



# M.Tech. VLSI

## Aims and Objectives

The M.Tech. (VLSI) programme at IIT Mandi is designed for students to acquire theoretical and practical knowledge in the domain of VLSI design, tools and technology. The programme is a part of VLSI centre of the Institute. The curriculum covers various core/elective courses on chip designing with hands-on training on EDA tools such as Cadence, Mentor Graphics and Synopsys design suites. The curriculum also covers the device/fabrication aspects with hand on fabrication experience on class-100 and 1000 fabrication facilities at IIT Mandi. In summary, the overall two years of M.Tech. equips students to meet the challenging needs of industry for the present as well as next generation.

## Academic Curriculum & Courses

Core	Electives	EDA Tool Facilities
CMOS Analog IC Design	Power Semiconductor Devices	Cadence design suite
CMOS Digital IC Design Practicum	Mixed Signal VLSI Design	Synopsys design suite
Digital MOS LSI Circuits	Low Power VLSI Design	Mentor Graphics design Suite
Microelectronics Devices & Modeling	Formal Verification in VLSI	Xilinx Vivado
Embedded Systems	Digital VLSI architecture design	Key sight ADS
VLSI Technology		Comsol
VLSI Fabrication Practicum		Sentaurus

## Fabrication Facilities

### FABRICATION TOOLS:

- Clean Rooms: 400sq. ft., Class 100, 1000 and 10,000.
- Lithography: Optical UV/DUV, MASKLESS, EBL.
- Thin Film Deposition Systems: RF/DC Sputtering, Chemical Vapour Deposition (CVD,PE-CVD), Thermal Evaporator, Spin coater.
- Annealing Systems: three-Zone Furnace, Oxidation/Diffusion Furnace

## Previous Recruiters

Western Design, Cadence, Synopsys, STMicroelectronics

## Associated Faculty

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