

**B.E.**  
**CIVIL ENGINEERING**

**ANNA UNIVERSITY, CHENNAI**  
**AFFILIATED INSTITUTIONS**  
**R - 2013**  
**B. E. CIVIL ENGINEERING**  
**I TO VIII SEMESTERS CURRICULUM & SYLLABUS**

**SEMESTER I**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	HS6151	Technical English - I	3	1	0	4
2.	MA6151	Mathematics – I	3	1	0	4
3.	PH6151	Engineering Physics – I	3	0	0	3
4.	CY6151	Engineering Chemistry – I	3	0	0	3
5.	GE6151	Computer Programming	3	0	0	3
6.	GE6152	Engineering Graphics	2	0	3	4
<b>PRACTICAL</b>						
7.	GE6161	Computer Practices Laboratory	0	0	3	2
8.	GE6162	Engineering Practices Laboratory	0	0	3	2
9.	GE6163	Physics and Chemistry Laboratory - I	0	0	2	1
<b>TOTAL</b>			<b>17</b>	<b>2</b>	<b>11</b>	<b>26</b>

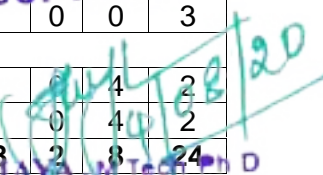
**SEMESTER II**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	HS6251	Technical English - II	3	1	0	4
2.	MA6251	Mathematics – II	3	1	0	4
3.	PH6251	Engineering Physics – II	3	0	0	3
4.	CY6251	Engineering Chemistry – II	3	0	0	3
5.	GE6252	Basic Electrical and Electronics Engineering	4	0	0	4
6.	GE6253	Engineering Mechanics	3	1	0	4
<b>PRACTICAL</b>						
7.	GE6261	Computer Aided Drafting and Modeling Laboratory	0	1	2	2
8.	GE6262	Physics and Chemistry Laboratory - II	0	0	2	1
<b>TOTAL</b>			<b>19</b>	<b>4</b>	<b>4</b>	<b>25</b>

**SEMESTER III**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MA6351	Transforms and Partial Differential Equations	3	1	0	4
2.	GE6351	Environmental Science and Engineering	3	0	0	3
3.	CE6301	Engineering Geology	3	0	0	3
4.	CE6302	Mechanics of Solids	3	1	0	4
5.	CE6303	Mechanics of Fluids	3	0	0	3
6.	CE6304	Surveying I	3	0	0	3
<b>PRACTICAL</b>						
7.	CE6311	Survey Practical I	0	0	4	2
8.	CE6312	Computer Aided Building Drawing	0	0	4	2
<b>TOTAL</b>			<b>18</b>	<b>2</b>	<b>8</b>	<b>24</b>

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### SEMESTER IV

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MA6459	Numerical Methods	3	1	0	4
2.	CE6401	Construction Materials	3	0	0	3
3.	CE6402	Strength of Materials	3	1	0	4
4.	CE6403	Applied Hydraulic Engineering	3	1	0	4
5.	CE6404	Surveying II	3	0	0	3
6.	CE6405	Soil Mechanics	3	0	0	3
<b>PRACTICAL</b>						
7.	CE6411	Strength of Materials Laboratory	0	0	3	2
8.	CE6412	Hydraulic Engineering Laboratory	0	0	3	2
9.	CE6413	Survey Practical II	0	0	4	2
<b>TOTAL</b>			<b>18</b>	<b>3</b>	<b>10</b>	<b>27</b>

### SEMESTER V


SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	CE6501	Structural Analysis I	3	1	0	4
2.	CE6502	Foundation Engineering	3	0	0	3
3.	CE6503	Environmental Engineering I	3	0	0	3
4.	CE6504	Highway Engineering	3	0	0	3
5.	CE6505	Design of Reinforced Concrete Elements	3	0	0	3
6.	CE6506	Construction Techniques, Equipment and Practice	3	0	0	3
<b>PRACTICAL</b>						
7.	GE6674	Communication and Soft skills- Laboratory Based	0	0	4	2
8.	CE6511	Soil Mechanics Laboratory	0	0	4	2
9.	CE6512	Survey Camp*	-	-	-	1
<b>TOTAL</b>			<b>18</b>	<b>1</b>	<b>8</b>	<b>24</b>

\* Survey Camp to be conducted for a period of 2 weeks during 4<sup>th</sup> Semester Summer Vacation

### SEMESTER VI

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	CE6601	Design of Reinforced Concrete & Brick Masonry Structures	3	0	0	3
2.	CE6602	Structural Analysis II	3	1	0	4
3.	CE6603	Design of Steel Structures	3	1	0	4
4.	CE6604	Railways, Airports and Harbour Engineering	3	0	0	3
5.	CE6605	Environmental Engineering II	3	0	0	3
6.		Elective I	3	0	0	3
<b>PRACTICAL</b>						
7.	CE6611	Environmental Engineering Laboratory	0	0	3	2
8.	CE6612	Concrete and Highway Engineering Laboratory	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>2</b>	<b>6</b>	<b>24</b>

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### SEMESTER VII

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	CE6701	Structural Dynamics and Earthquake Engineering	3	0	0	3
2.	CE6702	Prestressed Concrete Structures	3	0	0	3
3.	CE6703	Water Resources and Irrigation Engineering	3	0	0	3
4.	CE6704	Estimation and Quantity Surveying	3	0	0	3
5.		Elective II	3	0	0	3
6.		Elective III	3	0	0	3
<b>PRACTICAL</b>						
7.	CE6711	Computer Aided Design and Drafting Laboratory	0	0	4	2
8.	CE6712	Design Project	0	0	4	2
<b>TOTAL</b>			<b>18</b>	<b>0</b>	<b>8</b>	<b>22</b>

### SEMESTER VIII

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MG6851	Principles of Management	3	0	0	3
2.		Elective IV	3	0	0	3
3.		Elective V	3	0	0	3
<b>PRACTICAL</b>						
4.	CE6811	Project Work	0	0	12	6
<b>TOTAL</b>			<b>9</b>	<b>0</b>	<b>12</b>	<b>15</b>

**TOTAL NO OF CREDITS: 187**

### LIST OF ELECTIVES

#### ELECTIVE I

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	CE6001	Hydrology	3	0	0	3
2.	CE6002	Concrete Technology	3	0	0	3
3.	CE6003	Remote Sensing Techniques and GIS	3	0	0	3
4.	CE6004	Architecture	3	0	0	3
5.	GE6075	Professional Ethics in Engineering	3	0	0	3
6.	CE6005	Construction Planning and Scheduling	3	0	0	3

#### ELECTIVE II

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
7.	CE6006	Traffic Engineering and Management	3	0	0	3
8.	CE6007	Housing Planning and Management	3	0	0	3
9.	CE6008	Groundwater Engineering	3	0	0	3
10.	CE6009	Water Resources Systems Analysis	3	0	0	3
11.	CE6010	Pavement Engineering	3	0	0	3

**ELECTIVE III**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
12.	EN6801	Environmental Impact Assessment	3	0	0	3
13.	CE6023	Industrial Waste Management	3	0	0	3
14.	CE6011	Air Pollution Management	3	0	0	3
15.	EN6501	Municipal Solid Waste Management	3	0	0	3
16.	CE6012	Ground Improvement Techniques	3	0	0	3
17.	GE6083	Disaster Management	3	0	0	3


**ELECTIVE IV**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
18.	CE6013	Bridge Structures	3	0	0	3
19.	CE6014	Storage Structures	3	0	0	3
20.	CE6015	Tall Buildings	3	0	0	3
21.	CE6016	Prefabricated Structures	3	0	0	3
22.	CE6017	Experimental Analysis of Stress	3	0	0	3
23.	GE6757	Total Quality Management	3	0	0	3
24.	GE6084	Human Rights	3	0	0	3

**ELECTIVE V**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
25.	CE6018	Computer Aided Design of Structures	3	0	0	3
26.	CE6019	Industrial Structures	3	0	0	3
27.	CE6020	Finite Element Techniques	3	0	0	3
28.	CE6021	Repair and Rehabilitation of Structures	3	0	0	3
29.	CE6022	Earthquake Geotechnical Engineering	3	0	0	3

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**REGULATIONS – 2017**  
**CHOICE BASED CREDIT SYSTEM**  
**I TO VIII SEMESTERS CURRICULA & SYLLABI**  
**SEMESTER I**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
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
<b>PRACTICALS</b>								
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
<b>TOTAL</b>				<b>31</b>	<b>19</b>	<b>0</b>	<b>12</b>	<b>25</b>

**SEMESTER II**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	HS8251	Technical English	HS	4	4	0	0	4
2.	MA8251	Engineering Mathematics – II	BS	4	4	0	0	4
3.	PH8201	Physics For Civil Engineering	BS	3	3	0	0	3
4.	BE8251	Basic Electrical and Electronics 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
<b>PRACTICALS</b>								
7.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
8.	CE8211	Computer Aided Building Drawing	PC	4	0	0	4	2
<b>TOTAL</b>				<b>30</b>	<b>20</b>	<b>2</b>	<b>8</b>	<b>25</b>

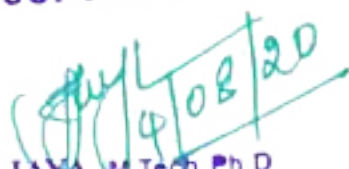
**SEMESTER III**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	MA8353	Transforms and Partial Differential Equations	BS	4	4	0	0	4
2.	CE8301	Strength of Materials I	PC	3	3	0	0	3
3.	CE8302	Fluid Mechanics	PC	3	3	0	0	3
4.	CE8351	Surveying	PC	3	3	0	0	3
5.	CE8391	Construction Materials	PC	3	3	0	0	3
6.	CE8392	Engineering Geology	ES	3	3	0	0	3
<b>PRACTICALS</b>								
7.	CE8311	Construction Materials Laboratory	PC	4	0	0	4	2
8.	CE8361	Surveying Laboratory	PC	4	0	0	4	2
9.	HS8381	Interpersonal Skills / Listening and Speaking	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>29</b>	<b>19</b>	<b>0</b>	<b>10</b>	<b>24</b>

**SEMESTER IV**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	MA8491	Numerical Methods	BS	4	4	0	0	4
2.	CE8401	Construction Techniques and Practices	PC	3	3	0	0	3
3.	CE8402	Strength of Materials II	PC	3	3	0	0	3
4.	CE8403	Applied Hydraulic Engineering	PC	3	3	0	0	3
5.	CE8404	Concrete Technology	PC	3	3	0	0	3
6.	CE8491	Soil Mechanics	PC	3	3	0	0	3
<b>PRACTICALS</b>								
7.	CE8481	Strength of Materials Laboratory	PC	4	0	0	4	2
8.	CE8461	Hydraulic Engineering Laboratory	PC	4	0	0	4	2
9.	HS8461	Advanced Reading and Writing	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>29</b>	<b>19</b>	<b>0</b>	<b>10</b>	<b>24</b>

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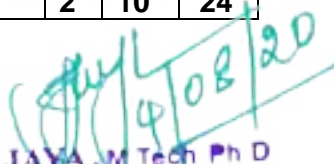
**SEMESTER V**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	CE8501	Design of Reinforced Cement Concrete Elements	PC	5	3	2	0	4
2.	CE8502	Structural Analysis I	PC	3	3	0	0	3
3.	EN8491	Water Supply Engineering	PC	3	3	0	0	3
4.	CE8591	Foundation Engineering	PC	3	3	0	0	3
5.		Professional Elective I	PE	3	3	0	0	3
6.		Open Elective I*	OE	3	3	0	0	3
<b>PRACTICALS</b>								
7.	CE8511	Soil Mechanics Laboratory	PC	4	0	0	4	2
8.	CE8512	Water and Waste Water Analysis Laboratory	PC	4	0	0	4	2
9.	CE8513	Survey Camp (2 weeks –During IV Semester)	EEC	0	0	0	0	2
<b>TOTAL</b>				<b>28</b>	<b>18</b>	<b>2</b>	<b>8</b>	<b>25</b>

**SEMESTER VI**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	CE8601	Design of Steel Structural Elements	PC	5	3	2	0	4
2.	CE8602	Structural Analysis II	PC	3	3	0	0	3
3.	CE8603	Irrigation Engineering	PC	3	3	0	0	3
4.	CE8604	Highway Engineering	PC	3	3	0	0	3
5.	EN8592	Wastewater Engineering	PC	3	3	0	0	3
6.		Professional Elective II	PE	3	3	0	0	3
<b>PRACTICALS</b>								
7.	CE8611	Highway Engineering Laboratory	PC	4	0	0	4	2
8.	CE8612	Irrigation and Environmental Engineering Drawing	PC	4	0	0	4	2
9.	HS8581	Professional Communication	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>30</b>	<b>18</b>	<b>2</b>	<b>10</b>	<b>24</b>

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### SEMESTER VII

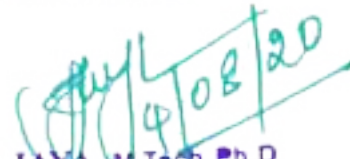
S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	CE8701	Estimation, Costing and Valuation Engineering	PC	3	3	0	0	3
2.	CE8702	Railways, Airports, Docks and Harbour Engineering	PC	3	3	0	0	3
3.	CE8703	Structural Design and Drawing	PC	5	3	0	2	4
4.		Professional Elective III	PE	3	3	0	0	3
5.		Open Elective II*	OE	3	3	0	0	3
<b>PRACTICALS</b>								
6.	CE8711	Creative and Innovative Project (Activity Based - Subject Related)	EEC	4	0	0	4	2
7.	CE8712	Industrial Training (4 weeks During VI Semester – Summer)	EEC	0	0	0	0	2
<b>TOTAL</b>				<b>21</b>	<b>15</b>	<b>0</b>	<b>6</b>	<b>20</b>

### SEMESTER VIII

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.		Professional Elective IV	PE	3	3	0	0	3
2.		Professional Elective V	PE	3	3	0	0	3
<b>PRACTICALS</b>								
3.	CE8811	Project Work	EEC	20	0	0	20	10
<b>TOTAL</b>				<b>26</b>	<b>6</b>	<b>0</b>	<b>20</b>	<b>16</b>

**TOTAL NO. OF CREDITS: 183**

\*Course from the curriculum of other UG Programmes.

