B.E. Electronics and Communication Engineering- Curriculum & Syllabus

REGULATIONS - 2020
CHOICE BASED CREDIT SYSTEM
B.E. ELECTRONICS AND COMMUNICATION ENGINEERING

I TO VIII SEMESTERS CURRICULUM AND SYLLABUS

SEMESTER I

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
THEORY								
1	UHS1151	Technical English - I	HS	3	3	0	0	3
2	UMA1151	Mathematics - I	BS	4	3	1	0	4
3	UPH1151	Engineering Physics - I	BS	3	3	0	0	3
4	UCY1151	Engineering Chemistry	BS	3	3	0	0	3
5	UGE1151	Python Programming and Problem Solving	ES	3	3	0	0	3
THEORY CUM PRACTICAL								
6	UBE1161	Basic Civil and Mechanical Engineering (Theory + Lab)	ES	5	3	0	2	4
PRACTICALS								
7	UBS1161	Physics and Chemistry Laboratory	BS	4	0	0	4	2
8	UGE1161	Python Programming and Problem Solving Laboratory	ES	4	0	0	4	2
			TOTAL	29	18	1	10	24

SEMESTER II

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
THEORY								
1	UHS1251	Technical English - II	HS	3	3	0	0	3
2	UMA1251	Mathematics - II	BS	4	3	1	0	4
3	UPH1251	Engineering Physics - II	BS	3	3	0	0	3
4	UGE1251	Environmental Science and Engineering	HS	3	3	0	0	3
5	UGE1252	C Programming	ES	3	3	0	0	3
6	UGE1253	Engineering Graphics	ES	5	1	0	4	3
7	UHS1252	Professional skills - I	EEC	2	0	0	2	1
THEORY CUM PRACTICAL								
8	UBE1261	Basic Electrical and Electronics Engineering (Theory + Lab)	ES	4	2	0	2	3
PRACTICALS								
9	UGE1261	C Programming Laboratory	ES	4	0	0	4	2
			TOTAL	31	18	1	12	25

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SEMESTER III

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
THEORY								
1.	UMA1354	Transforms and Numerical Analysis	BS	4	3	1	0	**4**
2.	UEC1301	Circuit Analysis and Devices	PC	3	3	0	0	**3**
3.	UEC1302	Digital Electronics	PC	3	3	0	0	**3**
4.	UEC1303	Signals and Systems	PC	4	3	1	0	**4**
5.	UEC1304	Electronic Circuits	PC	3	3	0	0	**3**
6.	UCS1351	OOPS and Data Structures	ES	3	3	0	0	**3**
7.	UHS1351	Professional Skills-II	EEC	2	0	0	2	**1**
PRACTICALS								
8.	UEC1311	Analog and Digital Circuits Laboratory	PC	4	0	0	4	**2**
9.	UCS1361	OOPS and Data Structures Laboratory	ES	4	0	0	4	**2**
10.	UHS1361	Interpersonal Skills Laboratory	EEC	2	0	0	2	**1**
			TOTAL	**32**	**18**	**2**	**12**	**26**

SEMESTER IV

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
THEORY								
1.	UMA1453	Probability and Random Processes	BS	4	3	1	0	**4**
2.	UEC1401	Linear Integrated Circuits and Applications	PC	3	3	0	0	**3**
3.	UEC1402	Microprocessors and Microcontrollers	PC	3	3	0	0	**3**
4.	UEC1403	Electromagnetic Theory	PC	4	3	1	0	**4**
5.	UEC1404	Analog and Digital Communication	PC	3	3	0	0	**3**
6.	UEE1451	Control Systems Engineering	PC	3	3	0	0	**3**
7.	UHS1451	Professional Skills-III	EEC	2	0	0	2	**1**
PRACTICALS								
8.	UEC1411	Linear Integrated Circuits Laboratory	PC	4	0	0	4	**2**
9.	UEC1412	Microprocessors and Microcontrollers Laboratory	PC	4	0	0	4	**2**
10.	UEC1413	Analog and Digital Communication Laboratory	PC	4	0	0	4	**2**
			TOTAL	**34**	**18**	**2**	**14**	**27**

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SEMESTER V

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
THEORY								
1.	UEC1501	Digital Signal Processing	PC	4	3	1	0	**4**
2.	UEC1502	VLSI Design	PC	3	3	0	0	**3**
3.	UEC1503	Transmission Lines and RF Systems	PC	4	3	1	0	**4**
4.	UMG1551	Principles of Management	HS	3	3	0	0	**3**
5.	UCS1552	Computer Architecture	PC	3	3	0	0	**3**
6.		Open Elective – I	OE	3	3	0	0	**3**
7.	UHS1551	Professional Skills-IV	EEC	2	0	0	2	**1**
PRACTICALS								
8.	UEC1511	Digital Signal Processing Laboratory	PC	4	0	0	4	**2**
9.	UEC1512	VLSI Design Laboratory	PC	4	0	0	4	**2**
10.	UHS1561	Professional Communication Laboratory	EEC	4	0	0	4	**2**
			TOTAL	**34**	**18**	**2**	**14**	**27**

