX Design	24BECSE533	Object Oriented Model and Design

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VI SEMESTER

Sl. No	Course	Course Code	Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week			Examination				Credits
					Theory Lecture	Tutorial	Practical / Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	PC	24BECSE601	Cloud Computing Technology	TD: CS PSB: CS	2	0	2	04	50	50	100	3
2	PC	24BECSE602	Neural Networks and Deep Learning	TD: CS PSB: CS	3	0	2	05	50	50	100	4
3	PC	24BECSE603	Augmented Reality and Virtual Reality	TD: CS PSB: CS	3	0	0	03	50	50	100	3
4	PC	24BECSE604	Cryptocurrency & Blockchain techniques	TD: CS PSB: CS	3	0	0	03	50	50	100	3
5	PE	24BECSE64X	Professional Elective-IV	TD: CS PSB: CS	3	0	0	03	50	50	100	3
6	PE	24BECSE65X	Professional Elective-V	TD: CS PSB: CS	3	0	0	03	50	50	100	3
7	HS	24BECSE605	Management & Entrepreneurship	TD: CS PSB: CS	3	0	0	03	50	50	100	3
8	PW	24BECSE606	Mini Project	TD: CS PSB: CS	0	0	0	00	50	50	100	2
9	NC	24BECSE607	Value Added Program-II	Any Department	0	0	0	01	100	---	100	0
Total									500	400	900	24

Professional Elective IV & V

IV	24BECSE641	Digital Image Processing	24BECSE642	Human Computer Interaction	24BECSE643	Web and Cyber Security
V	24BECSE651	Software Design & Design Thinking	24BSCES652	Generative AI	24BECSE653	High Performance Computing

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					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	OE	24BEYYY7XX	Open Elective/ MOOC/NPTEL-I	TD: CS PSB: CS	3	0	0	00	50	50	100	3
2	OE	24BEYYY7XX	Open Elective/ MOOC/NPTEL-II	TD: CS PSB: CS	3	0	0	00	50	50	100	3
3	IS	24BECSE701	Summer Internship	TD: CS PSB: CS	0	0	4	00	50	50	100	2
4	IS	24BECSE702	Technical Seminar	TD: CS PSB: CS	0	0	0	00	50	50	100	1
5	PW	24BECSE703	Project Phase-I	TD: CS PSB: CS	0	0	0	00	50	50	100	3
Total									250	250	500	12

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Sl. No	Course	Course Code	Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week			Examination				Credits
					Theory Lecture	Tutorial	Practical Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1	PW	24BECSE801	Project Phase-II	TD: CS PSB: CS	-	-	-	-	50	50	100	9
Total									50	50	100	9

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