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### HUMANITIES AND SOCIAL SCIENCES (HS)

S.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

### BASIC SCIENCES (BS)

S.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.	PH8201	Physics for Civil Engineering	BS	3	3	0	0	3
7.	MA8353	Transforms and Partial Differential Equations	BS	4	4	0	0	4
8.	MA8491	Numerical Methods	BS	4	4	0	0	4

### ENGINEERING SCIENCES (ES)

S.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.	BE8251	Basic Electrical and Electronics 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.	CE8392	Engineering Geology	ES	3	3	0	0	3

### PROFESSIONAL CORE (PC)

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CE8211	Computer Aided Building Drawing	PC	4	0	0	4	2
2.	CE8391	Construction Materials	PC	3	3	0	0	3
3.	CE8301	Strength of Materials I	PC	3	3	0	0	3
4.	CE8302	Fluid Mechanics	PC	3	3	0	0	3
5.	CE8351	Surveying	PC	3	3	0	0	3

6.	CE8481	Strength of Materials Laboratory	PC	4	0	0	4	2
7.	CE8361	Surveying Laboratory	PC	4	0	0	4	2
8.	CE8311	Construction Materials Laboratory	PC	4	0	0	4	2
9.	CE8401	Construction Techniques and Practices	PC	3	3	0	0	3
10.	CE8402	Strength of Materials II	PC	3	3	0	0	3
11.	CE8403	Applied Hydraulic Engineering	PC	3	3	0	0	3
12.	CE8404	Concrete Technology	PC	3	3	0	0	3
13.	CE8491	Soil Mechanics	PC	3	3	0	0	3
14.	CE8461	Hydraulic Engineering Laboratory	PC	4	0	0	4	2
15.	CE8501	Design of Reinforced Cement Concrete Elements	PC	5	3	2	0	4
16.	CE8502	Structural Analysis I	PC	3	3	0	0	3
17.	CE8511	Soil Mechanics Laboratory	PC	4	0	0	4	2
18.	CE8512	Water and Waste Water Analysis Laboratory	PC	4	0	0	4	2
19.	CE8591	Foundation Engineering	PC	3	3	0	0	3
20.	CE8601	Design of Steel Structural Elements	PC	5	3	2	0	4
21.	CE8602	Structural Analysis II	PC	3	3	0	0	3
22.	CE8603	Irrigation Engineering	PC	3	3	0	0	3
23.	CE8604	Highway Engineering	PC	3	3	0	0	3
24.	CE8611	Highway Engineering Laboratory	PC	4	0	0	4	2
25.	CE8612	Irrigation and Environmental Engineering Drawing	PC	4	0	0	4	2
26.	EN8592	Wastewater Engineering	PC	3	3	0	0	3
27.	EN8491	Water Supply Engineering	PC	3	3	0	0	3
28.	CE8701	Estimation, Costing and Valuation Engineering	PC	3	3	0	0	3
29.	CE8702	Railways, Airports, Docks and Harbour Engineering	PC	3	3	0	0	3
30.	CE8703	Structural Design and Drawing	PC	5	3	0	2	4

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**EMPLOYABILITY ENHANCEMENT COURSES (EEC)**

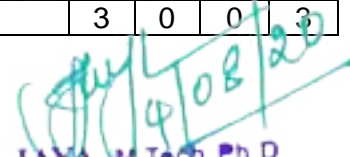
S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	HS8381	Interpersonal Skills / Listening and Speaking	EEC	2	0	0	2	1
2.	HS8461	Advanced Reading and Writing	EEC	2	0	0	2	1
3.	CE8513	Survey Camp (2 weeks – During IV Semester)	EEC	0	0	0	0	2
4.	HS8581	Professional Communication	EEC	2	0	0	2	1
5.	CE8711	Creative and Innovative Project (Activity Based - Subject Related)	EEC	4	0	0	4	2
6.	CE8712	Industrial Training (4 weeks During VI Semester – Summer)	EEC	0	0	0	0	2
7.	CE8811	Project Work	EEC	20	0	0	20	10

**PROFESSIONAL ELECTIVE  
SEMESTER V  
ELECTIVE - I**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	GI8012	Digital Cadastre	PE	3	3	0	0	3
2.	GI8013	Advanced Surveying	PE	3	3	0	0	3
3.	GI8014	Geographic Information System	PE	3	3	0	0	3
4.	GI8015	Geoinformatics Applications for Civil Engineers	PE	3	3	0	0	3
5.	GI8491	Total Station and GPS Surveying	PE	3	3	0	0	3
6.	GE8071	Disaster Management	PE	3	3	0	0	3
7.	GE8074	Human Rights	PE	3	3	0	0	3

**SEMESTER VI  
ELECTIVE - II**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CE8001	Ground Improvement Techniques	PE	3	3	0	0	3
2.	CE8002	Introduction to Soil Dynamics and Machine Foundations	PE	3	3	0	0	3
3.	CE8003	Rock Engineering	PE	3	3	0	0	3
4.	CE8004	Urban Planning and Development	PE	3	3	0	0	3
5.	CE8005	Air Pollution and Control Engineering	PE	3	3	0	0	3
6.	GE8075	Intellectual Property Rights	PE	3	3	0	0	3

  
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**SEMESTER VII  
ELECTIVE – III**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CE8006	Pavement Engineering	PE	3	3	0	0	3
2.	CE8007	Traffic Engineering and Management	PE	3	3	0	0	3
3.	CE8008	Transport and Environment	PE	3	3	0	0	3
4.	CE8009	Industrial Structures	PE	3	3	0	0	3
5.	CE8010	Environmental and Social Impact Assessment	PE	3	3	0	0	3
6.	CE8011	Design of Prestressed Concrete Structures	PE	3	3	0	0	3
7.	CE8012	Construction Planning and Scheduling	PE	3	3	0	0	3
8.	EN8591	Municipal Solid Waste Management	PE	3	3	0	0	3
9.	GE8077	Total Quality Management	PE	3	3	0	0	3
10.	GE8072	Foundation Skills In Integrated Product Development	PE	3	3	0	0	3

**SEMESTER VIII  
ELECTIVE – IV**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CE8013	Coastal Engineering	PE	3	3	0	0	3
2.	CE8014	Participatory Water Resources Management	PE	3	3	0	0	3
3.	CE8015	Integrated Water Resources Management	PE	3	3	0	0	3
4.	CE8016	Groundwater Engineering	PE	3	3	0	0	3
5.	CE8017	Water Resources Systems Engineering	PE	3	3	0	0	3
6.	CE8018	Geo-Environmental Engineering	PE	3	3	0	0	3
7.	CE8091	Hydrology and Water Resources Engineering	PE	3	3	0	0	3
8.	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3


**SEMESTER VIII  
ELECTIVE – V**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CE8019	Computer Aided Design of Structures	PE	3	3	0	0	3
2.	CE8020	Maintenance, Repair and Rehabilitation of Structures	PE	3	3	0	0	3
3.	CE8021	Structural Dynamics and Earthquake Engineering	PE	3	3	0	0	3
4.	CE8022	Prefabricated Structures	PE	3	3	0	0	3
5.	CE8023	Bridge Engineering	PE	3	3	0	0	3
6.	GE8073	Fundamentals of Nano Science	PE	3	3	0	0	3

S.No	Subject Area	Credits per Semester								Credits Total
		I	II	III	IV	V	VI	VII	VIII	
1	HS	4	7							11
2	BS	12	7	4	4					27
3	ES	9	9	3						21
4	PC		2	16	19	17	20	10		84
5	PE					3	3	3	6	15
6	OE					3		3		6
7	EEC			1	1	2	1	4	10	19
	<b>Total</b>	<b>25</b>	<b>25</b>	<b>24</b>	<b>24</b>	<b>25</b>	<b>24</b>	<b>20</b>	<b>16</b>	<b>183</b>
8	Non-Credit/Mandatory									

**SUMMARY**

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B.E.  
COMPUTER SCIENCE AND  
ENGINEERING

**ANNA UNIVERSITY, CHENNAI**  
**AFFILIATED INSTITUTIONS**  
**R-2013**  
**B.E. COMPUTER SCIENCE AND ENGINEERING**  
**I TO VIII SEMESTER CURRICULUM AND SYLLABUS**

**SEMESTER I**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	HS6151	<u>Technical English – I</u>	3	1	0	4
2.	MA6151	<u>Mathematics – I</u>	3	1	0	4
3.	PH6151	<u>Engineering Physics – I</u>	3	0	0	3
4.	CY6151	<u>Engineering Chemistry – I</u>	3	0	0	3
5.	GE6151	<u>Computer Programming</u>	3	0	0	3
6.	GE6152	<u>Engineering Graphics</u>	2	0	3	4
<b>PRACTICALS</b>						
7.	GE6161	<u>Computer Practices Laboratory</u>	0	0	3	2
8.	GE6162	<u>Engineering Practices Laboratory</u>	0	0	3	2
9.	GE6163	<u>Physics and Chemistry Laboratory - I</u>	0	0	2	1
<b>TOTAL</b>			<b>17</b>	<b>2</b>	<b>11</b>	<b>26</b>

**SEMESTER II**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	HS6251	<u>Technical English – II</u>	3	1	0	4
2.	MA6251	<u>Mathematics – II</u>	3	1	0	4
3.	PH6251	<u>Engineering Physics – II</u>	3	0	0	3
4.	CY6251	<u>Engineering Chemistry – II</u>	3	0	0	3
5.	CS6201	<u>Digital Principles and System Design</u>	3	0	0	3
6.	CS6202	<u>Programming and Data Structures I</u>	3	0	0	3
<b>PRACTICALS</b>						
7.	GE6262	<u>Physics and Chemistry Laboratory - II</u>	0	0	2	1
8.	CS6211	<u>Digital Laboratory</u>	0	0	3	2
9.	CS6212	<u>Programming and Data Structures Laboratory I</u>	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>2</b>	<b>8</b>	<b>25</b>

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**Kinathukadavu, Coimbatore - 642 109**


### SEMESTER III

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MA6351	<u>Transforms and Partial Differential Equations</u>	3	1	0	4
2.	CS6301	<u>Programming and Data Structure II</u>	3	0	0	3
3.	CS6302	<u>Database Management Systems</u>	3	0	0	3
4.	CS6303	<u>Computer Architecture</u>	3	0	0	3
5.	CS6304	<u>Analog and Digital Communication</u>	3	0	0	3
6.	GE6351	<u>Environmental Science and Engineering</u>	3	0	0	3
<b>PRACTICAL</b>						
7.	CS6311	<u>Programming and Data Structure Laboratory II</u>	0	0	3	2
8.	CS6312	<u>Database Management Systems Laboratory</u>	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>1</b>	<b>6</b>	<b>23</b>

### SEMESTER IV

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MA6453	<u>Probability and Queueing Theory</u>	3	1	0	4
2.	CS6551	<u>Computer Networks</u>	3	0	0	3
3.	CS6401	<u>Operating Systems</u>	3	0	0	3
4.	CS6402	<u>Design and Analysis of Algorithms</u>	3	0	0	3
5.	EC6504	<u>Microprocessor and Microcontroller</u>	3	0	0	3
6.	CS6403	<u>Software Engineering</u>	3	0	0	3
<b>PRACTICAL</b>						
7.	CS6411	<u>Networks Laboratory</u>	0	0	3	2
8.	CS6412	<u>Microprocessor and Microcontroller Laboratory</u>	0	0	3	2
9.	CS6413	<u>Operating Systems Laboratory</u>	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>1</b>	<b>9</b>	<b>25</b>

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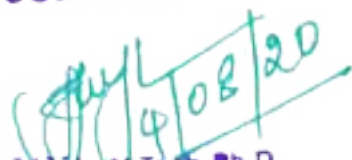
**SEMESTER V**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MA6566	<u>Discrete Mathematics</u>	3	1	0	4
2.	CS6501	<u>Internet Programming</u>	3	1	0	4
3.	CS6502	<u>Object Oriented Analysis and Design</u>	3	0	0	3
4.	CS6503	<u>Theory of Computation</u>	3	0	0	3
5.	CS6504	<u>Computer Graphics</u>	3	0	0	3
<b>PRACTICAL</b>						
6.	CS6511	<u>Case Tools Laboratory</u>	0	0	3	2
7.	CS6512	<u>Internet Programming Laboratory</u>	0	0	3	2
8.	CS6513	<u>Computer Graphics Laboratory</u>	0	0	3	2
<b>TOTAL</b>			<b>15</b>	<b>2</b>	<b>9</b>	<b>23</b>

