

Indian Institute of Information Technology Allahabad
Department of Electronics and Communication Engineering

**M.Tech-PhD Dual Degree ECE Program with Specialization in
Microelectronics and VLSI**

(With effect from July 2026 batch)

NEP-2020- New Education Policy- 2020

L-T-P (hr)

Lecture-L: 1 Credit = 1 hr/ week

Tutorial-T: 1 Credit = 1 hr/week

Practical-P: 1 Credit = 2 hr/week

Self Study: 1 Credit = 1 hr/week

1. Degree: M.Tech ECE
2. Duration: The total duration of the program will be 2 years.

Type of Courses

Programme Core Course (PCC)
Programme Elective Course (PEC)
Open/School Elective (OE/SE) other than particular program
Multidisciplinary Minor (MDM)
Ability Enhancement Course (AEC-01)
Indian Language (AEC-02)
Entrepreneurship/Economics/ Management Courses
Indian Knowledge System (IKS)
Value Education Course (VEC)
Internship
Dissertation/Thesis
Community Engagement Activity (CEA)/Field Project
Co-curricular & Extracurricular Activities (CCA)

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Semester 1					Total Credit: 21
Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1	Digital System Design	EC501	PCC	4	3-0-2-0
2	VLSI Technology	EC502	PCC	4	3-0-2-0
3	Solid State Devices	EC503	PCC	4	3-0-2-0
4	Embedded System Design	EC504	PCC	4	3-0-2-0
5	Tools and Techniques for Research Practices	EC505	ELC	3	0-1-4-0
6	Research Methodology & IPR	EC506	ELC	2	2-0-0-0
Total				21	14-1-12-0
					27 Hrs./Week

Semester 2					Total Credit: 18
Sl. No.	Course Name	Code	Type	Credit	Hours
					L-T-P-S
1	Testing and Verification	EC511	PCC	4	3-0-2-0
2	Analog Integrated Circuit Design	EC512	PCC	4	3-0-2-0
3	Elective - 1	ECXXX	PEC	3	3-0-0-0
4	Dissertation-I	EC550	ELC	3	0-0-6-0
5	HSMC		HSMC (VEC)	1	1-0-0-0
6	Independent Study#	ECE551* (*Title of the study)	ELC	3	0-0-0-3
Total				18*	10-0-10-3
					23 Hrs./Week

Exit: After successful completion of first two semesters, students may get a **PG Diploma**. They need to earn an additional 6 credits in the summer before exit.

Dual M.Tech-Ph.D: After the end of the Second Semester, the M.Tech-PhD student moves into the PhD part of the Degree and will be henceforth governed by the PhD ordinance.

Area Specific Depth of research domain advised by the Supervisor.