

KUMARAGURU COLLEGE OF TECHNOLOGY
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
Regulation 2017 - B.E ECE - Curriculum

Semester I										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17ENI1201	English for Cognizance	Embedded - Theory & Lab	HS	1	0	2	0	2	Nil
2	U17MAT1104	Differential Equations and Vector Calculus	Theory	BS	3	1	0	0	4	Nil
3	U17PHT1006	Physics for Circuit Engineering	Theory	BS	3	0	0	0	3	Nil
4	U17CHT1004	Chemistry for Circuit Engineering	Theory	BS	3	0	0	0	3	Nil
5	U17CSI1211	Structured Programming using C	Embedded - Theory & Lab	ES	3	0	2	0	4	Nil
6	U17MET1101	Engineering Graphics	Theory	BS	2	1	0	0	3	Nil
7	U17CHP1501	Chemistry Laboratory	Lab	BS	0	0	2	0	1	Nil
8	U17MEP1501	Engineering Practices Laboratory	Lab	ES	0	0	2	0	1	Nil
9	U17VEP1501	Human Excellence- Personal Values	Lab	HS	0	0	2	0	1	Nil
Total Credits									22	
Total Contact Hours/week									27	

Semester II										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17ENE21..	Language Elective	Lab	HS	0	0	4	0	2	U17ENI1201
2	U17MAT2104	Advanced Calculus and Transforms	Theory	BS	3	1	0	0	4	U17MAT1104
3	U17PHT2004	Material Science for Circuit Engineering	Theory	BS	3	0	0	0	3	Nil
4	U17EET2011	Electrical Machines and Drives	Theory	ES	3	0	0	0	3	Nil
5	U17ECT2001	Circuit theory	Theory	PC	3	0	0	0	3	Nil
6	U17ECT2002	Electron Devices	Theory	PC	3	0	0	0	3	Nil
7	U17ECP2501	Electron Devices and Circuits Laboratory	Lab	PC	0	0	2	0	1	Nil
8	U17PHP2501	Physics Laboratory	Lab	HS	0	0	2	0	1	Nil
9	U17ISR2001	Social Immersion Project	Lab	EEC	0	0	0	4	2	Nil
10	U17VEP2502	Human Excellence - Inter- Personal values	Lab	HS	0	0	2	0	1	Nil
Total Credits									23	
Total Contact Hours/week									30	

Semester III										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17ECT3101	Signals and Systems	Theory	BS	3	1	0	0	4	Nil
2	U17ECI3202	Analog Electronics	Embedded - Theory & Lab	PC	3	0	2	0	4	U17ECT2002
3	U17ECI3203	Digital System Design	Embedded - Theory & Lab	PC	3	0	2	0	4	Nil
4	U17ECT3004	Electro Magnetic Fields	Theory	PC	3	0	0	0	3	Nil
5	U17ECT3005	Linear Integrated Circuits	Theory	PC	3	0	0	0	3	Nil
6	U17INI3300	Engineering Clinic 1	Embedded - Theory & Project	ES	1	0	0	4	3	Nil
Total Credits									21	
Total Contact Hours/week									25	

Semester IV										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17MAT4104	Probability and Random Process	Theory	BS	3	1	0	0	4	Nil
2	U17ECI4201	Digital Signal Processing	Embedded - Theory & Lab	PC	3	0	2	0	4	U17ECT3101
3	U17ECI4202	Microprocessors and Microcontrollers	Embedded - Theory & Lab	PC	3	0	2	0	4	U17ECI3203
4	U17ECT4103	Transmission Lines and Waveguides	Theory	PC	3	1	0	0	4	U17ECT3004
5	U17INI4300	Engineering Clinic 2	Embedded - Theory & Project	ES	1	0	0	4	3	Nil
6	U17.....	Open Elective I	Theory	OE	3	0	0	0	3	Nil
Total Credits									22	
Total Contact Hours/week									27	

Semester V										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17ECI5201	Communication Engineering- I	Embedded - Theory & Lab	PC	3	0	2	0	4	U17ECT3101
2	U17ECI5202	VLSI and HDL Programming	Embedded - Theory & Lab	PC	3	0	2	0	4	U17ECI3203
3	U17ECI5203	Communication Networks	Embedded - Theory & Lab	PC	3	0	2	0	4	Nil
4	U17ECT5004	Control Systems	Theory	PC	3	0	0	0	3	Nil
5	U17ECT5005	Antenna and wave propagation	Theory	PC	3	0	0	0	3	U17ECT4103
6	U17INI5300	Engineering Clinic 3	Embedded - Theory & Project	ES	1	0	0	4	3	Nil
Total Credits									21	
Total Contact Hours/week									26	