**SEMESTER VI**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	CS6601	<u>Distributed Systems</u>	3	0	0	3
2.	IT6601	<u>Mobile Computing</u>	3	0	0	3
3.	CS6660	<u>Compiler Design</u>	3	0	0	3
4.	IT6502	<u>Digital Signal Processing</u>	3	1	0	4
5.	CS6659	<u>Artificial Intelligence</u>	3	0	0	3
6.		Elective I	3	0	0	3
<b>PRACTICAL</b>						
7.	CS6611	<u>Mobile Application Development Laboratory</u>	0	0	3	2
8.	CS6612	<u>Compiler Laboratory</u>	0	0	3	2
9.	GE6674	<u>Communication and Soft Skills - Laboratory Based</u>	0	0	4	2
<b>TOTAL</b>			<b>18</b>	<b>1</b>	<b>10</b>	<b>25</b>

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### SEMESTER VII

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	CS6701	<u>Cryptography and Network Security</u>	3	0	0	3
2.	CS6702	<u>Graph Theory and Applications</u>	3	0	0	3
3.	CS6703	<u>Grid and Cloud Computing</u>	3	0	0	3
4.	CS6704	<u>Resource Management Techniques</u>	3	0	0	3
5.		Elective II	3	0	0	3
6.		Elective III	3	0	0	3
<b>PRACTICAL</b>						
7.	CS6711	<u>Security Laboratory</u>	0	0	3	2
8.	CS6712	<u>Grid and Cloud Computing Laboratory</u>	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>0</b>	<b>6</b>	<b>22</b>

### SEMESTER VIII

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	CS6801	<u>Multi – Core Architectures and Programming</u>	3	0	0	3
2.		Elective IV	3	0	0	3
3.		Elective V	3	0	0	3
<b>PRACTICAL</b>						
4.	CS6811	<u>Project Work</u>	0	0	12	6
<b>TOTAL</b>			<b>9</b>	<b>0</b>	<b>12</b>	<b>15</b>

**TOTAL NO. OF CREDITS: 184**

### LIST OF ELECTIVES

#### SEMESTER VI – Elective I

S.NO.	CODE NO.	COURSE TITLE	L	T	P	C
1.	CS6001	<u>C# and .Net programming</u>	3	0	0	3
2.	GE6757	<u>Total Quality Management</u>	3	0	0	3
3.	IT6702	<u>Data Warehousing and Data Mining</u>	3	0	0	3
4.	CS6002	<u>Network Analysis and Management</u>	3	0	0	3
5.	IT6004	<u>Software Testing</u>	3	0	0	3
6.	GE6084	Human Rights	3	0	0	3

**SEMESTER VII – Elective II**

S.NO.	CODE NO.	COURSE TITLE	L	T	P	C
7.	CS6003	<u>Ad hoc and Sensor Networks</u>	3	0	0	3
8.	CS6004	<u>Cyber Forensics</u>	3	0	0	3
9.	CS6005	<u>Advanced Database Systems</u>	3	0	0	3
10.	BM6005	<u>Bio Informatics</u>	3	0	0	3
11.	IT6801	<u>Service Oriented Architecture</u>	3	0	0	3

**SEMESTER VII – Elective III**

S.NO	CODE NO.	COURSE TITLE	L	T	P	C
12.	IT6005	<u>Digital Image Processing</u>	3	0	0	3
13.	EC6703	<u>Embedded and Real Time Systems</u>	3	0	0	3
14.	CS6006	<u>Game Programming</u>	3	0	0	3
15.	CS6007	<u>Information Retrieval</u>	3	0	0	3
16.	IT6006	<u>Data Analytics</u>	3	0	0	3

**SEMESTER VIII – Elective IV**

S.NO.	CODE NO.	COURSE TITLE	L	T	P	C
17.	CS6008	<u>Human Computer Interaction</u>	3	0	0	3
18.	CS6009	<u>Nano Computing</u>	3	0	0	3
19.	IT6011	<u>Knowledge Management</u>	3	0	0	3
20.	CS6010	<u>Social Network Analysis</u>	3	0	0	3
21.	CS6013	Foundation Skills in Integrated Product Development	3	0	0	3

**SEMESTER VIII – Elective V**

S.NO.	CODE NO.	COURSE TITLE	L	T	P	C
22.	MG6088	<u>Software Project Management</u>	3	0	0	3
23.	GE6075	<u>Professional Ethics in Engineering</u>	3	0	0	3
24.	CS6011	<u>Natural Language Processing</u>	3	0	0	3
25.	CS6012	<u>Soft Computing</u>	3	0	0	3
26.	GE6083	Disaster Management	3	0	0	3

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**B.E. COMPUTER SCIENCE AND ENGINEERING**  
**REGULATIONS – 2017**  
**CHOICE BASED CREDIT SYSTEM**  
**I - VIII SEMESTERS CURRICULA AND SYLLABI**

**SEMESTER I**

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
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
<b>PRACTICALS</b>								
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
<b>TOTAL</b>				<b>31</b>	<b>19</b>	<b>0</b>	<b>12</b>	<b>25</b>

**SEMESTER II**

Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	HS8251	Technical English	HS	4	4	0	0	4
2.	MA8251	Engineering Mathematics - II	BS	4	4	0	0	4
3.	PH8252	Physics for Information Science	BS	3	3	0	0	3
4.	BE8255	Basic Electrical, Electronics and Measurement Engineering	ES	3	3	0	0	3
5.	GE8291	Environmental Science and Engineering	HS	3	3	0	0	3
6.	CS8251	Programming in C	PC	3	3	0	0	3
<b>PRACTICALS</b>								
7.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
8.	CS8261	C Programming Laboratory	PC	4	0	0	4	2
<b>TOTAL</b>				<b>28</b>	<b>20</b>	<b>0</b>	<b>8</b>	<b>25</b>

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**SEMESTER III**

SI.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	MA8351	Discrete Mathematics	BS	4	4	0	0	4
2.	CS8351	Digital Principles and System Design	ES	4	4	0	0	4
3.	CS8391	Data Structures	PC	3	3	0	0	3
4.	CS8392	Object Oriented Programming	PC	3	3	0	0	3
5.	EC8395	Communication Engineering	ES	3	3	0	0	3
<b>PRACTICALS</b>								
6.	CS8381	Data Structures Laboratory	PC	4	0	0	4	2
7.	CS8383	Object Oriented Programming Laboratory	PC	4	0	0	4	2
8.	CS8382	Digital Systems Laboratory	ES	4	0	0	4	2
9.	HS8381	Interpersonal Skills/Listening & Speaking	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>31</b>	<b>17</b>	<b>0</b>	<b>14</b>	<b>24</b>

**SEMESTER IV**

SI. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	MA8402	Probability and Queueing Theory	BS	4	4	0	0	4
2.	CS8491	Computer Architecture	PC	3	3	0	0	3
3.	CS8492	Database Management Systems	PC	3	3	0	0	3
4.	CS8451	Design and Analysis of Algorithms	PC	3	3	0	0	3
5.	CS8493	Operating Systems	PC	3	3	0	0	3
6.	CS8494	Software Engineering	PC	3	3	0	0	3
<b>PRACTICALS</b>								
7.	CS8481	Database Management Systems Laboratory	PC	4	0	0	4	2
8.	CS8461	Operating Systems Laboratory	PC	4	0	0	4	2
9.	HS8461	Advanced Reading and Writing	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>29</b>	<b>19</b>	<b>0</b>	<b>10</b>	<b>24</b>

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**SEMESTER V**

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	MA8551	Algebra and Number Theory	BS	4	4	0	0	4
2.	CS8591	Computer Networks	PC	3	3	0	0	3
3.	EC8691	Microprocessors and Microcontrollers	PC	3	3	0	0	3
4.	CS8501	Theory of Computation	PC	3	3	0	0	3
5.	CS8592	Object Oriented Analysis and Design	PC	3	3	0	0	3
6.		Open Elective I	OE	3	3	0	0	3
<b>PRACTICALS</b>								
7.	EC8681	Microprocessors and Microcontrollers Laboratory	PC	4	0	0	4	2
8.	CS8582	Object Oriented Analysis and Design Laboratory	PC	4	0	0	4	2
9.	CS8581	Networks Laboratory	PC	4	0	0	4	2
<b>TOTAL</b>				<b>31</b>	<b>19</b>	<b>0</b>	<b>12</b>	<b>25</b>

**SEMESTER VI**

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	CS8651	Internet Programming	PC	3	3	0	0	3
2.	CS8691	Artificial Intelligence	PC	3	3	0	0	3
3.	CS8601	Mobile Computing	PC	3	3	0	0	3
4.	CS8602	Compiler Design	PC	5	3	0	2	4
5.	CS8603	Distributed Systems	PC	3	3	0	0	3
6.		Professional Elective I	PE	3	3	0	0	3
<b>PRACTICALS</b>								
7.	CS8661	Internet Programming Laboratory	PC	4	0	0	4	2
8.	CS8662	Mobile Application Development Laboratory	PC	4	0	0	4	2
9.	CS8611	Mini Project	EEC	2	0	0	2	1
10.	HS8581	Professional Communication	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>32</b>	<b>18</b>	<b>0</b>	<b>14</b>	<b>25</b>

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**SEMESTER VII**

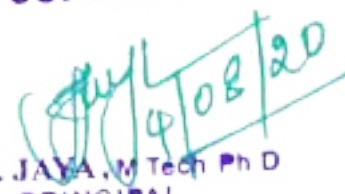
SI. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	MG8591	Principles of Management	HS	3	3	0	0	3
2.	CS8792	Cryptography and Network Security	PC	3	3	0	0	3
3.	CS8791	Cloud Computing	PC	3	3	0	0	3
4.		Open Elective II	OE	3	3	0	0	3
5.		Professional Elective II	PE	3	3	0	0	3
6.		Professional Elective III	PE	3	3	0	0	3
<b>PRACTICALS</b>								
7.	CS8711	Cloud Computing Laboratory	PC	4	0	0	4	2
8.	IT8761	Security Laboratory	PC	4	0	0	4	2
<b>TOTAL</b>				<b>26</b>	<b>18</b>	<b>0</b>	<b>8</b>	<b>22</b>

**SEMESTER VIII**

SI. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.		Professional Elective IV	PE	3	3	0	0	3
2.		Professional Elective V	PE	3	3	0	0	3
<b>PRACTICALS</b>								
3.	CS8811	Project Work	EEC	20	0	0	20	10
<b>TOTAL</b>				<b>26</b>	<b>6</b>	<b>0</b>	<b>20</b>	<b>16</b>

**TOTAL NO. OF CREDITS: 185**

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### HUMANITIES AND SOCIAL SCIENCES (HS)

SI. 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

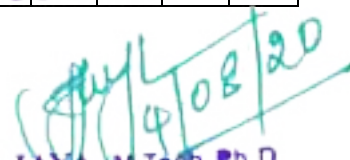
### BASIC SCIENCES (BS)

SI. 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.	PH8252	Physics for Information Science	BS	3	3	0	0	3
7.	MA8351	Discrete Mathematics	BS	4	4	0	0	4
8.	MA8402	Probability and Queueing Theory	BS	4	4	0	0	4
9.	MA8551	Algebra and Number Theory	BS	4	4	0	0	4

### ENGINEERING SCIENCES (ES)

SI. 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.	BE8255	Basic Electrical, Electronics and Measurement Engineering	ES	3	3	0	0	3
5.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
6.	CS8351	Digital Principles and System Design	ES	4	4	0	0	4
7.	EC8395	Communication Engineering	ES	3	3	0	0	3
8.	CS8382	Digital Systems Laboratory	ES	4	0	0	4	2

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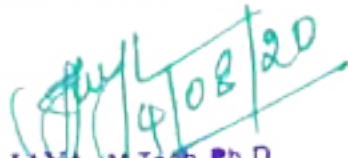


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**PROFESSIONAL CORE (PC)**

SI. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CS8251	Programming in C	PC	3	3	0	0	3
2.	CS8261	C Programming Laboratory	PC	4	0	0	4	2
3.	CS8391	Data Structures	PC	3	3	0	0	3
4.	CS8392	Object Oriented Programming	PC	3	3	0	0	3
5.	CS8381	Data Structures Laboratory	PC	4	0	0	4	2
6.	CS8383	Object Oriented Programming Laboratory	PC	4	0	0	4	2
7.	CS8491	Computer Architecture	PC	3	3	0	0	3
8.	CS8492	Database Management Systems	PC	3	3	0	0	3
9.	CS8451	Design and Analysis of Algorithms	PC	3	3	0	0	3
10.	CS8493	Operating Systems	PC	3	3	0	0	3
11.	CS8494	Software Engineering	PC	3	3	0	0	3
12.	CS8481	Database Management Systems Laboratory	PC	4	0	0	4	2
13.	CS8461	Operating Systems Laboratory	PC	4	0	0	4	2
14.	CS8591	Computer Networks	PC	3	3	0	0	3
15.	EC8691	Microprocessors and Microcontrollers	PC	3	3	0	0	3
16.	CS8501	Theory of Computation	PC	3	3	0	0	3
17.	CS8592	Object Oriented Analysis and Design	PC	3	3	0	0	3
18.	EC8681	Microprocessors and Microcontrollers Laboratory	PC	4	0	0	4	2
19.	CS8582	Object Oriented Analysis and Design Laboratory	PC	4	0	0	4	2
20.	CS8581	Networks Laboratory	PC	4	0	0	4	2
21.	CS8651	Internet Programming	PC	3	3	0	0	3
22.	CS8691	Artificial Intelligence	PC	3	3	0	0	3
23.	CS8601	Mobile Computing	PC	3	3	0	0	3
24.	CS8602	Compiler Design	PC	5	3	0	2	4
25.	CS8603	Distributed Systems	PC	3	3	0	0	3
26.	CS8661	Internet Programming Laboratory	PC	4	0	0	4	2
27.	CS8662	Mobile Application Development Laboratory	PC	4	0	0	4	2
28.	CS8792	Cryptography and Network Security	PC	3	3	0	0	3
29.	CS8791	Cloud Computing	PC	3	3	0	0	3
30.	CS8711	Cloud Computing Laboratory	PC	4	0	0	4	2
31.	IT8761	Security Laboratory	PC	4	0	0	4	2

