

KUMARAGURU COLLEGE OF TECHNOLOGY
DEPARTMENT OF MECHATRONICS ENGINEERING
Regulation 2018 - B.E MCE - Curriculum

Semester I										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U18ENI1201	Fundamentals of Communication-I	Embedded - Theory & Lab	HS	2	0	2	0	3	Nil
	U18MAI1201	Linear Algebra & Calculus	Embedded - Theory & Lab	BS	3	0	2	0	4	Nil
2	U18CHI1201	Engineering Chemistry	Embedded - Theory & Lab	BS	3	0	2	0	4	Nil
3	U18MEI1201	Engineering Graphics	Embedded - Theory & Lab	ES	2	0	2	0	3	Nil
4	U18CSI1202	Problem solving and Programming using C	Embedded - Theory & Lab	ES	2	0	2	0	3	Nil
5	U18INI1300	Engineering Clinics	Embedded - Theory & Project	ES	1	0	0	4	3	Nil
Total Credits									20	
Total Contact Hours/week									22	

Semester II										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U18ENI2201	Fundamentals of Communication-II	Embedded - Theory & Lab	HS	2	0	2	0	3	U18ENI1201
2	U18MAI2201	Advanced Calculus and Laplace Transform	Embedded - Theory & Lab	BS	3	0	2	0	4	U18MAI1201
3	U18PHI2201	Engineering Physics	Embedded - Theory & Lab	BS	3	0	2	0	4	Nil
4	U18CSI2201	Problem solving and Programming using Python	Embedded - Theory & Lab	ES	2	0	2	0	3	U18CSI1201
5	U18MET2001	Engineering Mechanics	Theory	ES	3	0	0	0	3	Nil
6	U18INI2300	Engineering Clinics	Embedded - Theory & Project	ES	1	0	0	4	3	Nil
Total Credits									20	
Total Contact Hours/week									21	

Semester III										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U18MAT3101	Partial Differential Equations and Transforms	Theory	BS	3	1	0	0	4	Nil
2	U18MCI3201	Electronic Devices and Circuits	Embedded - Theory & Lab	ES	3	0	2	0	4	Nil
3	U18MCI3202	Electrical Machines	Embedded - Theory & Lab	PC	3	0	2	0	4	Nil
4	U18MCT3003	Mechanics of solids	Theory	ES	3	1	0	0	4	U18MET2001
5	U18MCT3004	Fluid Mechanics and Thermal Sciences	Theory	ES	3	0	0	0	3	Nil
6	U18INI3300	Engineering Clinics	Embedded - Theory & Project	ES	1	0	0	4	3	Nil
Total Credits									22	
Total Contact Hours/week									26	

Semester IV										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U18MAT4101	Numerical Methods and Probability	Theory	BS	3	1	0	0	4	Nil
2	U18MCT4201	Hydraulics and Pneumatics	Embedded - Theory & Lab	PC	3	0	2	0	4	U18MCT3004
3	U18MCT4002	Sensors and Instrumentation	Embedded - Theory & Lab	PC	3	0	2	0	4	U18MCI3201
4	U18MCT4003	Digital Electronics and Microprocessor	Theory	PC	3	0	0	0	3	U18MCI3201
5	U18MCT4004	Theory of Machines	Theory	PC	3	1	0	0	4	U18MET2001
6	U18INI4300	Engineering Clinics	Embedded - Theory & Project	ES	1	0	0	4	3	Nil
Total Credits									22	
Total Contact Hours/week									26	

Semester V										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U18MCI5201	Industrial Electronics and drives	Embedded - Theory & Lab	PC	3	0	2	0	4	U18MCI3203
2	U18MCI5202	Manufacturing Technology	Theory	PC	2	0	2	0	3	Nil
3	U18MCI5203	Programmable logic controllers	Embedded - Theory & Lab	PC	3	0	2	0	4	Nil
4	U18MCT5104	Controls Engineering	Theory	PC	3	1	0	0	4	Nil
5	U18MCT5105	Design of Machine Elements	Theory	PC	3	0	0	0	3	U18MCT3003
6	U18INI5300	Engineering Clinics	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	U18MCI6201	Computer aided Manufacturing	Embedded - Theory & Lab	PC	3	0	2	0	4	U18MCI5202
2	U18MCI6202	Robotics Engineering	Embedded - Theory & Lab	PC	3	0	2	0	4	U18MCT4004
3	U18MCI6203	Microcontroller and Embedded Systems	Embedded - Theory & Lab	PC	2	0	2	0	3	U18MCT4003
4	PE1	Programme Elective I	Theory	PE	3	0	0	0	3	Nil
5	OE	Open Elective	Theory	OE	3	0	0	0	3	Nil
6	U18INI6001	Professional Communication	Theory	HS	3	0	0	0	3	Nil
Total Credits									20	
Total Contact Hours/week									23	

Semester VII										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U18MBT7001	Engineering Economics and Financial Management	Theory	HS	3	0	0	0	3	Nil
2	U18MCT7001	Image Processing and Computer Vision	Theory	PC	3	1	0	0	4	Nil
3	U18MCT7002	Autonomous Vehicle	Theory	PC	3	0	0	0	3	U18MCI6202
4	PE II	Programme Elective II	Theory	PE	3	0	0	0	3	Nil
5	PE III	Programme Elective III	Theory	PE	3	0	0	0	3	Nil
Total Credits									16	
Total Contact Hours/week									16	

Semester VIII									
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C
1	U18MCP8701	Capstone Project	Project only Course	PW	0	0	0	30	15
Total Credits									15
Total Contact Hours/week									30

Total Credits									156
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List of mandatory courses

S.No	Couse Code	Course Title	Course Mode	CT	Sem
1	U18VEP1501	Personal Values	Lab	HS	1
2	U18INT2000	Indian Constitution	Theory	MC	2
	U18VEP2502	Interpersonal Values	Lab	MC	
3	U18VEP3503	Family Values	Lab	MC	3
4	U18CHI4000	Environmental Science	Theory	MC	4
	U18VEP4504	Professional Values	Lab		
5	U18VEP5505	Social Values	Lab	MC	5
6	U18VEP6506	National Values	Lab	MC	6
7	U18VEP7507	Global Values	Lab	MC	7

Programme Electives									
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C
Elective I									
1	U18MCE601	Automotive Electronics I	Theory	PE	3	0	0	0	3
2	U18MCE602	Condition Monitoring	Theory	PE	3	0	0	0	3
3	U18MCE603	Data Analytics	Theory	PE	3	0	0	0	3
Elective II									
1	U18MCE701	Artificial Intelligence and Machine Learning	Theory	PE	3	0	0	0	3
2	U18MCE702	Composite and Smart Materials	Theory	PE	3	0	0	0	3
3	U18MCE703	Micro Electro Mechanical Systems	Theory	PE	3	0	0	0	3
Elective III									
1	U18MCE704	Automotive Electronics II	Theory	PE	3	0	0	0	3
2	U18MCE705	Statistical Quality Control	Theory	PE	3	0	0	0	3
3	U18MCE706	Database Management System	Theory	PE	3	0	0	0	3
List of Open Elective Courses									
1	U18MCOE001	Robotics for Engineers	Theory	OE	3	0	0	0	3
2	U18MCOE002	Automation in Agriculture	Theory	OE	3	0	0	0	3
3	U18MCOE003	Introduction to Sensors and PLC	Theory	OE	3	0	0	0	3
4	U18MCOE004	Mechanics in Cricket	Theory	OE	3	0	0	0	3
5	U18MCOE005	Low Cost Automation	Theory	OE	3	0	0	0	3