ANNA UNIVERSITY, CHENNAI
AFFILIATED INSTITUTIONS
M.E. VLSI DESIGN
REGULATIONS – 2017
CHOICE BASED CREDIT SYSTEM
CURRICULA AND SYLLABI

SEMESTER I

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	MA5152	Applied Mathematics for Electronics Engineers	FC	4	4	0	0	4
2.	AP5151	Advanced Digital System Design	PC	3	3	0	0	3
3.	VL5101	CMOS Digital VLSI Design	PC	3	3	0	0	3
4.	VL5191	DSP Integrated Circuits	PC	3	3	0	0	3
5.	VL5102	CAD for VLSI Circuits	PC	3	3	0	0	3
6.	VL5103	Analog IC Design	PC	4	4	0	0	4
PRACTICALS								
7.	VL5111	VLSI Design Laboratory I	PC	4	0	0	4	2
			TOTAL	**24**	**20**	**0**	**4**	**22**

SEMESTER II

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	VL5201	Testing of VLSI Circuits	PC	3	3	0	0	3
2.	VL5291	VLSI Signal Processing	PC	3	3	0	0	3
3.	VL5202	Low Power VLSI Design	PC	3	3	0	0	3
4.		Professional Elective I	PE	3	3	0	0	3
5.		Professional Elective II	PE	3	3	0	0	3
6.		Professional Elective III	PE	3	3	0	0	3
PRACTICALS								
7.	VL5211	VLSI Design Laboratory II	PC	4	0	0	4	2
8.	CP5281	Term Paper Writing and Seminar	EEC	2	0	0	2	1
			TOTAL	**24**	**18**	**0**	**6**	**21**

SEMESTER III

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	VL5301	Analog to Digital Interfaces	PC	3	3	0	0	3
2.		Professional Elective IV	PE	3	3	0	0	3
3.		Professional Elective V	PE	3	3	0	0	3
PRACTICALS								
4.	VL5311	Project Work Phase-I	EEC	12	0	0	12	6
			TOTAL	**21**	**9**	**0**	**12**	**15**

SEMESTER IV

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
PRACTICALS								
1.	VL5411	Project Work Phase-II	EEC	24	0	0	24	12
			TOTAL	**24**	**0**	**0**	**24**	**12**

TOTAL NO. OF CREDITS:70

FOUNDATION COURSES (FC)

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	MA5152	Applied Mathematics for Electronics Engineers	FC	4	4	0	0	4

PROFESSIONAL CORE (PC)

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	AP5151	Advanced Digital System Design	PC	3	3	0	0	3
2.	VL5101	CMOS Digital VLSI Design	PC	3	3	0	0	3
3.	VL5191	DSP Integrated Circuits	PC	3	3	0	0	3
4.	VL5102	CAD for VLSI Circuits	PC	3	3	0	0	3
5.	VL5103	Analog IC Design	PC	4	4	0	0	4
6.	VL5111	VLSI Design Laboratory I	PC	4	0	0	4	2
7.	VL5201	Testing of VLSI Circuits	PC	3	3	0	0	3
8.	VL5291	VLSI Signal Processing	PC	3	3	0	0	3
9.	VL5202	Low Power VLSI Design	PC	3	3	0	0	3
10.	VL5211	VLSI Design Laboratory II	PC	4	0	0	4	2
11.	VL5301	Analog to Digital Interfaces	PC	3	3	0	0	3

EMPLOYABILITY ENHANCEMENT COURSE (EEC)

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CP5281	Term Paper Writing and Seminar	EEC	2	0	0	2	1
2.	VL5311	Project Work Phase – I	EEC	12	0	0	12	6
3.	VL5411	Project Work Phase – II	EEC	24	0	0	24	12

PROFESSIONAL ELECTIVES (PE)*

SEMESTER II
ELECTIVE I

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	VL5001	Device Modeling - I	PE	3	3	0	0	3
2.	VL5002	RF IC Design	PE	3	3	0	0	3
3.	VL5003	Design of Analog Filters and Signal Conditioning Circuits	PE	3	3	0	0	3
4.	VL5004	Nano Scale Devices	PE	3	3	0	0	3

SEMESTER II
ELECTIVE II

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	DS5191	DSP Processor Architecture and Programming	PE	3	3	0	0	3
2.	VL5005	Networks on Chip	PE	3	3	0	0	3
3.	AP5094	Signal Integrity for High Speed Design	PE	3	3	0	0	3
4.	AP5091	Digital Control Engineering	PE	3	3	0	0	3

SEMESTER II
ELECTIVE III

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	AP5191	Embedded System Design	PE	3	3	0	0	3
2.	AP5251	Soft Computing and Optimization Techniques	PE	3	3	0	0	3
3.	VL5006	Reconfigurable Architectures	PE	3	3	0	0	3
4.	VL5007	Advanced Microprocessors and Architectures	PE	3	3	0	0	3

SEMESTER III
ELECTIVE IV

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	VL5008	Selected Topics in ASIC Design	PE	3	3	0	0	3
2.	VL5009	Design and Analysis of Computer Algorithms	PE	3	3	0	0	3
3.	VL5010	Device Modeling- II	PE	3	3	0	0	3
4.	AP5292	Digital Image Processing	PE	3	3	0	0	3

SEMESTER III
ELECTIVE V

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	VL5091	MEMS and NEMS	PE	3	3	0	0	3
2.	VL5011	Scripting Languages for VLSI	PE	3	3	0	0	3
3.	AP5291	Hardware – Software Co-Design	PE	3	3	0	0	3
4.	VL5012	Selected Topics in IC Design	PE	3	3	0	0	3