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**PROFESSIONAL ELECTIVES (PE)**

**SEMESTER VI  
ELECTIVE - I**

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CS8075	Data Warehousing and Data Mining	PE	3	3	0	0	3
2.	IT8076	Software Testing	PE	3	3	0	0	3
3.	IT8072	Embedded Systems	PE	3	3	0	0	3
4.	CS8072	Agile Methodologies	PE	3	3	0	0	3
5.	CS8077	Graph Theory and Applications-	PE	3	3	0	0	3
6.	IT8071	Digital Signal Processing	PE	3	3	0	0	3
7.	GE8075	Intellectual Property Rights	PE	3	3	0	0	3

**SEMESTER VII  
ELECTIVE - II**

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CS8091	Big Data Analytics	PE	3	3	0	0	3
2.	CS8082	Machine Learning Techniques	PE	3	3	0	0	3
3.	CS8092	Computer Graphics and Multimedia	PE	3	3	0	0	3
4.	IT8075	Software Project Management	PE	3	3	0	0	3
5.	CS8081	Internet of Things	PE	3	3	0	0	3
6.	IT8074	Service Oriented Architecture	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.	CS8083	Multi-core Architectures and Programming	PE	3	3	0	0	3
2.	CS8079	Human Computer Interaction	PE	3	3	0	0	3
3.	CS8073	C# and .Net Programming	PE	3	3	0	0	3
4.	CS8088	Wireless Adhoc and Sensor Networks	PE	3	3	0	0	3
5.	CS8071	Advanced Topics on Databases	PE	3	3	0	0	3
6.	GE8072	Foundation Skills in Integrated Product Development	PE	3	3	0	0	3
7.	GE8074	Human Rights	PE	3	3	0	0	3
8.	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.	EC8093	Digital Image Processing	PE	3	3	0	0	3
2.	CS8085	Social Network Analysis	PE	3	3	0	0	3
3.	IT8073	Information Security	PE	3	3	0	0	3
4.	CS8087	Software Defined Networks	PE	3	3	0	0	3
5.	CS8074	Cyber Forensics	PE	3	3	0	0	3
6.	CS8086	Soft Computing	PE	3	3	0	0	3
7.	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3


**SEMESTER VIII  
ELECTIVE - V**

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CS8080	Information Retrieval Techniques	PE	3	3	0	0	3
2.	CS8078	Green Computing	PE	3	3	0	0	3
3.	CS8076	GPU Architecture and Programming	PE	3	3	0	0	3
4.	CS8084	Natural Language Processing	PE	3	3	0	0	3
5.	CS8001	Parallel Algorithms	PE	3	3	0	0	3
6.	IT8077	Speech Processing	PE	3	3	0	0	3
7.	GE8073	Fundamentals of Nano Science	PE	3	3	0	0	3

**EMPLOYABILITY ENHANCEMENT COURSES (EEC)**

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	HS8381	Interpersonal Skills/Listening & Speaking	EEC	2	0	0	2	1
2.	HS8461	Advanced Reading and Writing	EEC	2	0	0	2	1
3.	CS8611	Mini Project	EEC	2	0	0	2	1
4.	HS8581	Professional Communication	EEC	2	0	0	2	1
5.	CS8811	Project Work	EEC	20	0	0	20	10

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**B.E.**  
**ELECTRICAL AND**  
**ELECTRONICS**  
**ENGINEERING**

**ANNA UNIVERSITY, CHENNAI**

**AFFILIATED INSTITUTIONS**

**R - 2013**

**B. E. ELECTRICAL AND ELECTRONICS ENGINEERING**

**I TO VIII SEMESTERS CURRICULUM AND SYLLABUS**

**SEMESTER I**

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	HS6151	Technical English - I	3	1	0	4
2.	MA6151	Mathematics - I	3	1	0	4
3.	PH6151	Engineering Physics - I	3	0	0	3
4.	CY6151	Engineering Chemistry - I	3	0	0	3
5.	GE6151	Computer Programming	3	0	0	3
6.	GE6152	Engineering Graphics	2	0	3	4
<b>PRACTICAL</b>						
7.	GE6161	Computer Practices Laboratory	0	0	3	2
8.	GE6162	Engineering Practices Laboratory	0	0	3	2
9.	GE6163	Physics and Chemistry Laboratory - I	0	0	2	1
			<b>17</b>	<b>2</b>	<b>11</b>	<b>26</b>

**SEMESTER II**

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	HS6251	Technical English - II	3	1	0	4
2.	MA6251	Mathematics - II	3	1	0	4
3.	PH6251	Engineering Physics - II	3	0	0	3
4.	CY6251	Engineering Chemistry - II	3	0	0	3
5.	GE6251	Basic Civil and Mechanical Engineering	4	0	0	4
6.	EE6201	Circuit Theory	3	1	0	4
<b>PRACTICAL</b>						
7.	GE6262	Physics and Chemistry Laboratory - II	0	0	2	1
8.	GE6263	Computer Programming Laboratory	0	1	2	2
9.	EE6211	Electric Circuits Laboratory	0	0	3	2
		<b>TOTAL</b>	<b>19</b>	<b>4</b>	<b>7</b>	<b>27</b>

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**SEMESTER III**

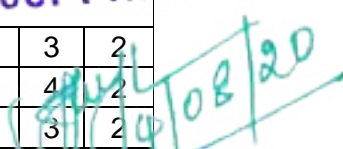
S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MA6351	Transforms and Partial Differential Equations	3	1	0	4
2.	EE6301	Digital Logic Circuits	3	1	0	4
3.	EE6302	Electromagnetic Theory	3	1	0	4
4.	GE6351	Environmental Science and Engineering	3	0	0	3
5.	EC6202	Electronic Devices and Circuits	3	1	0	4
6.	EE6303	Linear Integrated Circuits and Applications	3	0	0	3
<b>PRACTICAL</b>						
7.	EC6361	Electronics Laboratory	0	0	3	2
8.	EE6311	Linear and Digital Integrated Circuits Laboratory	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>4</b>	<b>6</b>	<b>26</b>

**SEMESTER IV**

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MA6459	Numerical Methods	3	1	0	4
2.	EE6401	Electrical Machines - I	3	1	0	4
3.	CS6456	Object Oriented Programming	3	0	0	3
4.	EE6402	Transmission and Distribution	3	0	0	3
5.	EE6403	Discrete Time Systems and Signal Processing	3	0	0	3
6.	EE6404	Measurements and Instrumentation	3	0	0	3
<b>PRACTICAL</b>						
7.	CS6461	Object Oriented Programming Laboratory	0	0	3	2
8.	EE6411	Electrical Machines Laboratory - I	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>2</b>	<b>6</b>	<b>24</b>

**SEMESTER V**

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	EE6501	Power System Analysis	3	0	0	3
2.	EE6502	Microprocessors and Microcontrollers	3	0	0	3
3.	ME6701	Power Plant Engineering	3	0	0	3
4.	EE6503	Power Electronics	3	0	0	3
5.	EE6504	Electrical Machines - II	3	1	0	4
6.	IC6501	Control Systems	3	1	0	4
<b>PRACTICAL</b>						
7.	EE6511	Control and Instrumentation Laboratory	0	0	3	2
8.	GE6674	Communication and Soft Skills- Laboratory Based	0	0	4	2
9.	EE6512	Electrical Machines Laboratory - II	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>2</b>	<b>10</b>	<b>26</b>

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**SEMESTER VI**

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	EC6651	Communication Engineering	3	0	0	3
2.	EE6601	Solid State Drives	3	0	0	3
3.	EE6602	Embedded Systems	3	0	0	3
4.	EE6603	Power System Operation and Control	3	0	0	3
5.	EE6604	Design of Electrical Machines	3	1	0	4
6.		Elective - I	3	0	0	3
<b>PRACTICAL</b>						
7.	EE6611	Power Electronics and Drives Laboratory	0	0	3	2
8.	EE6612	Microprocessors and Microcontrollers Laboratory	0	0	3	2
9.	EE6613	Presentation Skills and Technical Seminar	0	0	2	1
<b>TOTAL</b>			<b>18</b>	<b>1</b>	<b>8</b>	<b>24</b>

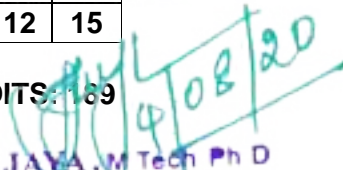
**SEMESTER VII**

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	EE6701	High Voltage Engineering	3	0	0	3
2.	EE6702	Protection and Switchgear	3	0	0	3
3.	EE6703	Special Electrical Machines	3	0	0	3
4.	MG6851	Principles of Management	3	0	0	3
5.		Elective – II	3	0	0	3
6.		Elective – III	3	0	0	3
<b>PRACTICAL</b>						
7.	EE6711	Power System Simulation Laboratory	0	0	3	2
8.	EE6712	Comprehension	0	0	2	1
<b>TOTAL</b>			<b>18</b>	<b>0</b>	<b>5</b>	<b>21</b>

**SEMESTER VIII**

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	EE6801	Electric Energy Generation, Utilization and Conservation	3	0	0	3
2.		Elective – IV	3	0	0	3
3.		Elective – V	3	0	0	3
<b>PRACTICAL</b>						
4.	EE6811	Project Work	0	0	12	6
<b>TOTAL</b>			<b>9</b>	<b>0</b>	<b>12</b>	<b>15</b>

TOTAL CREDITS: 189

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**ELECTIVE - I**

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	EE6001	Visual Languages and Applications	3	0	0	3
2.	IC6601	Advanced Control System	3	0	0	3
3.	EE6002	Power System Transients	3	0	0	3
4.	EE6003	Optimisation Techniques	3	0	0	3

**ELECTIVE - II**

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
5.	EI6703	Fibre Optics and Laser Instruments	3	0	0	3
6.	EI6704	Biomedical Instrumentation	3	0	0	3
7.	EE6004	Flexible AC Transmission Systems	3	0	0	3
8.	EE6005	Power Quality	3	0	0	3
9.	EE6006	Applied Soft Computing	3	0	0	3

**ELECTIVE - III**

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
10.	GE6081	Fundamentals of Nanoscience	3	0	0	3
11.	IC6002	System Identification and Adaptive Control	3	0	0	3
12.	EE6007	Micro Electro Mechanical Systems	3	0	0	3
13.	EE6008	Microcontroller Based System Design	3	0	0	3

**ELECTIVE - IV**

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
14.	EE6009	Power Electronics for Renewable Energy Systems	3	0	0	3
15.	EE6010	High Voltage Direct Current Transmission	3	0	0	3
16.	EE6011	Power System Dynamics	3	0	0	3
17.	IC6003	Principles of Robotics	3	0	0	3
18.	GE6083	Disaster Management	3	0	0	3

**ELECTIVE - V**

S.NO.	COURSE CODE	COURSE TITLE	L	T	P	C
19.	GE6075	Professional Ethics in Engineering	3	0	0	3
20.	GE6757	Total Quality Management	3	0	0	3
21.	EC6002	Advanced Digital Signal Processing	3	0	0	3
22.	EE6012	Computer Aided Design of Electrical Apparatus	3	0	0	3
23.	EC6601	VLSI Design	3	0	0	3
24.	GE6084	Human Rights	3	0	0	3
25.	MA6468	Probability and Statistics	3	1	0	4
26.	EI6001	Data Structures and Algorithms	3	0	0	3

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**B.E. ELECTRICAL AND ELECTRONICS ENGINEERING**  
**REGULATIONS – 2017**  
**CHOICE BASED CREDIT SYSTEM**  
**I TO VIII SEMESTERS CURRICULUM**

**SEMESTER I**

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
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
<b>PRACTICALS</b>								
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
<b>TOTAL</b>				<b>31</b>	<b>19</b>	<b>0</b>	<b>12</b>	<b>25</b>

**SEMESTER II**

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	HS8251	Technical English	HS	4	4	0	0	4
2.	MA8251	Engineering Mathematics - II	BS	4	4	0	0	4
3.	PH8253	Physics for Electronics Engineering	BS	3	3	0	0	3
4.	BE8252	Basic Civil and Mechanical Engineering	ES	4	4	0	0	4
5.	EE8251	Circuit Theory	PC	4	2	2	0	3
6.	GE8291	Environmental Science and Engineering	HS	3	3	0	0	3
<b>PRACTICALS</b>								
7.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
8.	EE8261	Electric Circuits Laboratory	PC	4	0	0	4	2
<b>TOTAL</b>				<b>30</b>	<b>20</b>	<b>2</b>	<b>8</b>	<b>25</b>

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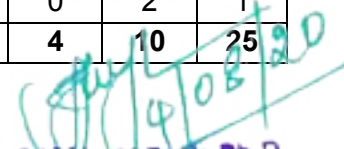
### SEMESTER III

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	MA8353	Transforms and Partial Differential Equations	BS	4	4	0	0	4
2.	EE8351	Digital Logic Circuits	PC	4	2	2	0	3
3.	EE8391	Electromagnetic Theory	PC	4	2	2	0	3
4.	EE8301	Electrical Machines - I	PC	4	2	2	0	3
5.	EC8353	Electron Devices and Circuits	ES	3	3	0	0	3
6.	ME8792	Power Plant Engineering	ES	3	3	0	0	3
<b>PRACTICALS</b>								
7.	EC8311	Electronics Laboratory	ES	4	0	0	4	2
8.	EE8311	Electrical Machines Laboratory - I	PC	4	0	0	4	2
<b>TOTAL</b>				<b>30</b>	<b>16</b>	<b>6</b>	<b>8</b>	<b>23</b>

