

ANNA UNIVERSITY, CHENNAI
AFFILIATED INSTITUTIONS
B.E. MECHATRONICS ENGINEERING
REGULATIONS – 2017
CHOICE BASED CREDIT SYSTEM
I TO VIII SEMESTERS CURRICULA AND SYLLABI

SEMESTER I

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	HS8151	Communicative English	HS	4	4	0	0	4
2.	MA8151	Engineering Mathematics - I	BS	4	4	0	0	4
3.	PH8151	Engineering Physics	BS	3	3	0	0	3
4.	CY8151	Engineering Chemistry	BS	3	3	0	0	3
5.	GE8151	Problem Solving and Python Programming	ES	3	3	0	0	3
6.	GE8152	Engineering Graphics	ES	6	2	0	4	4
PRACTICALS								
7.	GE8161	Problem Solving and Python Programming Laboratory	ES	4	0	0	4	2
8.	BS8161	Physics and Chemistry Laboratory	BS	4	0	0	4	2
TOTAL				31	19	0	12	25

SEMESTER II

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	HS8251	Technical English	HS	4	4	0	0	4
2.	MA8251	Engineering Mathematics - II	BS	4	4	0	0	4
3.	PH8251	Materials Science	BS	3	3	0	0	3
4.	BE8253	Basic Electrical, Electronics and Instrumentation Engineering	ES	3	3	0	0	3
5.	GE8291	Environmental Science and Engineering	HS	3	3	0	0	3
6.	GE8292	Engineering Mechanics	ES	5	3	2	0	4
PRACTICALS								
7.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
8.	BE8261	Basic Electrical, Electronics and Instrumentation Engineering Laboratory	ES	4	0	0	4	2
TOTAL				30	20	2	8	25

SEMESTER III

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	MA8353	Transforms and Partial Differential Equations	BS	4	4	0	0	4
2.	CE8395	Strength of Materials for Mechanical Engineers	ES	3	3	0	0	3
3.	CE8394	Fluid Mechanics and Machinery	ES	4	4	0	0	4
4.	EC8392	Digital Electronics	ES	3	3	0	0	3
5.	MT8301	Electrical Machines and Drives	ES	3	3	0	0	3
6.	MT8302	Analog Devices and Circuits	PC	3	3	0	0	3
PRACTICALS								
7.	CE8381	Strength of Materials and Fluid Mechanics & Machinery Laboratory	ES	4	0	0	4	2
8.	MT8311	Electrical Machines and Drives Laboratory	ES	4	0	0	4	2
9.	HS8381	Interpersonal Skills/Listening & Speaking	EEC	2	0	0	2	1
TOTAL				30	20	0	10	25

SEMESTER IV

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	MA8452	Statistics and Numerical Methods	BS	4	4	0	0	4
2.	ME8392	Manufacturing Technology	PC	3	3	0	0	3
3.	MT8491	Microprocessors and Microcontrollers	PC	3	3	0	0	3
4.	ME8492	Kinematics of Machinery	PC	3	3	0	0	3
5.	MT8401	Thermodynamics and Heat Transfer	PC	3	3	0	0	3
PRACTICALS								
6.	MT8411	Microprocessor and Microcontrollers Laboratory	PC	4	0	0	4	2
7.	ME8461	Manufacturing Technology Laboratory	PC	4	0	0	4	2
8.	ME8381	Computer Aided Machine Drawing	PC	4	0	0	4	2
9.	HS8461	Advanced Reading and Writing	EEC	2	0	0	2	1
TOTAL				30	16	0	14	23

SEMESTER V

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	EE8552	Power Electronics	ES	3	3	0	0	3
2.	MT8591	Sensors and Instrumentation	PC	3	3	0	0	3
3.	ME8594	Dynamics of Machines	PC	4	4	0	0	4
4.	EC8391	Control Systems Engineering	ES	3	3	0	0	3
5.		Open Elective - I	OE	3	3	0	0	3
PRACTICALS								
6.	MT8511	Power Electronics Laboratory	ES	4	0	0	4	2
7.	MT8512	Sensors and Instrumentation Laboratory	PC	4	0	0	4	2
8.	ME8481	Dynamics Laboratory	PC	4	0	0	4	2
9.	HS8581	Professional Communication	EEC	2	0	0	2	1
TOTAL				30	16	0	14	23

