

NATIONAL INSTITUTE OF TECHNOLOGY SIKKIM

Curriculum for M. Tech. in Microelectronics and VLSI Design (Till 2016 Admitted Batch)

Semester 1

S. No.	Code	Name of the Subject	L	T	P/S	C
1.	EC5001	Basics of VLSI	3	1	3	3
2.	EC5002	Semiconductor Device Theory and Modelling	3	0	0	3
3.	EC5003	Semiconductor Materials Technology	3	1	0	3
4.	EC5004	Analog Integrated Circuit Design	3	0	0	3
5.		Elective 1	3	0	0	3
6.	EC5090	Micro Electronic Design Lab	0	0	3	2
7.	EC5091	Modelling of digital system Lab	0	0	3	2
		Total credits				19

Semester 2

S. No.	Code	Name of the Subject	L	T	P/S	C
1.	EC5005	MOS Device Modelling	3	1	0	3
2.	EC5006	VLSI System Design	3	1	0	3
3.		Elective 1	3	0	0	3
4.		Elective 2	3	0	0	3
6.	EC5007	Semiconductor Materials and Device characterization	3	1	0	3
7.	EC5092	VLSI Design Lab	0	0	3	2
8.	EC5093	Mini Project on SOC	0	0	2	2
9.	EC 5094	Viva voice				1
10.	EC 5095	Summer Internship				-
		Total credits				20

Semester 3

S. No.	Code	Name of the Subject	L	T	P/S	C
		Project Work Phase I	-	-	-	21
1.	EC 6096	Seminar & Viva-voice				10
2.	EC 6097	Dissertation and Thesis				10
3.	EC 5095	Evaluation of Internship (2 nd Sem)				1
		Total credits				21

Semester 4

S. No.	Code	Name of the Subject	L	T	P/S	C
		Project Work Phase II	-	-	-	20
1.	EC 6098	Final Seminar and Viva Voice				10
2.	EC 6099	Dissertation and Thesis				10
		Total credits				20

Minimum Requirements

Minimum number of credits to be earned by a student is 80

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List of Electives

S.No	Code	Name of the Subject	L	T	P/S	C
1.	EC5008	Compound Semiconductors: Properties & Applications	3	0	0	3
2.	EC5009	Micro Electro Mechanical Systems	3	0	0	3
3.	EC5010	Foundation of VLSI CAD	3	0	0	3
4.	EC5011	Testing & Verification of VLSI Circuits	3	0	0	3
5.	EC5012	Semiconductor Power Devices	3	0	0	3
6.	EC5013	Nanoelectronics	3	0	0	3
7.	EC5014	Low Power VLSI	3	0	0	3
8.	EC5015	Mixed Signal circuit design	3	0	0	3
9.	EC5016	CMOS RF circuit design	3	0	0	3
9.	EC5017	III-V semiconductors and High Speed electronic Devices	3	0	0	3
10	EC5018	Modelling of Digital System	3	0	0	3
11	EC5019	Analog VLSI Design	3	0	0	3

*Any other subject (core/elective) offered by the Department from time to time shall be taken as elective with the consent of course co-ordinator/faculty.