Semester VI										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17ECI6201	Communication Engineering- II	Embedded - Theory & Lab	PC	3	0	2	0	4	U17ECI5201
2	U17ECI6202	RF and Microwave Communication	Embedded - Theory & Lab	PC	3	0	2	0	4	U17ECT4103
3	U17INI6300	Engineering Clinic 4	Embedded - Theory & Project	ES	1	0	0	4	3	Nil
4	U17.....	Open Elective II	Theory	OE	3	0	0	0	3	Nil
5	U17ECE....	Programme Elective I	Theory	PE	3	0	0	0	3	Nil
6	U17ECE....	Programme Elective II	Theory	PE	3	0	0	0	3	Nil
Total Credits									20	
Total Contact Hours/week									24	

Semester VII										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17ECT7002	Wireless Communication	Theory	PC	3	0	0	0	3	U17ECI6201
2	U17ECI7203	Optical Communication	Embedded - Theory & Lab	PC	3	0	2	0	4	Nil
3	U17ECE....	Programme Elective III	Theory	PE	3	0	0	0	3	Nil
4	U17ECE....	Programme Elective IV	Theory	PE	3	0	0	0	3	Nil
5	U17INT7000	Soft Skills	Theory	HS	3	0	0	0	3	Nil
6	U17ECP7701	Project /Internship	Project only Course	PW	0	0	0	6	3	Nil
Total Credits									19	
Total Contact Hours/week									23	

Semester VIII										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17ECP8701	Project /Internship	Project only Course	PW	0	0	0	24	12	Nil
Total Credits									12	
Total Contact Hours/week									24	

Total Credits	160
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List of mandatory courses

S.No	Course Code	Course Title	Course Mode	CT	Sem
1	U17VEP3503	Human Excellence-Family Values	Lab	HS	3
2	U17CHT3000	Environmental Science for Circuit Engineering	Theory	MC	3
3	U17VEP4504	Human Excellence-Professional Values	Lab	HS	4
4	U17VEP5505	Human Excellence-Social Values	Lab	HS	5
5	U17VEP6506	Human Excellence-National Values	Lab	HS	6
6	U17VEP7507	Human Excellence-Global Values	Lab	HS	7

Programme Electives									
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C
Communication System									
1	U17ECE0001	Cognitive Radio	Theory	PE	3	0	0	0	3
2	U17ECE0002	Satellite Communication	Theory	PE	3	0	0	0	3
3	U17ECE0003	MIMO systems	Theory	PE	3	0	0	0	3
4	U17ECE0004	Information Theory and Coding	Theory	PE	3	0	0	0	3
5	U17ECE0005	GPS and its application	Theory	PE	3	0	0	0	3
Signal Processing									
1	U17ECE0006	Digital Image Processing	Theory	PE	3	0	0	0	3
2	U17ECE0007	Multimedia and Compression	Theory	PE	3	0	0	0	3
3	U17ECE0008	Biomedical Signal Processing	Theory	PE	3	0	0	0	3
4	U17ECE0009	Machine Learning	Theory	PE	3	0	0	0	3
5	U17ECE0010	Statistical Signal processing	Theory	PE	3	0	0	0	3
Communication Networks									
1	U17ECE0011	Adhoc wireless networks.	Theory	PE	3	0	0	0	3
2	U17ECE0012	High speed networks.	Theory	PE	3	0	0	0	3
3	U17ECE0013	Network security	Theory	PE	3	0	0	0	3
4	U17ECE0014	Wireless system and standards	Theory	PE	3	0	0	0	3
5	U17ECE0015	Graph theory and its applications.	Theory	PE	3	0	0	0	3
RF and Antenna									
1	U17ECE0016	RF MEMS	Theory	PE	3	0	0	0	3
2	U17ECE0017	RF System Design	Theory	PE	3	0	0	0	3
3	U17ECE0018	Electromagnetic Interference and Compatibility	Theory	PE	3	0	0	0	3
4	U17ECE0019	Computational Electromagnetics	Theory	PE	3	0	0	0	3
5	U17ECE0020	Smart Antennas	Theory	PE	3	0	0	0	3
VLSI									
1	U17ECE0021	VLSI testing and testability	Theory	PE	3	0	0	0	3
2	U17ECE0022	System design with FPGA	Theory	PE	3	0	0	0	3
3	U17ECE0023	System on Chip	Theory	PE	3	0	0	0	3
4	U17ECE0024	Nano Electronics	Theory	PE	3	0	0	0	3
5	U17ECE0025	Low power VLSI	Theory	PE	3	0	0	0	3
Embedded System									
1	U17ECE0026	Robotics and Automation	Theory	PE	3	0	0	0	3
2	U17ECE0027	Consumer Electronics	Theory	PE	3	0	0	0	3
3	U17ECE0028	Virtual Instrumentation	Theory	PE	3	0	0	0	3
4	U17ECE0029	Real time Embedded Systems	Theory	PE	3	0	0	0	3
5	U17ECE0030	Automotive Electronics	Theory	PE	3	0	0	0	3