SEMESTER VI

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	ME8591	Applied Hydraulics and Pneumatics	PC	3	3	0	0	3
2.	MT8601	Design of Mechatronics System	PC	3	3	0	0	3
3.	ME8593	Design of Machine Elements	PC	3	3	0	0	3
4.	MT8602	Industrial Automation	PC	3	3	0	0	3
5.	MG8591	Principles of Management	HS	3	3	0	0	3
6.		Professional Elective – I	PE	3	3	0	0	3
PRACTICALS								
7.	MT8611	Applied Hydraulics and Pneumatics Laboratory	PC	4	0	0	4	2
8.	MT8612	Industrial Automation Laboratory	PC	4	0	0	4	2
9.	ME8682	Design and Fabrication Project	EEC	4	0	0	4	2
TOTAL				30	18	0	12	24

SEMESTER VII

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	ME8691	Computer Aided Design and Manufacturing	PC	3	3	0	0	3
2.	MT8701	Robotics and Machine Vision System	PC	3	3	0	0	3
3.	MT8791	Embedded System Design	PC	4	2	0	2	3
4.		Open Elective - II	OE	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.	MT8711	Computer Aided Design and Manufacturing Laboratory	PC	4	0	0	4	2
8.	MT8781	Robotics Laboratory	PC	4	0	0	4	2
TOTAL				27	17	0	10	22

SEMESTER VIII

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY								
1.	MT8801	Automotive Electronics	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.	MT8811	Project Work	EEC	20	0	0	20	10
TOTAL				29	9	0	20	19

TOTAL NO. OF CREDITS:186

HUMANITIES AND SOCIAL SCIENCES (HS)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1	HS8151	Communicative English	HS	4	4	0	0	4
2	HS8251	Technical English	HS	4	4	0	0	4
3	GE8291	Environmental Science and Engineering	HS	3	3	0	0	3
4	MG8591	Principles of Management	HS	3	3	0	0	3

BASIC SCIENCE (BS)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1	MA8151	Engineering Mathematics I	BS	4	4	0	0	4
2	PH8151	Engineering Physics	BS	3	3	0	0	3
3	CY8151	Engineering Chemistry	BS	3	3	0	0	3
4	BS8161	Physics and Chemistry Laboratory	BS	4	0	0	4	2
5	MA8251	Engineering Mathematics II	BS	4	4	0	0	4
6	PH8251	Materials Science	BS	3	3	0	0	3
7	MA8353	Transforms and Partial Differential Equations	BS	4	4	0	0	4
8	MA8452	Statistics and Numerical Methods	BS	4	4	0	0	4

ENGINEERING SCIENCES (ES)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	GE8151	Problem Solving and Python Programming	ES	3	3	0	0	3
2.	GE8152	Engineering Graphics	ES	6	2	0	4	4
3.	GE8161	Problem Solving and Python Programming Laboratory	ES	4	0	0	4	2
4.	BE8253	Basic Electrical, Electronics and Instrumentation Engineering	ES	3	3	0	0	3
5.	GE8292	Engineering Mechanics	ES	5	3	2	0	4
6.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
7.	BE8261	Basic Electrical, Electronics and Instrumentation Engineering Laboratory	ES	4	0	0	4	2
8.	CE8395	Strength of Materials for Mechanical Engineers	ES	3	3	0	0	3

9.	CE8394	Fluid Mechanics and Machinery	ES	4	4	0	0	4
10.	CE8395	Strength of Materials and Fluid Mechanics & Machinery Laboratory	ES	4	0	0	4	2
11.	EC8392	Digital Electronics	ES	3	3	0	0	3
12.	MT8301	Electrical Machines and Drives	ES	3	3	0	0	3
13.	MT8311	Electrical Machines and Drives Laboratory	ES	4	0	0	4	2
14.	EE8552	Power Electronics	ES	3	3	0	0	3
15.	EC8391	Control Systems Engineering	ES	3	3	0	0	3
16.	MT8511	Power Electronics Laboratory	ES	4	0	0	4	2