### SEMESTER IV

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	MA8491	Numerical Methods	BS	4	4	0	0	4
2.	EE8401	Electrical Machines - II	PC	4	2	2	0	3
3.	EE8402	Transmission and Distribution	PC	3	3	0	0	3
4.	EE8403	Measurements and Instrumentation	PC	3	3	0	0	3
5.	EE8451	Linear Integrated Circuits and Applications	PC	3	3	0	0	3
6.	IC8451	Control Systems	PC	5	3	2	0	4
<b>PRACTICALS</b>								
7.	EE8411	Electrical Machines Laboratory - II	PC	4	0	0	4	2
8.	EE8461	Linear and Digital Integrated Circuits Laboratory	PC	4	0	0	4	2
9.	EE8412	Technical Seminar	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>32</b>	<b>18</b>	<b>4</b>	<b>10</b>	<b>25</b>

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**OPEN ELECTIVES (Offered by Other Branches)**

**V SEMESTER**  
**OPEN ELECTIVE I**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	OCY551	Advanced Engineering Chemistry	OE	3	3	0	0	3
2.	OCE551	Air Pollution and Control Engineering	OE	3	3	0	0	3
3.	OAT551	Automotive Systems	OE	3	3	0	0	3
4.	OIT551	Database Management Systems	OE	3	3	0	0	3
5.	OIT552	Cloud Computing	OE	3	3	0	0	3
6.	OMF551	Product Design and Development	OE	3	3	0	0	3
7.	OAN551	Sensors and Transducers	OE	3	3	0	0	3
8.	OME552	Vibration and Noise Control	OE	3	3	0	0	3
9.	OMD551	Basics of Biomedical Instrumentation	OE	3	3	0	0	3

**VII SEMESTER**  
**OPEN ELECTIVE II**

S.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	OBT751	Analytical Methods and Instrumentation	OE	3	3	0	0	3
2.	OME751	Design of Experiments	OE	3	3	0	0	3
3.	OCS752	Introduction to C Programming	OE	3	3	0	0	3
4.	OCH751	Process Modeling and Simulation	OE	3	3	0	0	3
5.	OEC753	Signals and Systems	OE	4	4	0	0	4
6.	OML751	Testing of Materials	OE	3	3	0	0	3

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**PROFESSIONAL ELECTIVE – I ( VI SEMESTER)**

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	IC8651	Advanced Control System	PE	4	2	2	0	3
2.	EE8001	Visual Languages and Applications	PE	3	3	0	0	3
3.	EE8002	Design of Electrical Apparatus	PE	3	3	0	0	3
4.	EE8003	Power Systems Stability	PE	3	3	0	0	3
5.	EE8004	Modern Power Converters	PE	3	3	0	0	3
6.	GE8075	Intellectual Property Rights	PE	3	3	0	0	3

**PROFESSIONAL ELECTIVE – II ( VI SEMESTER)**

1.	RO8591	Principles of Robotics	PE	3	3	0	0	3
2.	EE8005	Special Electrical Machines	PE	3	3	0	0	3
3.	EE8006	Power Quality	PE	3	3	0	0	3
4.	EE8007	EHVAC Transmission	PE	3	3	0	0	3
5.	EC8395	Communication Engineering	PE	3	3	0	0	3

**PROFESSIONAL ELECTIVE – III ( VII SEMESTER)**

1.	GE8071	Disaster Management	PE	3	3	0	0	3
2.	GE8074	Human Rights	PE	3	3	0	0	3
3.	MG8491	Operations Research	PE	3	3	0	0	3
4.	MA8391	Probability and Statistics	PE	4	4	0	0	4
5.	EI8075	Fibre Optics and Laser Instrumentation	PE	3	3	0	0	3

**PROFESSIONAL ELECTIVE – IV ( VII SEMESTER)**

1.	EE8008	System Identification and Adaptive Control	PE	3	3	0	0	3
2.	CS8491	Computer Architecture	PE	3	3	0	0	3
3.	EE8009	Control of Electrical Drives	PE	3	3	0	0	3
4.	EC8095	VLSI Design	PE	3	3	0	0	3
5.	EE8010	Power Systems Transients	PE	3	3	0	0	3
6.	GE8077	Total Quality Management	PE	3	3	0	0	3

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**ENGINEERING**

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**B.E. ELECTRONICS AND COMMUNICATION ENGINEERING**  
**I – VIII SEMESTERS CURRICULUM AND SYLLABUS**

**SEMESTER I**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	HS6151	<u>Technical English – I</u>	3	1	0	4
2.	MA6151	<u>Mathematics – I</u>	3	1	0	4
3.	PH6151	<u>Engineering Physics – I</u>	3	0	0	3
4.	CY6151	<u>Engineering Chemistry – I</u>	3	0	0	3
5.	GE6151	<u>Computer Programming</u>	3	0	0	3
6.	GE6152	<u>Engineering Graphics</u>	2	0	3	4
<b>PRACTICALS</b>						
7.	GE6161	<u>Computer Practices Laboratory</u>	0	0	3	2
8.	GE6162	<u>Engineering Practices Laboratory</u>	0	0	3	2
9.	GE6163	<u>Physics and Chemistry Laboratory - I</u>	0	0	2	1
<b>TOTAL</b>			<b>17</b>	<b>2</b>	<b>11</b>	<b>26</b>

**SEMESTER II**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	HS6251	<u>Technical English – II</u>	3	1	0	4
2.	MA6251	<u>Mathematics – II</u>	3	1	0	4
3.	PH6251	<u>Engineering Physics – II</u>	3	0	0	3
4.	CY6251	<u>Engineering Chemistry – II</u>	3	0	0	3
5.	EC6201	<u>Electronic Devices</u>	3	0	0	3
6.	EE6201	<u>Circuit Theory</u>	3	1	0	4
<b>PRACTICALS</b>						
7.	GE6262	<u>Physics and Chemistry Laboratory - II</u>	0	0	2	1
8.	EC6211	<u>Circuits and Devices Laboratory</u>	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>3</b>	<b>5</b>	<b>24</b>

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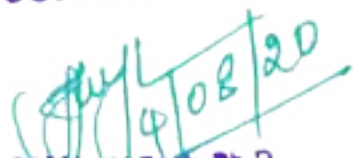
### SEMESTER III

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MA6351	<u>Transforms and Partial Differential Equations</u>	3	1	0	4
2.	EE6352	<u>Electrical Engineering and Instrumentation</u>	3	1	0	4
3.	EC6301	<u>Object Oriented Programming and Data Structures</u>	3	0	0	3
4.	EC6302	<u>Digital Electronics</u>	3	0	0	3
5.	EC6303	<u>Signals and Systems</u>	3	1	0	4
6.	EC6304	<u>Electronic Circuits- I</u>	3	1	0	4
<b>PRACTICAL</b>						
7.	EC6311	<u>Analog and Digital Circuits Laboratory</u>	0	0	3	2
8.	EC6312	<u>OOPS and Data Structures Laboratory</u>	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>4</b>	<b>6</b>	<b>26</b>

### SEMESTER IV

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MA6451	Probability and Random Processes	3	1	0	4
2.	EC6401	<u>Electronic Circuits II</u>	3	0	0	3
3.	EC6402	<u>Communication Theory</u>	3	0	0	3
4.	EC6403	Electromagnetic Fields	3	1	0	4
5.	EC6404	<u>Linear Integrated Circuits</u>	3	0	0	3
6.	EC6405	<u>Control System Engineering</u>	3	0	0	3
<b>PRACTICAL</b>						
7.	EC6411	<u>Circuit and Simulation Integrated Laboratory</u>	0	0	3	2
8.	EC6412	<u>Linear Integrated Circuit Laboratory</u>	0	0	3	2
9.	EE6461	<u>Electrical Engineering and Control System Laboratory</u>	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>2</b>	<b>9</b>	<b>26</b>

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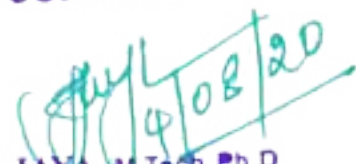
### SEMESTER V

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	EC6501	<u>Digital Communication</u>	3	0	0	3
2.	EC6502	<u>Principles of Digital Signal Processing</u>	3	1	0	4
3.	EC6503	<u>Transmission Lines and Wave Guides</u>	3	1	0	4
4.	GE6351	<u>Environmental Science and Engineering</u>	3	0	0	3
5.	EC6504	<u>Microprocessor and Microcontroller</u>	3	0	0	3
<b>PRACTICAL</b>						
6.	EC6511	<u>Digital Signal Processing Laboratory</u>	0	0	3	2
7.	EC6512	<u>Communication System Laboratory</u>	0	0	3	2
8.	EC6513	<u>Microprocessor and Microcontroller Laboratory</u>	0	0	3	2
		<b>TOTAL</b>	<b>15</b>	<b>2</b>	<b>9</b>	<b>23</b>

### SEMESTER VI

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MG6851	<u>Principles of Management</u>	3	0	0	3
2.	CS6303	<u>Computer Architecture</u>	3	0	0	3
3.	CS6551	<u>Computer Networks</u>	3	0	0	3
4.	EC6601	<u>VLSI Design</u>	3	0	0	3
5.	EC6602	<u>Antenna and Wave propagation</u>	3	0	0	3
6.		Elective I	3	0	0	3
<b>PRACTICAL</b>						
7.	EC6611	<u>Computer Networks Laboratory</u>	0	0	3	2
8.	EC6612	<u>VLSI Design Laboratory</u>	0	0	3	2
9.	GE6674	<u>Communication and Soft Skills - Laboratory Based</u>	0	0	4	2
		<b>TOTAL</b>	<b>18</b>	<b>0</b>	<b>10</b>	<b>24</b>

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### SEMESTER VII

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	EC6701	<u>RF and Microwave Engineering</u>	3	0	0	3
2.	EC6702	<u>Optical Communication and Networks</u>	3	0	0	3
3.	EC6703	<u>Embedded and Real Time Systems</u>	3	0	0	3
4.		Elective II	3	0	0	3
5.		Elective III	3	0	0	3
6.		Elective IV	3	0	0	3
<b>PRACTICAL</b>						
7.	EC6711	<u>Embedded Laboratory</u>	0	0	3	2
8.	EC6712	<u>Optical and Microwave Laboratory</u>	0	0	3	2
		<b>TOTAL</b>	<b>18</b>	<b>0</b>	<b>6</b>	<b>22</b>

### SEMESTER VIII

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	EC6801	<u>Wireless Communication</u>	3	0	0	3
2.	EC6802	<u>Wireless Networks</u>	3	0	0	3
3.		Elective V	3	0	0	3
4.		Elective VI	3	0	0	3
<b>PRACTICAL</b>						
5.	EC6811	<u>Project Work</u>	0	0	12	6
		<b>TOTAL</b>	<b>12</b>	<b>0</b>	<b>12</b>	<b>18</b>

**TOTAL CREDITS:189**

### SEMESTER VI

#### ELECTIVE – I

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	EC6001	<u>Medical Electronics</u>	3	0	0	3
2.	EC6002	<u>Advanced Digital Signal Processing</u>	3	0	0	3
3.	CS6401	<u>Operating Systems</u>	3	0	0	3
4.	EC6003	<u>Robotics and Automation</u>	3	0	0	3

**SEMESTER VII****ELECTIVE- II**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
5.	EC6004	<u>Satellite Communication</u>	3	0	0	3
6.	EC6005	<u>Electronic Testing</u>	3	0	0	3
7.	EC6006	Avionics	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>
8.	CS6012	<u>Soft Computing</u>	3	0	0	3
9.	IT6005	<u>Digital Image Processing</u>	3	0	0	3
10.	CS6013	Foundation Skills in Integrated Product Development	3	0	0	3


**ELECTIVE- III**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
11.	EC6007	<u>Speech Processing</u>	3	0	0	3
12.	EC6008	<u>Web Technology</u>	3	0	0	3
13.	EC6009	<u>Advanced Computer Architecture</u>	3	0	0	3
14.	EC 6010	<u>Electronics Packaging</u>	3	0	0	3
15.	EC6011	<u>Electro Magnetic Interference and Compatibility</u>	3	0	0	3

**ELECTIVE - IV**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
16.	EC6012	<u>CMOS Analog IC Design</u>	3	0	0	3
17.	EC6013	<u>Advanced Microprocessors and Microcontrollers</u>	3	0	0	3
18.	EC6014	<u>Cognitive Radio</u>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>
19.	EC6015	<u>Radar and Navigational Aids</u>	3	0	0	3
20.	EC6016	<u>Opto Electronic Devices</u>	3	0	0	3

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**SEMESTER VIII****ELECTIVE –V**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
21.	EC6017	<u>RF System Design</u>	3	0	0	3
22.	CS6003	<u>Ad hoc and Sensors Networks</u>	3	0	0	3
23.	GE6082	<u>Indian Constitution and Society</u>	3	0	0	3
24.	EC6018	<u>Multimedia Compression and Communication</u>	3	0	0	3
25.	GE6075	<u>Professional Ethics in Engineering</u>	3	0	0	3
26.	GE6083	Disaster Management	3	0	0	3