SEMESTER VI

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
THEORY								
1.	UEC1601	Antenna and Microwave Measurements	PC	4	3	1	0	**4**
2.	UEC1602	Embedded Systems and IoT	PC	3	3	0	0	**3**
3.	UEC1603	Communication Networks	PC	3	3	0	0	**3**
4.	UEC1604	Speech and Image Processing	PC	3	3	0	0	**3**
5.	UEC1605	Programmable Logic Controller	PC	3	3	0	0	**3**
6.		Professional Elective – I	PE	3	3	0	0	**3**
PRACTICALS								
7.	UEC1611	Embedded Systems and IoT Laboratory	PC	4	0	0	4	**2**
8.	UEC1612	Speech and Image Processing Laboratory	PC	4	0	0	4	**2**
			TOTAL	**27**	**18**	**1**	**8**	**23**

SEMESTER VII

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
THEORY								
1.	UEC1701	RF MEMS circuit design	PC	3	3	0	0	**3**
2.	UEC1702	Optical Communication Networks	PC	3	3	0	0	**3**
3.	UEC1703	Adhoc and Wireless Sensor Networks	PC	3	3	0	0	**3**
4.	UEC1704	Wireless Communication	PC	3	3	0	0	**3**
5.	UMG1054	Professional Ethics in Engineering	HS	3	3	0	0	**3**
6.		Open Elective - II	OE	3	3	0	0	**3**
PRACTICALS								
7.	UEC1711	RF System Design and Communication Laboratory	PC	4	0	0	4	**2**
8.	UEC1712	Networks Laboratory	PC	4	0	0	4	**2**
			TOTAL	**26**	**18**	**0**	**8**	**22**

SEMESTER VIII

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
THEORY								
1.		Professional Elective - II	PE	3	3	0	0	**3**
2.		Professional Elective - III	PE	3	3	0	0	**3**
PRACTICALS								
3.	UEC1811	Project Work	EEC	12	0	0	12	**6**
			TOTAL	**18**	**6**	**0**	**12**	**12**

TOTAL NO OF CREDITS: 186

PROFESSIONAL ELECTIVE – I (SEMESTER VI)

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
1	UEC1001	Transducer Engineering	PE	3	3	0	0	**3**
2	UEC1002	Bio-Medical Electronics	PE	3	3	0	0	**3**
3	UEC1003	Multimedia Compression Techniques	PE	3	3	0	0	**3**
4	UEC1004	CMOS Analog IC Design	PE	3	3	0	0	**3**

PROFESSIONAL ELECTIVE – II (SEMESTER VIII)

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
5	UEC1005	Cognitive Radio	PE	3	3	0	0	**3**
6	UEC1006	High Speed Networks	PE	3	3	0	0	**3**
7	UEC1007	Nano Electronics	PE	3	3	0	0	**3**
8	UEC1008	FPGA Based Embedded System Design	PE	3	3	0	0	**3**

PROFESSIONAL ELECTIVE – III (SEMESTER VIII)

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
9	UEC1009	Advanced Wireless Communication	PE	3	3	0	0	**3**
10	UEC1010	Advanced Digital Signal Processing	PE	3	3	0	0	**3**
11	UEC1011	Electromagnetic Interference and Compatibility	PE	3	3	0	0	**3**
12	UEC1012	Satellite Communication	PE	3	3	0	0	**3**

OPEN ELECTIVE – I (SEMESTER V)

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
1	OAM1551	Machine Learning Techniques	OE	3	3	0	0	**3**
2	OAD1551	Advanced Python Programming	OE	3	3	0	0	**3**
3	OCS1551	Artificial Neural networks	OE	3	3	0	0	**3**
4	OCS1552	Artificial Intelligence	OE	3	3	0	0	**3**
5	OEE1551	Renewable Energy Systems	OE	3	3	0	0	**3**

OPEN ELECTIVE – II (SEMESTER VII)

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	TOTAL CONTACT PERIODS	PERIODS PER WEEK			CREDITS
					L	T	P	
6	OAD1751	Big Data Technologies	OE	3	3	0	0	**3**
7	OEE1751	Power Electronics	OE	3	3	0	0	**3**
8	OIT1751	Cryptography and Network Security	OE	3	3	0	0	**3**
9	OCS1753	Database Management System	OE	3	3	0	0	**3**
10	OCS1754	Internet Programming	OE	3	3	0	0	**3**

SUBJECT CATEGORIZATION								
SEMESTER	HS	BS	ES	PC	PE	OE	EEC	Total Credits
I	1	4	3	-	-	-	-	23
II	2	2	4	-	-	-	1	25
III	-	1	2	5	-	-	2	27
IV	-	1	-	8	-	-	1	27
V	1	-	-	6	-	1	2	27
VI	-	-	-	7	1	-	-	23
VII	1	-	-	6	-	1	-	22
VIII	-	-	-	-	2	-	1	12
Total Credits	15	27	24	91	9	6	14	186
% Distribution	8.06	14.52	12.90	48.92	4.84	3.23	7.53	100

HOD　　　　　　**Member Secretary**　　　　**Academic Council Chairman**