M.Tech. in ECE
(Micro and Nano-Electronics)
Course Structure

Semester I			
S.No.	**Course No.**	**Course Title**	**Credits**
1.		Professional and Communication Skills (Compulsory)	2-0-0-2
2.	EC541	Physics of Semiconductor Devices (core1)	3-0-2-5
3.	EC544	Digital VLSI Design (core2)	3-1-0-4
4.	EC545	Device Fabrication Technology (Core3)	3-1-0-4
5.		Elective I	3-0-0-3
6.	EC546L	Lab1 (attached to Core1) (TCAD)	--
Semester II			
1.	EC541	Analog IC Design (core4)	3-1-0-4
2.		Elective II	3-1-0-4
3.		Elective III	3-1-0-4
4.		Elective IV/ Thesis Credit	3-1-0-4
5.	EC547L	Lab2 (EDA Tool)	0-0-4-2
Semester III			
1.	EC699a	Thesis Credit	16
2.	EC598a	Graduate Seminar I	2
Semester IV			
1.	EC699b	Thesis Credit	16
2.	EC598b	Graduate Seminar II	2

Elective-I:

Sl No	**Course No**	**Courses**	**Credits**
1.	EC543	CMOS memory Design	3-0-0-3
2.	EC545a	VLSI Device and Modeling	3-0-0-3
3.	EC545b	VLSI Design Automation	3-0-0-3

Elective-II:

Sl No	**Course No**	**Courses**	**Credits**
1.	EC548a	Testing and diagnosis of Digital systems	3-1-0-4
2.	EC548b	Low power VLSI Design	3-1-0-4
3.	EC548	CMOS/RF IC Design	3-1-0-4

Elective-III:

Sl No	**Course No**	**Courses**	**Credits**
1.	EC549a	Advanced micro and nano Devices/Nanoelectronics	3-1-0-4
2.	EC549b	MEMS/NEMS and Sensors	3-1-0-4

Elective-IV:

Sl No	**Course No**	**Courses**	**Credits**
1.	EC550	Nano Scale Integrated Computing	3-1-0-4

Note: Students may opt an elective offered by other specialization/discipline related to his/her field of interest with the prior permission of Instructor-in-Charge/Supervisor, as the case may be.