PROFESSIONAL CORE (PC)

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1	MT8302	Analog Devices and Circuits	PC	3	3	0	0	3
3	ME8392	Manufacturing Technology	PC	3	3	0	0	3
4	MT8491	Microprocessors and Microcontrollers	PC	3	3	0	0	3
5	ME8492	Kinematics of Machinery	PC	3	3	0	0	3
6	MT8401	Thermodynamics and Heat Transfer	PC	3	3	0	0	3
7	MT8411	Microprocessor and Microcontrollers Laboratory	PC	4	0	0	4	2
8	ME8461	Manufacturing Technology Laboratory	PC	4	0	0	4	2
9	ME8381	Computer Aided Machine Drawing	PC	4	0	0	4	2
10	MT8591	Sensors and Instrumentation	PC	3	3	0	0	3
11	ME8594	Dynamics of Machines	PC	4	4	0	0	4
12	MT8511	Sensors and Instrumentation Laboratory	PC	4	0	0	4	2
13	ME8481	Dynamics Laboratory	PC	4	0	0	4	2
14	ME8591	Applied Hydraulics and Pneumatics	PC	3	3	0	0	3
15	MT8601	Design of Mechatronics System	PC	3	3	0	0	3
16	ME8593	Design of Machine Elements	PC	3	3	0	0	3

17	MT8602	Industrial Automation	PC	3	3	0	0	3
18	MT8611	Applied Hydraulics and Pneumatics Laboratory	PC	4	0	0	4	2
19	MT8612	Industrial Automation Laboratory	PC	4	0	0	4	2
20	ME8691	Computer Aided Design and Manufacturing	PC	3	3	0	0	3
21	MT8701	Robotics and Machine Vision System	PC	3	3	0	0	3
22	MT8791	Embedded System Design	PC	4	2	0	2	3
25	MT8711	Computer Aided Design and Manufacturing Laboratory	PC	4	0	0	4	2
26	MT8781	Robotics Laboratory	PC	4	0	0	4	2
27	MT8801	Automotive Electronics	PC	3	3	0	0	3

PROFESSIONAL ELECTIVES (PE)***SEMESTER VI, ELECTIVE I**

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	IT8071	Digital Signal Processing	PE	3	3	0	0	3
2.	MT8001	Object Oriented Programming in C++	PE	3	3	0	0	3
3.	ME8091	Automobile Engineering	PE	3	3	0	0	3
4.	GE8075	Intellectual Property Rights	PE	3	3	0	0	3
5.	GE8073	Fundamentals of Nano Science	PE	3	3	0	0	3

SEMESTER VII, ELECTIVE II

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	AN8091	Maintenance Engineering	PE	3	3	0	0	3
2.	ME8793	Process Planning and Cost Estimation	PE	3	3	0	0	3
3.	MG8491	Operations Research	PE	3	3	0	0	3
4.	MT8002	Advanced Manufacturing Technology	PE	3	3	0	0	3
5.	AE8751	Avionics	PE	3	3	0	0	3
6.	MF8071	Additive Manufacturing	PE	3	3	0	0	3
7.	GE8077	Total Quality Management	PE	3	3	0	0	3

SEMESTER VII, ELECTIVE III

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	EC8093	Digital Image Processing	PE	3	3	0	0	3
2.	MT8003	Medical Mechatronics	PE	3	3	0	0	3
3.	MT8071	Virtual Instrumentation	PE	3	3	0	0	3
4.	IT8075	Software Project Management	PE	3	3	0	0	3
5.	GE8072	Foundation skills in Integrated Product Development	PE	3	3	0	0	3
6.	GE8074	Human Rights	PE	3	3	0	0	3
7.	GE8071	Disaster Management	PE	3	3	0	0	3

SEMESTER VIII, ELECTIVE IV

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CS8691	Artificial Intelligence	PE	3	3	0	0	3
2.	MG8091	Entrepreneurship Development	PE	3	3	0	0	3
3.	RO8791	Modeling and Simulation	PE	3	3	0	0	3
4.	EE8091	Micro Electro Mechanical Systems	PE	3	3	0	0	3

