

**CHHATTISGARH SWAMI VIVEKANAND TECHNICAL UNIVERSITY,
BHILAI (C.G.)
M. TECH – Microelectronics and VLSI**

SEMESTER I

S. No.	Board of Study	Subject Code	Subject	Periods per Week			Scheme of Examination			Total Marks	Credit
				L	T	P	Theory / Practical				
							ESE	CT	TA		
1.	ET&T Engg.	588111(28)	MICROELECTRONIC S TECHNOLOGY & IC FABRICATION	3	1	-	100	20	20	140	4
2.	ET&T Engg.	588112(28)	Basics of Micro-electronics & VLSI	3	1	-	100	20	20	140	4
3.	ET&T Engg.	572112(28)	Hardware Descriptive Languages	3	1	-	100	20	20	140	4
4.	ET&T Engg.	588113(28)	CMOS ANALOG INTEGRATED CIRCUITS	3	1	-	100	20	20	140	4
5.		Elective – I		3	1	-	100	20	20	140	4
6.	ET&T Engg.	588121(28)	Hardware Descriptive Languages Lab I	-	-	3	75	-	75	150	2
7.	ET&T Engg.	588122(28)	CMOS Integrated Circuits Lab II	-	-	3	75	-	75	150	2
Total				15	5	6	650	100	250	1000	24

L- Lecture T- Tutorial

P- Practical, ESE- End Semester Exam

CT- Class Test, TA- Teacher's Assessment

**Table-I
ELECTIVE – I**

S. No.	Board of Study	Subject Code	Subject
1.	ET&T	588131(28)	Introduction to MEMS
2.	ET&T	588132(28)	MEMORY DESIGN AND TESTING
3.	ET&T	588133(28)	Optoelectronics
4.	ET&T	588134(28)	Microwave Integrated Circuits
5.	ET&T	588135(28)	Neural Networks for VLSI

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SEMESTER II**

S. N	Board of Study	Subject Code	Subject	Periods per Week		Scheme of Examination			Total Marks	Credit	
				L	T	P	Theory / Practical				
							ESE	CT	TA		
1.	ET&T Engg.	572211(28)	Mixed Signal and RF Circuit Design	3	1	-	100	20	20	140	4
2.	ET&T Engg.	588212(28)	SYSTEM ON CHIP	3	1	-	100	20	20	140	4
3.	ET&T Engg.	588213(28)	DIGITAL SIGNAL PROCESSING & IMPLEMENTATION WITH VLSI	3	1	-	100	20	20	140	4
4.	ET&T Engg.	588214(28)	Testing and Verification of VLSI Circuits	3	1	-	100	20	20	140	4
5.		Elective – II		3	1	-	100	20	20	140	4
6.	ET&T Engg.	588221(28)	RF Circuit Lab I	-	-	3	75	-	75	150	2
7.	ET&T Engg.	588222(28)	SYSTEM ON CHIP Lab II	-	-	3	75	-	75	150	2
Total				15	5	6	650	100	250	1000	24

**Table-II
ELECTIVE – II**

S. No.	Board of Study	Subject Code	Subject
1.	ET&T	588231(28)	Physics of Nano Electronic Devices
2.	ET&T E.	588232(28)	ASIC
3.	ET&T E	588233(28)	Nano-sensors
4.	ET&T E	572231(28)	ULSI Technology
5.	ET&T E	588234(28)	Process and Device Characterization & Measurements

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SEMESTER III

S. No.	Board of Study	Subject Code	Subject	Periods per Week			Scheme of Examination			Total Marks	Credit
							Theory / Practical				
				L	T	P	ESE	CT	TA		
1.	ET&T Engg.	588311(28)	Digital Systems Engineering	3	1	-	100	20	20	140	4
2.		Elective-III		3	1	-	100	20	20	140	4
3.	ET&T Engg.	588321(28)	Project Work	-	-	28	100	-	100	200	14
4.	ET&T Engg.	588322(28)	Seminar on Industrial Training and Dissertation	-	-	3	-	-	20	20	2
Total				6	2	31	300	40	160	500	24

**Table-III
ELECTIVE – III**

S. No.	Board of Study	Subject Code	Subject
1.	ET&T	588331(28)	DESIGN OF ANALOG FILTERS AND SIGNAL CONDITIONING CIRCUITS
2.	ET&T.	588332(28)	HARDWARE SOFTWARE CO-DESIGN
3.	ET&T	588333(28)	LOW POWER VLSI CIRCUIT AND SYSTEM
4.	ET&T	588334(28)	SENSORS

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SEMESTER IV

S. No.	Board of Study	Subject Code	Subject	Periods per Week			Scheme of Examination			Total Marks	Credit
							Theory / Practical				
				L	T	P	ESE	CT	TA		
1.	ET&T Engg.	588421(28)	Major project + Seminar	6	-	34	300	-	200	500	23
Total				6	-	34	300	-	200	500	23