**ELECTIVE – VI**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
27.	EC6019	<u>Data Converters</u>	3	0	0	3
28.	CS6701	<u>Cryptography and Network Security</u>	3	0	0	3
29.	GE6757	<u>Total Quality Management</u>	3	0	0	3
30.	MG6071	<u>Entrepreneurship Development</u>	3	0	0	3
31.	MG6088	<u>Software Project Management</u>	3	0	0	3
32.	GE6084	Human Rights	3	0	0	3

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**I - VIII SEMESTERS CURRICULA AND SYLLABI**


**SEMESTER I**

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
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
<b>PRACTICALS</b>								
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
<b>TOTAL</b>				<b>31</b>	<b>19</b>	<b>0</b>	<b>12</b>	<b>25</b>

**SEMESTER II**

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	HS8251	Technical English	HS	4	4	0	0	4
2.	MA8251	Engineering Mathematics - II	BS	4	4	0	0	4
3.	PH8253	Physics for Electronics Engineering	BS	3	3	0	0	3
4.	BE8254	Basic Electrical and Instrumentation Engineering	ES	3	3	0	0	3
5.	EC8251	Circuit Analysis	PC	4	4	0	0	4
6.	EC8252	Electronic Devices	PC	3	3	0	0	3
<b>PRACTICALS</b>								
7.	EC8261	Circuits and Devices Laboratory	PC	4	0	0	4	2
8.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
<b>TOTAL</b>				<b>29</b>	<b>21</b>	<b>0</b>	<b>8</b>	<b>25</b>

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### SEMESTER III

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	MA8352	Linear Algebra and Partial Differential Equations	BS	4	4	0	0	4
2.	EC8393	Fundamentals of Data Structures In C	ES	3	3	0	0	3
3.	EC8351	Electronic Circuits- I	PC	3	3	0	0	3
4.	EC8352	Signals and Systems	PC	4	4	0	0	4
5.	EC8392	Digital Electronics	PC	3	3	0	0	3
6.	EC8391	Control Systems Engineering	PC	3	3	0	0	3
<b>PRACTICALS</b>								
7.	EC8381	Fundamentals of Data Structures in C Laboratory	ES	4	0	0	4	2
8.	EC8361	Analog and Digital Circuits Laboratory	PC	4	0	0	4	2
9.	HS8381	Interpersonal Skills/Listening & Speaking	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>30</b>	<b>20</b>	<b>0</b>	<b>10</b>	<b>25</b>

### SEMESTER IV

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	MA8451	Probability and Random Processes	BS	4	4	0	0	4
2.	EC8452	Electronic Circuits II	PC	3	3	0	0	3
3.	EC8491	Communication Theory	PC	3	3	0	0	3
4.	EC8451	Electromagnetic Fields	PC	4	4	0	0	4
5.	EC8453	Linear Integrated Circuits	PC	3	3	0	0	3
6.	GE8291	Environmental Science and Engineering	HS	3	3	0	0	3
<b>PRACTICALS</b>								
7.	EC8461	Circuits Design and Simulation Laboratory	PC	4	0	0	4	2
8.	EC8462	Linear Integrated Circuits Laboratory	PC	4	0	0	4	2
<b>TOTAL</b>				<b>28</b>	<b>20</b>	<b>0</b>	<b>8</b>	<b>24</b>

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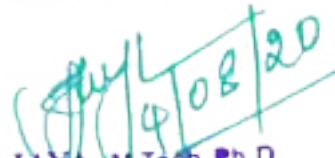
**SEMESTER V**

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	EC8501	Digital Communication	PC	3	3	0	0	3
2.	EC8553	Discrete-Time Signal Processing	PC	4	4	0	0	4
3.	EC8552	Computer Architecture and Organization	PC	3	3	0	0	3
4.	EC8551	Communication Networks	PC	3	3	0	0	3
5.		Professional Elective I	PE	3	3	0	0	3
6.		Open Elective I	OE	3	3	0	0	3
<b>PRACTICALS</b>								
7.	EC8562	Digital Signal Processing Laboratory	PC	4	0	0	4	2
8.	EC8561	Communication Systems Laboratory	PC	4	0	0	4	2
9.	EC8563	Communication Networks Laboratory	PC	4	0	0	4	2
<b>TOTAL</b>				<b>31</b>	<b>19</b>	<b>0</b>	<b>12</b>	<b>25</b>

**SEMESTER VI**

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	EC8691	Microprocessors and Microcontrollers	PC	3	3	0	0	3
2.	EC8095	VLSI Design	PC	3	3	0	0	3
3.	EC8652	Wireless Communication	PC	3	3	0	0	3
4.	MG8591	Principles of Management	HS	3	3	0	0	3
5.	EC8651	Transmission Lines and RF Systems	PC	3	3	0	0	3
6.		Professional Elective -II	PE	3	3	0	0	3
<b>PRACTICALS</b>								
7.	EC8681	Microprocessors and Microcontrollers Laboratory	PC	4	0	0	4	2
8.	EC8661	VLSI Design Laboratory	PC	4	0	0	4	2
9.	EC8611	Technical Seminar	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>28</b>	<b>18</b>	<b>0</b>	<b>10</b>	<b>23</b>

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### SEMESTER VII

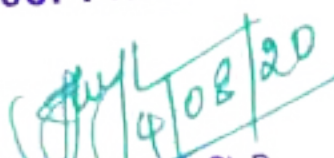
Sl.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	EC8701	Antennas and Microwave Engineering	PC	3	3	0	0	3
2.	EC8751	Optical Communication	PC	3	3	0	0	3
3.	EC8791	Embedded and Real Time Systems	PC	3	3	0	0	3
4.	EC8702	Ad hoc and Wireless Sensor Networks	PC	3	3	0	0	3
5.		Professional Elective -III	PE	3	3	0	0	3
6.		Open Elective - II	OE	3	3	0	0	3
<b>PRACTICALS</b>								
7.	EC8711	Embedded Laboratory	PC	4	0	0	4	2
8.	EC8761	Advanced Communication Laboratory	PC	4	0	0	4	2
<b>TOTAL</b>				<b>26</b>	<b>18</b>	<b>0</b>	<b>8</b>	<b>22</b>

### SEMESTER VIII

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.		Professional Elective IV	PE	3	3	0	0	3
2.		Professional Elective V	PE	3	3	0	0	3
<b>PRACTICALS</b>								
3.	EC8811	Project Work	EEC	20	0	0	20	10
<b>TOTAL</b>				<b>26</b>	<b>6</b>	<b>0</b>	<b>20</b>	<b>16</b>

**TOTAL NO. OF CREDITS: 185**

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### HUMANITIES AND SOCIALSCIENCES (HS)

SI.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

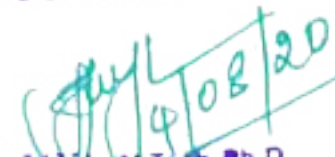
### BASIC SCIENCES (BS)

SI.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.	PH8253	Physics for Electronics Engineering	BS	3	3	0	0	3
7.	MA8352	Linear Algebra and Partial Differential Equations	BS	4	4	0	0	4
8.	MA8451	Probability and Random Processes	BS	4	4	0	0	4

### ENGINEERING SCIENCES (ES)

SI. 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.	BE8254	Basic Electrical and Instrumentation Engineering	ES	3	3	0	0	3
5.	GE8261	Engineering Practices Laboratory	ES	4	0	0	4	2
6.	EC8393	Fundamentals of Data Structures In C	ES	3	3	0	0	3
7.	EC8381	Fundamentals of Data Structures in C Laboratory	ES	4	0	0	4	2

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**PROFESSIONAL CORE (PC)**

SI.NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	EC8251	Circuit Analysis	PC	4	4	0	0	4
2.	EC8252	Electronic Devices	PC	3	3	0	0	3
3.	EC8261	Circuits and Devices Lab	PC	4	0	0	4	2
4.	EC8351	Electronic Circuits- I	PC	3	3	0	0	3
5.	EC8352	Signals and Systems	PC	4	4	0	0	4
6.	EC8392	Digital Electronics	PC	3	3	0	0	3
7.	EC8391	Control System Engineering	PC	3	3	0	0	3
8.	EC8361	Analog and Digital Circuits Laboratory	PC	4	0	0	4	2
9.	EC8452	Electronic Circuits II	PC	3	3	0	0	3
10.	EC8491	Communication Theory	PC	3	3	0	0	3
11.	EC8451	Electromagnetic Fields	PC	4	4	0	0	4
12.	EC8453	Linear Integrated Circuits	PC	3	3	0	0	3
13.	EC8461	Circuits Design and Simulation Laboratory	PC	4	0	0	4	2
14.	EC8462	Linear Integrated Circuits Laboratory	PC	4	0	0	4	2
15.	EC8501	Digital Communication	PC	3	3	0	0	3
16.	EC8553	Discrete-Time Signal Processing	PC	4	4	0	0	4
17.	EC8651	Transmission Lines and RF Systems	PC	3	3	0	0	3
18.	EC8552	Computer Architecture and Organization	PC	3	3	0	0	3
19.	EC8551	Communication Networks	PC	3	3	0	0	3
20.	EC8562	Digital Signal Processing Laboratory	PC	4	0	0	4	2
21.	EC8561	Communication Systems Laboratory	PC	4	0	0	4	2
22.	EC8563	Communication Networks Laboratory	PC	4	0	0	4	2
23.	EC8691	Microprocessors and Microcontrollers	PC	3	3	0	0	3
24.	EC8095	VLSI Design	PC	3	3	0	0	3
25.	EC8652	Wireless Communication	PC	3	3	0	0	3
26.	EC8661	VLSI Design	PC	4	4	0	0	4

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		Laboratory						
27.	EC8681	Microprocessors and Microcontrollers Laboratory	PC	4	0	0	4	2
28.	EC8701	Antennas and Microwave Engineering	PC	3	3	0	0	3
29.	EC8751	Optical Communication	PC	3	3	0	0	3
30.	EC8791	Embedded and Real Time Systems	PC	3	3	0	0	3
31.	EC8702	Ad hoc and Wireless Sensor Networks	PC	3	3	0	0	3
32.	EC8711	Embedded Laboratory	PC	4	0	0	4	2
33.	EC8761	Advanced Communication Laboratory	PC	4	0	0	4	2

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*(Signature)*  
 4/08/20  
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**PROFESSIONAL ELECTIVES (PE)\*  
SEMESTER V  
ELECTIVE I**

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CS8392	Object Oriented Programming	PE	3	3	0	0	3
2.	EC8073	Medical Electronics	PE	3	3	0	0	3
3.	CS8493	Operating Systems	PE	3	3	0	0	3
4.	EC8074	Robotics and Automation	PE	3	3	0	0	3
5.	EC8075	Nano Technology and Applications	PE	3	3	0	0	3
6.	GE8074	Human Rights	PE	3	3	0	0	3
7.	GE8077	Total Quality Management	PE	3	3	0	0	3

**SEMESTER VI  
ELECTIVE II**

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CS8792	Cryptography and Network Security	PE	3	3	0	0	3
2.	EC8091	<u>Advanced Digital Signal Processing</u>	PE	3	3	0	0	3
3.	EC8001	MEMS and NEMS	PE	3	3	0	0	3
4.	EC8002	Multimedia Compression and Communication	PE	3	3	0	0	3
5.	EC8003	CMOS Analog IC Design	PE	3	3	0	0	3
6.	EC8004	Wireless Networks	PE	3	3	0	0	3
7.	GE8075	Intellectual Property Rights	PE	3	3	0	0	3

**SEMESTER VII  
ELECTIVE III**

Sl. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	EC8092	Advanced Wireless Communication	PE	3	3	0	0	3
2.	EC8071	Cognitive Radio	PE	3	3	0	0	3
3.	GE8072	Foundation Skills in Integrated Product Development	PE	3	3	0	0	3
4.	CS8082	Machine Learning Techniques	PE	3	3	0	0	3
5.	EC8005	Electronics Packaging and Testing	PE	3	3	0	0	3
6.	EC8006	Mixed Signal IC Design	PE	3	3	0	0	3
7.	GE8071	Disaster Management	PE	3	3	0	0	3

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**SEMESTER VIII  
ELECTIVE IV**

SI.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	EC8072	Electro Magnetic Interference and Compatibility	PE	3	3	0	0	3
2.	EC8007	Low power SoC Design	PE	3	3	0	0	3
3.	EC8008	Photonic Networks	PE	3	3	0	0	3
4.	EC8009	Compressive Sensing	PE	3	3	0	0	3
5.	EC8093	Digital Image Processing	PE	3	3	0	0	3
6.	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3

**SEMESTER VIII  
ELECTIVE V**

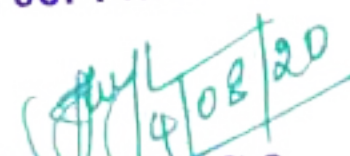
SI.No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	EC8010	Video Analytics	PE	3	3	0	0	3
2.	EC8011	DSP Architecture and Programming	PE	3	3	0	0	3
3.	EC8094	Satellite Communication	PE	3	3	0	0	3
4.	CS8086	Soft Computing	PE	3	3	0	0	3
5.	IT8006	Principles of Speech Processing	PE	3	3	0	0	3
6.	GE8073	Fundamentals of Nano Science	PE	3	3	0	0	3

\*Professional Electives are grouped according to elective number as was done previously.

