

Sapthagiri NPS University, BENGALURU-560057.

B.E. in ECE; Scheme of Teaching and Examinations 2024 batch

Outcome Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2024-25)

III SEMESTER

SN	Course Type	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	24BEECE301	Discrete Mathematics	TD: Maths PSB: Maths	3	0	0	03	50	50	100	3
2.	IPCC	24BEECE302	Analog Electronics Circuits	TD: ECE PSB: ECE	2	0	2	03	50	50	100	3
3.	IPCC	24BEECE303	Digital Electronic Circuits	TD: ECE PSB: ECE	2	0	2	03	50	50	100	3
4.	IPCC	24BEECE304	Microprocessors and Microcontrollers	TD: ECE PSB: ECE	3	0	2	03	50	50	100	4
5.	PC	24BEECE305	Network Analysis and Control System	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
6.	PC	24BEECE306	Signals and Systems	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
7.	PC	24BEECE307	Object Oriented Programming	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
8.	AE	24BEECE308	Cyber Laws and Ethics	TD: ECE PSB: ECE	1	0	0	01	50	50	100	1
9.	UV	24BEECE309	Out Reach Activity 1	Any Department	0	0	1	01	100	---	100	1
Total								500	400	900	24	
10.	BS	24BEECE310	Maths-Dip (for Lateral entry)	TD: Maths PSB: Maths	3	0	0	03	50	--	50	-

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IV SEMESTER

SN	Course Type	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	24BEECE401	Probability and Statistics	TD: Maths PSB: Maths	3	0	0	03	50	50	100	3
2.	IPCC	24BEECE402	Linear Integrated Circuits	TD: ECE PSB: ECE	2	0	2	03	50	50	100	3
3.	IPCC	24BEECE403	Digital System Design using Verilog	TD: ECE PSB: ECE	2	0	2	03	50	50	100	3
4.	IPCC	24BEECE404	Principles of Communication Systems	TD: ECE PSB: ECE	3	0	2	03	50	50	100	4
5.	PC	24BEECE405	Electromagnetic Theory and Transmission Lines	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
6.	PC	24BEECE406	Internet of Things	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
7.	PE	24BEECE41X	Professional Elective-I	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
8.	AE	24BEECE407	Life Skills for Engineers	TD: ECE PSB: ECE	1	0	0	01	50	50	100	1
9.	UV	24BEECE409	Out Reach Activity - II	Any Department	0	0	1	01	100	---	100	1
Total								500	400	900	24	

Professional Elective I

24BEECE411	Operating System	24BEECE412	Database Management Systems	24BEECE413	Automotive Electronics
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Professional Core Course (IPCC): Refers to Professional Core Course Theory Integrated with practical of the same course. Credit for IPCC can be 04 and its Teaching– Learning hours (L: T: P) can be considered as (3: 0: 2) or (2: 2: 2). The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by only CIE (no SEE). However, questions from the practical part of IPCC shall be included in the SEE question paper. For more details, the regulation governing the Degree of Bachelor of Engineering /Technology (B.E./B.Tech.) 2022-23 may please be referred.

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V SEMESTER

SN	Course Type	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.	IPCC	24BEECE501	VLSI Design and Technology	TD: ECE PSB: ECE	2	0	2	03	50	50	100	3
2.	IPCC	24BEECE502	Digital Signal Processing	TD: ECE PSB: ECE	2	0	2	03	50	50	100	3
3.	IPCC	24BEECE503	Microwave and Antenna wave propagation	TD: ECE PSB: ECE	3	0	2	03	50	50	100	4
4.	PC	24BEECE504	Digital Communication	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
5.	PE	24BEECE52X	Professional Elective-II	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
6.	PE	24BEECE53X	Professional Elective-III	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
7.	HS	24XXXXXX	Digital Marketing	Any Department	3	0	0	03	50	50	100	3
8.	UV	24BEECE505	Professional Ethics and Human Values	Any Department	1	0	0	01	50	50	100	1
9.	NC	24BEECE506	Value Added Program-I	Any Department	-	-	-	01	---	---	---	---
Total								400	400	800	23	

Professional Elective - II

24BEECE521	System Verilog	24BEECE522	R Programming	24BEECE523	Flexible Electronics
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Professional Elective - III

24BEECE531	Artificial Neural Networks & Deep Learning	24BEECE532	Industrial Automation	24BEECE533	Real Time Operating Systems
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Outcome Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2024-25)

VI SEMESTER

SN	Course Type	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	24BEECE601	Optical Communication and Networking	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
2.	IPCC	24BEECE602	Computer Communication Networks	TD: ECE PSB: ECE	3	0	2	03	50	50	100	4
3.	PC	24BEECE603	Wireless Cellular Communications	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
4.	IPCC	24BEECE604	Embedded System Design	TD: ECE PSB: ECE	2	0	2	03	50	50	100	3
5.	PE	24BEECE64X	Professional Elective-IV	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
6.	PE	24BEECE65X	Professional Elective-V	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
7.	HS	24XXXXXX	Management & Entrepreneurship	Any Department	3	0	0	03	50	50	100	3
8.	PW	24BEECE605	Mini Project		-	-	-	01	50	50	100	2
9.	NC	24BEECE606	Value Added Program-II	Any Department	-	-	-	01	---	---	---	---
								Total	400	400	800	24

Professional Elective - IV

24BEECE641	Digital Image Processing	24BEECE642	Cryptography and Network Security	24BEECE643	Speech Processing
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Professional Elective - V

24BEECE651	VLSI Testing	24BEECE652	Radar and Satellite Communications	24BEECE653	AIoT
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					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P					
1.	OE	24BEECE701	Open Elective/MOOC/NPTEL-I	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
2.	OE	24BEECE702	Open Elective/MOOC/NPTEL-II	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
3.	IS	24BEECE703	Summer Internship		0	0	4	-	50	50	100	2
4.	IS	24BEECE704	Technical Seminar		0	0	0	-	50	50	100	1
5.	PW	24BEECE705	Project Phase-I		-	-	-	-	50	50	100	3
Total								250	250	500	12	

Open Elective - I

24BEECE711	EV Technology	24BEECE712	Robotics and AI	24BEECE713	Real Time Operating System
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Open Elective - II

24BEECE721	Space Technology	24BEECE722	Wireless Communication		
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VIII SEMESTER

SN	Course Type	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	24BEECE801	Project Phase-II		-	-	-	-	50	50	100	9

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