



SAPTHAGIRI NPS
UNIVERSITY

UNMATCHED EXCELLENCE, UNLIMITED POTENTIAL
#14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru - 560057

School of Engineering and Technology

Department of
**ELECTRONICS AND
COMMUNICATION ENGINEERING**
(VLSI Design)

2026 Batch Admitted
Master of Technology in ECE (VLSI)

1st, 2nd, 3rd & 4th Semester M.Tech.
SCHEME & SYLLABUS
2026 Scheme

Sapthagiri NPS University [SNPSU]

(Approved by UGC, New Delhi and Private University under Govt., of Karnataka)
No. 14 / 5, Chikkasandra, Hesaraghatta Main Road, Bengaluru-560057.
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Sapthagiri NPS University, BENGALURU-560057.

M.Tech in Electronics and Communication Engineering (VLSI Design); Scheme of Teaching and Examinations 2026 batch

Outcome Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2026-27)

I 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	CIA Marks	SEE Marks	Total Marks	
					L	T	P					
1.	ES	26MTVLD101	CMOS VLSI Design	TD: ECE PSB: ECE	3	0	2	03	50	50	100	4
2.	ES	26MTVLD102	Digital System Design using FPGA	TD:ECE PSB:ECE	3	0	2	03	50	50	100	4
3.	ES	26MTVLD103	ASIC Design	TD:ECE PSB:ECE	3	0	0	03	50	50	100	3
4.	ES	26MTVLD104	Mixed signal IC Design	TD:ECE PSB:ECE	3	0	0	03	50	50	100	3
5.	PE	26MTVLD1XX	Professional Elective-I	TD:ECE PSB:ECE	3	0	0	03	50	50	100	3
6.	ES	26MTVLD105	Research Methodology and IPR	TD:ECE PSB:ECE	2	0	0	03	50	50	100	2
7.	AE	26MTVLD106	Audit (Personality development)	TD:HRD PSB: HRD	1	0	0	03	100	0	100	1
								Total	400	300	700	20

ES: Engineering Science Course, **PC:** Professional Course, **PW:** Project Work/Mini Project, **IS:** Internship / Technical Seminar, **PE:** Professional Elective Course, **L:** Lecture, **T:** Tutorial, **P:** Practical, **CIA:** Continuous Internal Assessment, **SEE:** Semester End Examination.

26MTVLD1XX- Professional Elective-I

26MTVLD111- High-performance computer architectures 26MTVLD113- CAD for VLSI	26MTVLD112- VLSI Data converters
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II Semester

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					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIA Marks	SEE Marks		Total Marks
					L	T	P					
1.	ES	26MTVLD201	VLSI Process Technology	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
2.	ES	26MTVLD202	Analog IC Design	TD: ECE PSB: ECE	3	0	2	03	50	50	100	4
3.	ES	26MTVLD203	Low Power VLSI Design	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
4.	ES	26MTVLD204	System Verilog	TD: ECE PSB: ECE	3	0	2	03	50	50	100	4
5.	PE	26MTVLD2XX	Professional Elective-II	TD:ECE PSB:ECE	3	0	0	03	50	50	100	3
6.	PE	26MTVLD2XX	Professional Elective-III	TD: ECE PSB: ECE	3	0	0	03	50	50	100	3
Total									300	300	600	20

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26MTVLSID2XX – Professional Elective-II

26MTVLD211- Memory Technology
26MTVLD212- VLSI Testing

26MTVLD213 - CMOS Logic Circuit Design

26MTCSE2XX– Professional Elective-III

26MTVLD221 - RF IC Design
26MTVLD222– Nano Electronics

26MTVLD223- System on Chip

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III Semester

SN	Course Type	Course Code	Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week			Examination				
					Theory Lecture	Tutorial	Practical/ Drawing	Duration in hours	CIA Marks	SEE Marks	Total Marks	Credits
					L	T	P					
1.	IS	26MTVLD301	Industry Internship/Research Internship/Teaching Internship	PSB: ECE	0	0	16	03	50	50	100	8
2.	IS	26MTVLD302	Technical Seminar	PSB: ECE	0	0	4	03	100	-	100	2
3.	PW	26MTVLD303	Project Work Phase- I	TD:ECE PSB:ECE	0	0	14	03	50	50	100	7
4.	PE	26MTVLD3XX	Professional Elective IV – Online Courses MOOC/NPTEL (12 Weeks)	PSB: MOOC/NPTEL	-	-	-	-	-	-	-	3
Total								200	100	300	20	

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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	CIA Marks	SEE Marks	Total Marks	
					L	T	P					
1.	PW	26MTVLD401	Project Work Phase -II	TD: ECE PSB: ECE	0	0	36	03	50	50	100	18
Total									50	50	100	18

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