**EMPLOYABILITY ENHANCEMENT COURSES (EEC)**

S.NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	HS8381	Interpersonal Skills/Listening & Speaking	EEC	2	0	0	2	1
2.	EC8611	Technical Seminar	EEC	2	0	0	2	1
3.	EC8811	Project Work	EEC	20	0	0	20	10


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### SUMMARY

S.NO.	SUBJECT AREA	CREDITS AS PER SEMESTER								CREDITS TOTAL	Percentage
		I	II	III	IV	V	VI	VII	VIII		
1.	HS	4	4		3		3			14	7.56%
2.	BS	12	7	4	4					27	14.6%
3.	ES	9	5	5						19	10.27%
4.	PC		9	15	17	19	16	16		92	50%
5.	PE					3	3	3	6	15	8.10%
6.	OE					3		3		6	3.24%
7.	EEC			1			1		10	12	6.48%
	<b>Total</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>24</b>	<b>25</b>	<b>23</b>	<b>22</b>	<b>16</b>	<b>185</b>	
8.	<b>Non Credit / Mandatory</b>										

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**B.E.**  
**MECHANICAL**  
**ENGINEERING**

**ANNA UNIVERSITY, CHENNAI**  
**AFFILIATED INSTITUTIONS**  
**R - 2013**

**B.E. MECHANICAL ENGINEERING**  
**I – VIII SEMESTERS CURRICULUM AND SYLLABUS**

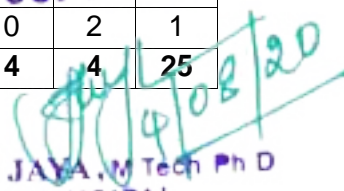
**SEMESTER I**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	HS6151	<u>Technical English – I</u>	3	1	0	4
2.	MA6151	<u>Mathematics – I</u>	3	1	0	4
3.	PH6151	<u>Engineering Physics – I</u>	3	0	0	3
4.	CY6151	<u>Engineering Chemistry – I</u>	3	0	0	3
5.	GE6151	<u>Computer Programming</u>	3	0	0	3
6.	GE6152	<u>Engineering Graphics</u>	2	0	3	4
<b>PRACTICALS</b>						
7.	GE6161	<u>Computer Practices Laboratory</u>	0	0	3	2
8.	GE6162	<u>Engineering Practices Laboratory</u>	0	0	3	2
9.	GE6163	<u>Physics and Chemistry Laboratory - I</u>	0	0	2	1
<b>TOTAL</b>			<b>17</b>	<b>2</b>	<b>11</b>	<b>26</b>

**SEMESTER II**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	HS6251	<u>Technical English – II</u>	3	1	0	4
2.	MA6251	<u>Mathematics – II</u>	3	1	0	4
3.	PH6251	<u>Engineering Physics – II</u>	3	0	0	3
4.	CY6251	<u>Engineering Chemistry – II</u>	3	0	0	3
5.	GE6252	<u>Basic Electrical and Electronics Engineering</u>	4	0	0	4
6.	GE6253	<u>Engineering Mechanics</u>	3	1	0	4
<b>PRACTICALS</b>						
7.	GE6261	<u>Computer Aided Drafting and Modeling Laboratory</u>	0	1	2	2
8.	GE6262	<u>Physics and Chemistry Laboratory - II</u>	0	0	2	1
<b>TOTAL</b>			<b>19</b>	<b>4</b>	<b>4</b>	<b>25</b>

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### SEMESTER III

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MA6351	Transforms and Partial Differential Equations	3	1	0	4
2.	CE6306	Strength of Materials	3	1	0	4
3.	ME6301	Engineering Thermodynamics	3	0	0	3
4.	CE6451	Fluid Mechanics and Machinery	3	0	0	3
5.	ME6302	Manufacturing Technology - I	3	0	0	3
6.	EE6351	Electrical Drives and Controls	3	0	0	3
<b>PRACTICAL</b>						
7.	ME6311	Manufacturing Technology Laboratory - I	0	0	3	2
8.	CE6461	Fluid Mechanics and Machinery Laboratory	0	0	3	2
9.	EE6365	Electrical Engineering Laboratory	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>2</b>	<b>9</b>	<b>26</b>

### SEMESTER IV

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MA6452	Statistics and Numerical Methods	3	1	0	4
2.	ME6401	Kinematics of Machinery	3	0	0	3
3.	ME6402	Manufacturing Technology- II	3	0	0	3
4.	ME6403	Engineering Materials and Metallurgy	3	0	0	3
5.	GE6351	Environmental Science and Engineering	3	0	0	3
6.	ME6404	Thermal Engineering	3	0	0	3
<b>PRACTICAL</b>						
7.	ME6411	Manufacturing Technology Laboratory-II	0	0	3	2
8.	ME6412	Thermal Engineering Laboratory - I	0	0	3	2
9.	CE6315	Strength of Materials Laboratory	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>1</b>	<b>9</b>	<b>25</b>

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**SEMESTER V**

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	ME6501	Computer Aided Design	3	0	0	3
2.	ME6502	Heat and Mass Transfer	3	0	0	3
3.	ME6503	Design of Machine Elements	3	0	0	3
4.	ME6504	Metrology and Measurements	3	0	0	3
5.	ME6505	Dynamics of Machines	3	0	0	3
6.	GE6075	Professional Ethics in Engineering	3	0	0	3
<b>PRACTICAL</b>						
7.	ME6511	Dynamics Laboratory	0	0	3	2
8.	ME6512	Thermal Engineering Laboratory-II	0	0	3	2
9.	ME6513	Metrology and Measurements Laboratory	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>0</b>	<b>9</b>	<b>24</b>

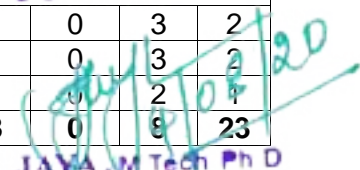
**SEMESTER VI**

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	ME6601	Design of Transmission Systems	3	0	0	3
2.	MG6851	Principles of Management	3	0	0	3
3.	ME6602	Automobile Engineering	3	0	0	3
4.	ME6603	Finite Element Analysis	3	0	0	3
5.	ME6604	Gas Dynamics and Jet Propulsion	3	0	0	3
6.		Elective - I	3	0	0	3
<b>PRACTICAL</b>						
7.	ME6611	C.A.D. / C.A.M. Laboratory	0	0	3	2
8.	ME6612	Design and Fabrication Project	0	0	4	2
9.	GE6674	Communication and Soft Skills- Laboratory Based	0	0	4	2
<b>TOTAL</b>			<b>18</b>	<b>0</b>	<b>11</b>	<b>24</b>

**SEMESTER VII**

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	ME6701	Power Plant Engineering	3	0	0	3
2.	ME6702	Mechatronics	3	0	0	3
3.	ME6703	Computer Integrated Manufacturing Systems	3	0	0	3
4.	GE6757	Total Quality Management	3	0	0	3
5.		Elective – II	3	0	0	3
6.		Elective – III	3	0	0	3
<b>PRACTICAL</b>						
7.	ME6711	Simulation and Analysis Laboratory	0	0	3	2
8.	ME6712	Mechatronics Laboratory	0	0	3	2
9.	ME6713	Comprehension	0	0	2	1
<b>TOTAL</b>			<b>18</b>	<b>0</b>	<b>8</b>	<b>23</b>

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### SEMESTER VIII

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MG6863	<u>Engineering Economics</u>	3	0	0	3
2.		Elective – IV	3	0	0	3
3.		Elective – V	3	0	0	3
<b>PRACTICAL</b>						
4.	ME6811	<u>Project Work</u>	0	0	12	6
<b>TOTAL</b>			<b>9</b>	<b>0</b>	<b>12</b>	<b>15</b>

**TOTAL NUMBER OF CREDITS TO BE EARNED FOR AWARD OF THE DEGREE = 188**

### ELECTIVES FOR B.E. MECHANICAL ENGINEERING

#### SEMESTER VI

##### Elective I

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	MG6072	<u>Marketing Management</u>	3	0	0	3
2.	ME6001	Quality Control and Reliability Engineering	3	0	0	3
3.	ME6002	Refrigeration and Air conditioning	3	0	0	3
4.	ME6003	Renewable Sources of Energy	3	0	0	3
5.	ME6004	Unconventional Machining Processes	3	0	0	3

#### SEMESTER VII

##### Elective II

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	ME6005	Process Planning and Cost Estimation	3	0	0	3
2.	ME6006	Design of Jigs, Fixtures and Press Tools	3	0	0	3
3.	ME6007	Composite Materials and Mechanics	3	0	0	3
4.	ME6008	Welding Technology	3	0	0	3
5.	ME6009	Energy Conservation and Management	3	0	0	3
6.	GE6083	Disaster Management	3	0	0	3

##### Elective III

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	ME6010	Robotics	3	0	0	3
2.	GE6081	Fundamentals of Nanoscience	3	0	0	3
3.	ME6011	Thermal Turbo Machines	3	0	0	3
4.	ME6012	Maintenance Engineering	3	0	0	3
5.	EE6007	<u>Micro Electro Mechanical Systems</u>	3	0	0	3
6.	ME6021	<u>Hydraulics and Pneumatics</u>	3	0	0	3

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**SEMESTER-VIII  
Elective IV**

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	IE6605	Production Planning and Control	3	0	0	3
2.	MG6071	Entrepreneurship Development	3	0	0	3
3.	ME6013	Design of Pressure Vessels and Piping	3	0	0	3
4.	ME6014	Computational Fluid Dynamics	3	0	0	3
5.	ME6015	Operations Research	3	0	0	3
6.	GE6084	Human Rights	3	0	0	3

**Elective V**

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	ME6016	Advanced I.C. Engines	3	0	0	3
2.	ME6017	Design of Heat Exchangers	3	0	0	3
3.	ME6018	Additive Manufacturing	3	0	0	3
4.	ME6019	Non Destructive Testing and Materials	3	0	0	3
5.	ME6020	Vibration and Noise Control	3	0	0	3

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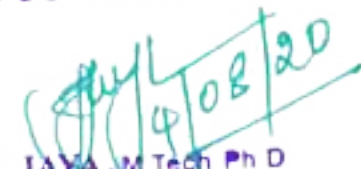
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**B.E. MECHANICAL ENGINEERING**  
**REGULATIONS - 2017**  
**CHOICE BASED CREDIT SYSTEM**  
**I TO VIII SEMESTERS CURRICULA AND SYLLABI**

**SEMESTER I**

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
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
<b>PRACTICALS</b>								
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
<b>TOTAL</b>				<b>31</b>	<b>19</b>	<b>0</b>	<b>12</b>	<b>25</b>

**SEMESTER II**

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
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
<b>PRACTICALS</b>								
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
<b>TOTAL</b>				<b>30</b>	<b>20</b>	<b>2</b>	<b>8</b>	<b>25</b>

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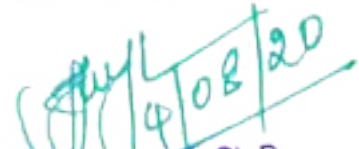
**SEMESTER III**

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	MA8353	Transforms and Partial Differential Equations	BS	4	4	0	0	4
2.	ME8391	Engineering Thermodynamics	PC	5	3	2	0	4
3.	CE8394	Fluid Mechanics and Machinery	ES	4	4	0	0	4
4.	ME8351	Manufacturing Technology - I	PC	3	3	0	0	3
5.	EE8353	Electrical Drives and Controls	ES	3	3	0	0	3
<b>PRACTICAL</b>								
6.	ME8361	Manufacturing Technology Laboratory - I	PC	4	0	0	4	2
7.	ME8381	Computer Aided Machine Drawing	PC	4	0	0	4	2
8.	EE8361	Electrical Engineering Laboratory	ES	4	0	0	4	2
9.	HS8381	Interpersonal Skills / Listening & Speaking	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>33</b>	<b>17</b>	<b>2</b>	<b>14</b>	<b>25</b>

**SEMESTER IV**

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	MA8452	Statistics and Numerical Methods	BS	4	4	0	0	4
2.	ME8492	Kinematics of Machinery	PC	3	3	0	0	3
3.	ME8451	Manufacturing Technology – II	PC	3	3	0	0	3
4.	ME8491	Engineering Metallurgy	PC	3	3	0	0	3
5.	CE8395	Strength of Materials for Mechanical Engineers	ES	3	3	0	0	3
6.	ME8493	Thermal Engineering- I	PC	3	3	0	0	3
<b>PRACTICAL</b>								
7.	ME8462	Manufacturing Technology Laboratory – II	PC	4	0	0	4	2
8.	CE8381	Strength of Materials and Fluid Mechanics and Machinery Laboratory	ES	4	0	0	4	2
9.	HS8461	Advanced Reading and Writing	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>29</b>	<b>19</b>	<b>0</b>	<b>10</b>	<b>24</b>

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### SEMESTER V

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	ME8595	Thermal Engineering- II	PC	3	3	0	0	3
2.	ME8593	Design of Machine Elements	PC	3	3	0	0	3
3.	ME8501	Metrology and Measurements	PC	3	3	0	0	3
4.	ME8594	Dynamics of Machines	PC	4	4	0	0	4
5.		Open Elective I	OE	3	3	0	0	3
<b>PRACTICAL</b>								
6.	ME8511	Kinematics and Dynamics Laboratory	PC	4	0	0	4	2
7.	ME8512	Thermal Engineering Laboratory	PC	4	0	0	4	2
8.	ME8513	Metrology and Measurements Laboratory	PC	4	0	0	4	2
<b>TOTAL</b>				<b>28</b>	<b>16</b>	<b>0</b>	<b>12</b>	<b>22</b>

