

Special Centre for Nanoscience

M. Tech. in Nano Science (NS) and Nano Electronics (NE) 2019-20 Onwards

Course Structure

A student shall have to earn a **minimum of 55 credits** at the end of II years in order to be eligible for the award of M. Tech. Degree.

Semester I: Total Credits = 18

Sl. No.	Course Name	Credits
Core - 1	Physics at Nanoscale	3
Core - 2	Nano Chemistry	3
Core - 3	Nano Bioscience	3
Core - 4	Nanoelectronics	3
Core - 5	Thin Film Technology	3
Core - 6	Lab – 1 (Common)	3

Semester II: Total Credits = 18

Sl. No.	Course Name	Credits
1.	Elective- I (NS/ NE)	3
2.	Elective - II (NS/ NE)	3
3.	Elective – III (NS/ NE)	3
4.	Elective - IV (NS/ NE)	3
5.	Elective – V (NS/ NE)	3
6.	Lab – 2 (NS/ NE)	3

Semester III: Total Credits = 9

Sl. No.	Course Name	Credits
Core - 7	Research Methodology and Intellectual Property Rights	3
1.	Minor project	6

Semester IV: Total Credits = 10

Sl. No.	Course Name	Credits
1.	Major Project: Dissertation & Presentation	10

List of Elective Courses* for M.Tech. Semester II

Program Electives: Nanoscience (NS):

<u>Course No.</u>	<u>Course Name</u>
Elective - 1	Design & Synthesis of nanostructures
Elective - 2	Nano scale Characterization
Elective - 3	Nano Biosensors and Microfluidics
Elective - 4	Nanobiotechnology and Nanomedicine
Elective - 5	Renewable energy technology
Elective - 6	Nanolithography & Nanoscale devices
Elective - 7	RFIC/MMIC Design

Program Electives: Nano Electronics (NE)

<u>Course No.</u>	<u>Course Name</u>
Elective - 1	Advance Semiconductor Devices
Elective - 2	VLSI Technology
Elective - 3	VLSI Design & Testing
Elective - 4	Foundation of VLSI CAD
Elective - 5	MEMS/NEMS
Elective - 6	Analog IC design
Elective - 7	Embedded System
Elective - 8	CAD for VLSI Design
Elective - 9	Nanolithography & Nanoscale devices
Elective - 10	RFIC/MMIC Design

Minor project: Minor project can be taken up with the faculties of the Centre.

Major Project: For Major Project & Dissertation the students will be encouraged to join any industry or research laboratory.

*Elective courses will be offered by the SCNS as per the availability of the teachers