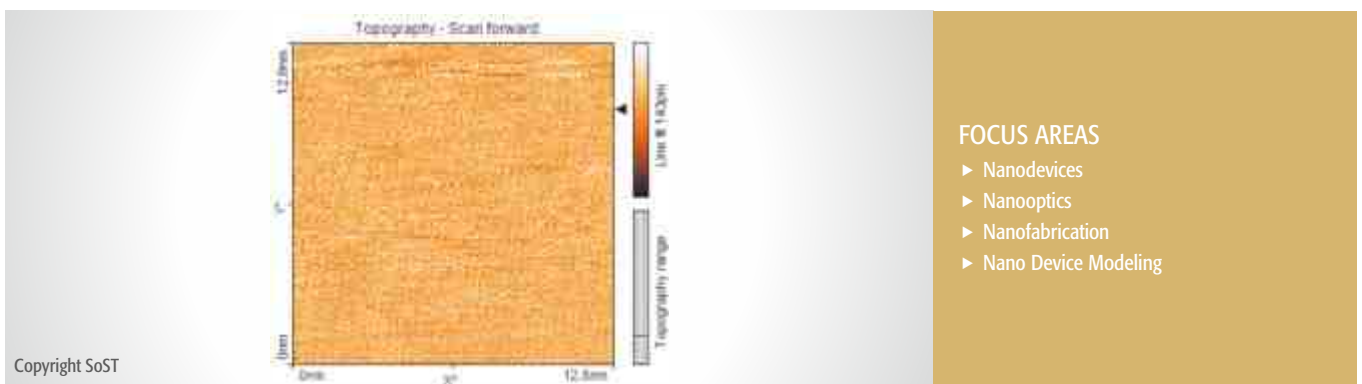


M.Tech. IN ADVANCED INFORMATION TECHNOLOGY WITH SPECIALIZATION IN NANO-ELECTRONICS (MTECHNE)

2 years, full-time and residential



“Why cannot we write the entire 24 volumes of the Encyclopedia Britannica on the head of a pin?” - Richard P Feynman

Nanoelectronics is where Physics, Material Science, Chemistry, Electrical and Electronics Engineering converge. Today's commercial transistors are well below 100 nanometer in size, and are therefore entering the Nano-world. The tremendous miniaturization in electronic devices has not only led to increased capacity and performance, but also to the discovery of new phenomena and applications. It is obvious that Moore's law cannot hold forever, and at some moment, the fundamental limits set by Nature await us. Getting a grip on the fundamental properties of Nanoelectronic devices is therefore of crucial importance and, at the same time, a very exciting scientific challenge. Considering this, the program has a strong focus on exploring the possibilities of different Nanomaterials for different types of Nanodevices.

ELIGIBILITY

Graduates / Postgraduates with a Bachelors Degree in Engineering / Technology in Electrical / Electronics / Communication / Instrumentation / Chemical / Mechanical / Polymer / Computer Science / IT or MSc Physics / Electronics / Chemistry / Computer Science or equivalent (with minimum 55 percent marks or equivalent grades)

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COURSE STRUCTURE

SEMESTER	CODE	COURSE NAME	CREDITS
SEMESTER I			
	MINI-001	Engineering Sciences I	6
	MINI-008	Introduction to Nanoscience and Nanotechnology	6
	MINI-009	Nanophysics	6
	MINI-101	Nanochemistry	6
	MINI-011	Nanobiology	6
	MINI-012	Nanomaterials Synthesize and Characterization	6
	MNNI-021	Seminar	4
	MIN-001	Life Skill Development I	6
		Total	46
SEMESTER II			
	MINI-006	Engineering Sciences II	6
	MINNI-022	Nanoelectronics	6
	MINI-013	Nanosensors	6
	MINNI-023	Nano-Optics	6
	MINNI-024	Nanodevice Fabrication	6
	MINI-007	Research Methodology	6
	MIN-002	Life Skill Development II	6
		Total	42
SEMESTER III			
	MNNP-001	Project Phase I	36
SEMESTER IV			
	MNNP-002	Project Phase II	48
Total Credits			172