### SEMESTER VI

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	ME8651	Design of Transmission Systems	PC	3	3	0	0	3
2.	ME8691	Computer Aided Design and Manufacturing	PC	3	3	0	0	3
3.	ME8693	Heat and Mass Transfer	PC	5	3	2	0	4
4.	ME8692	Finite Element Analysis	PC	3	3	0	0	3
5.	ME8694	Hydraulics and Pneumatics	PC	3	3	0	0	3
6.		Professional Elective - I	PE	3	3	0	0	3
<b>PRACTICAL</b>								
7.	ME8681	CAD / CAM Laboratory	PC	4	0	0	4	2
8.	ME8682	Design and Fabrication Project	EEC	4	0	0	4	2
9.	HS8581	Professional Communication	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>30</b>	<b>18</b>	<b>2</b>	<b>10</b>	<b>24</b>

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### SEMESTER VII


SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	ME8792	Power Plant Engineering	PC	3	3	0	0	3
2.	ME8793	Process Planning and Cost Estimation	PC	3	3	0	0	3
3.	ME8791	Mechatronics	PC	3	3	0	0	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
<b>PRACTICAL</b>								
7.	ME8711	Simulation and Analysis Laboratory	PC	4	0	0	4	2
8.	ME8781	Mechatronics Laboratory	PC	4	0	0	4	2
9.	ME8712	Technical Seminar	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>28</b>	<b>18</b>	<b>0</b>	<b>10</b>	<b>23</b>

### SEMESTER VIII

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	MG8591	Principles of Management	HS	3	3	0	0	3
2.		Professional Elective– IV	PE	3	3	0	0	3
<b>PRACTICAL</b>								
3.	ME8811	Project Work	EEC	20	0	0	20	10
<b>TOTAL</b>				<b>29</b>	<b>9</b>	<b>0</b>	<b>20</b>	<b>16</b>

**TOTAL NUMBER OF CREDITS TO BE EARNED FOR AWARD OF THE DEGREE = 184**

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### 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	5	3	2	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.	CE8394	Fluid Mechanics and Machinery	ES	5	3	2	0	4
9.	EE8353	Electrical Drives and Controls	ES	3	3	0	0	3
10.	EE8361	Electrical Engineering Laboratory	ES	4	0	0	4	2
11.	CE8395	Strength of Materials for Mechanical Engineers	ES	3	3	0	0	3
12.	CE8381	Strength of Materials and Fluid Mechanics and Machinery Laboratory	ES	4	0	0	4	2

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**PROFESSIONAL CORE (PC)**

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ME8391	Engineering Thermodynamics	PC	5	3	2	0	4
2.	ME8351	Manufacturing Technology - I	PC	3	3	0	0	3
3.	ME8361	Manufacturing Technology Laboratory - I	PC	4	0	0	4	2
4.	ME8381	Computer Aided Machine Drawing	PC	4	0	0	4	2
5.	ME8492	Kinematics of Machinery	PC	3	3	0	0	3
6.	ME8451	Manufacturing Technology– II	PC	3	3	0	0	3
7.	ME8491	Engineering Metallurgy	PC	3	3	0	0	3
8.	ME8493	Thermal Engineering- I	PC	3	3	0	0	3
9.	ME8462	Manufacturing Technology Laboratory–II	PC	4	0	0	4	2
10.	ME8595	Thermal Engineering- II	PC	3	3	0	0	3
11.	ME8593	Design of Machine Elements	PC	3	3	0	0	3
12.	ME8501	Metrology and Measurements	PC	3	3	0	0	3
13.	ME8594	Dynamics of Machines	PC	4	4	0	0	4
14.	ME8511	Kinematics and Dynamics Laboratory	PC	4	0	0	4	2
15.	ME8512	Thermal Engineering Laboratory	PC	4	0	0	4	2
16.	ME8513	Metrology and Measurements Laboratory	PC	4	0	0	4	2
17.	ME8651	Design of Transmission Systems	PC	3	3	0	0	3
18.	ME8691	Computer Aided Design and Manufacturing	PC	3	3	0	0	3
19.	ME8693	Heat and Mass Transfer	PC	5	3	2	0	4
20.	ME8692	Finite Element Analysis	PC	3	3	0	0	3
21.	ME8694	Hydraulics and Pneumatics	PC	3	3	0	0	3
22.	ME8681	C.A.D. / C.A.M. Laboratory	PC	4	0	0	4	2
23.	ME8682	Design and Fabrication Project	PC	4	0	0	4	2
24.	ME8792	Power Plant Engineering	PC	3	3	0	0	3
25.	ME8791	Mechatronics	PC	3	3	0	0	3
26.	ME8793	Process Planning and Cost Estimation	PC	3	3	0	0	3
27.	ME8711	Simulation and Analysis Laboratory	PC	4	0	0	4	2
28.	ME8781	Mechatronics Laboratory	PC	4	0	0	4	2

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**PROFESSIONAL ELECTIVES FOR B.E. MECHANICAL ENGINEERING**

**SEMESTER VI, ELECTIVE I**

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ME8091	Automobile Engineering	PE	3	3	0	0	3
2.	PR8592	Welding Technology	PE	3	3	0	0	3
3.	ME8096	Gas Dynamics and Jet Propulsion	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.	ME8071	Refrigeration and Air conditioning	PE	3	3	0	0	3
2.	ME8072	Renewable Sources of Energy	PE	3	3	0	0	3
3.	ME8098	Quality Control and Reliability Engineering	PE	3	3	0	0	3
4.	ME8073	Unconventional Machining Processes	PE	3	3	0	0	3
5.	MG8491	Operations Research	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.	ME8099	Robotics	PE	3	3	0	0	3
2.	ME8095	Design of Jigs, Fixtures and Press Tools	PE	3	3	0	0	3
3.	ME8093	Computational Fluid Dynamics	PE	3	3	0	0	3
4.	ME8097	Non Destructive Testing and Evaluation	PE	3	3	0	0	3
5.	ME8092	Composite Materials and Mechanics	PE	3	3	0	0	3
6.	GE8072	Foundation Skills in Integrated Product Development	PE	3	3	0	0	3
7.	GE8074	Human Rights	PE	3	3	0	0	3
8.	GE8071	Disaster Management	PE	3	3	0	0	3

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**SEMESTER VIII, ELECTIVE IV**

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	IE8693	Production Planning and Control	PE	3	3	0	0	3
2.	MG8091	Entrepreneurship Development	PE	3	3	0	0	3
3.	ME8094	Computer Integrated Manufacturing Systems	PE	3	3	0	0	3
4.	ME8074	Vibration and Noise Control	PE	3	3	0	0	3
5.	EE8091	Micro Electro Mechanical Systems	PE	3	3	0	0	3
6.	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3

**EMPLOYABILITY ENHANCEMENT COURSES (EEC)**

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	HS8381	Interpersonal Skills/Listening &	EEC	4	0	0	4	2
2.	ME8712	Technical Seminar	EEC	2	0	0	2	1
3.	ME8811	Project Work	EEC	20	0	0	20	12
4.	HS8461	Advanced Reading and Writing	EEC	2	0	0	2	1
5.	ME8682	Design and Fabrication Project	EEC	4	0	0	4	2
6.	HS8581	Professional Communication	EEC	2	0	0	2	1

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**ENGINEERING**

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**B.E. MECHATRONICS ENGINEERING**  
**I – VIII SEMESTERS CURRICULUM AND SYLLABUS**

**SEMESTER I**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	HS6151	<u>Technical English – I</u>	3	1	0	4
2.	MA6151	<u>Mathematics – I</u>	3	1	0	4
3.	PH6151	<u>Engineering Physics – I</u>	3	0	0	3
4.	CY6151	<u>Engineering Chemistry – I</u>	3	0	0	3
5.	GE6151	<u>Computer Programming</u>	3	0	0	3
6.	GE6152	<u>Engineering Graphics</u>	2	0	3	4
<b>PRACTICALS</b>						
7.	GE6161	<u>Computer Practices Laboratory</u>	0	0	3	2
8.	GE6162	<u>Engineering Practices Laboratory</u>	0	0	3	2
9.	GE6163	<u>Physics and Chemistry Laboratory - I</u>	0	0	2	1
<b>TOTAL</b>			<b>17</b>	<b>2</b>	<b>11</b>	<b>26</b>

**SEMESTER II**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	HS6251	<u>Technical English – II</u>	3	1	0	4
2.	MA6251	<u>Mathematics – II</u>	3	1	0	4
3.	PH6251	<u>Engineering Physics – II</u>	3	0	0	3
4.	CY6251	<u>Engineering Chemistry – II</u>	3	0	0	3
5.	GE6252	<u>Basic Electrical and Electronics Engineering</u>	4	0	0	4
6.	GE6253	<u>Engineering Mechanics</u>	3	1	0	4
<b>PRACTICALS</b>						
7.	GE6261	<u>Computer Aided Drafting and Modeling Laboratory</u>	0	1	2	2
8.	GE6262	<u>Physics and Chemistry Laboratory - II</u>	0	0	2	1
<b>TOTAL</b>			<b>19</b>	<b>4</b>	<b>4</b>	<b>25</b>

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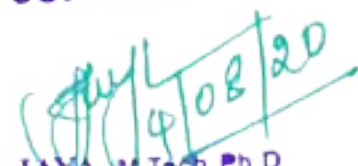
### SEMESTER III

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MA6351	<u>Transforms and Partial Differential Equations</u>	3	1	0	4
2.	CE6306	<u>Strength of Materials</u>	3	1	0	4
3.	CE6451	<u>Fluid Mechanics and Machinery</u>	3	0	0	3
4.	EC6302	<u>Digital Electronics</u>	3	0	0	3
5.	EE6358	<u>Electrical Machines and Drives</u>	3	0	0	3
6.	ME6401	<u>Kinematics of Machinery</u>	3	0	0	3
<b>PRACTICALS</b>						
7.	CE6461	<u>Fluid Mechanics and Machinery Laboratory</u>	0	0	3	2
8.	EE6362	<u>Electrical Machines and Drives Laboratory</u>	0	0	3	2
9.	MT6311	<u>Computer Aided Machine Drawing</u>	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>2</b>	<b>9</b>	<b>26</b>

### SEMESTER IV

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MA6452	<u>Statistics and Numerical Methods</u>	3	1	0	4
2.	ME6505	<u>Dynamics of Machines</u>	3	0	0	3
3.	EC6405	<u>Control System Engineering</u>	3	0	0	3
4.	ME6352	<u>Manufacturing Technology</u>	3	0	0	3
5.	ME6504	<u>Metrology and Measurements</u>	3	0	0	3
6.	MT6401	<u>Microprocessors and Applications</u>	3	0	0	3
<b>PRACTICALS</b>						
7.	MT6411	<u>Microprocessor Laboratory</u>	0	0	3	2
8.	ME6465	<u>Manufacturing Technology Laboratory</u>	0	0	3	2
9.	ME6511	<u>Dynamics Laboratory</u>	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>1</b>	<b>9</b>	<b>25</b>

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### SEMESTER V

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	ME6503	<u>Design of Machine Elements</u>	3	0	0	3
2.	EE6503	<u>Power Electronics</u>	3	0	0	3
3.	MT6501	<u>Sensors and Signal Processing</u>	3	0	0	3
4.	GE6351	<u>Environmental Science and Engineering</u>	3	0	0	3
5.	MF6505	<u>CNC Machining Technology</u>	3	0	0	3
6.	MT6502	<u>Thermodynamics Principles and Applications</u>	3	0	0	3
<b>PRACTICALS</b>						
7.	MT6511	<u>Power Electronics Laboratory</u>	0	0	3	2
8.	MT6512	<u>Sensors and Signal Processing Laboratory</u>	0	0	3	2
9.	MT6513	<u>CNC Laboratory</u>	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>0</b>	<b>9</b>	<b>24</b>

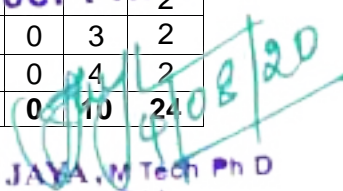
### SEMESTER VI

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MG6851	<u>Principles of Management</u>	3	0	0	3
2.	MT6601	<u>Micro Controller and PLC</u>	3	0	0	3
3.	MT6602	<u>Applied Hydraulics and Pneumatics</u>	3	0	0	3
4.	MT6603	<u>Design of Mechatronics System</u>	3	0	0	3
5.	MT6604	<u>Object Oriented Programming in C++</u>	3	0	0	3
6.		Elective – I	3	0	0	3
<b>PRACTICALS</b>						
7.	MT6611	<u>Micro Controller and PLC Laboratory</u>	0	0	3	2
8.	MT6612	<u>Object Oriented Programming Laboratory</u>	0	0	3	2
9.	MT6613	<u>Applied Hydraulics and Pneumatics Laboratory</u>	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>0</b>	<b>9</b>	<b>24</b>

### SEMESTER VII

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MT6701	<u>Medical Mechatronics</u>	3	0	0	3
2.	MT6702	<u>Modeling and Simulation</u>	3	0	0	3
3.	MT6703	<u>Robotics and Machine Vision System</u>	3	0	0	3
4.	ME6602	<u>Automobile Engineering</u>	3	0	0	3
5.		Elective – II	3	0	0	3
6.		Elective - III	3	0	0	3
<b>PRACTICALS</b>						
7.	MT6711	<u>Computer Aided Design and Computer Aided Manufacturing Laboratory</u>	0	0	3	2
8.	MT6712	<u>Robotics Laboratory</u>	0	0	3	2
9.	MT6713	<u>Design and Fabrication Project</u>	0	0	4	2
<b>TOTAL</b>			<b>18</b>	<b>0</b>	<b>10</b>	<b>24</b>

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### SEMESTER VIII

SL. No.	COURSE CODE.	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MT6801	<u>Automotive Electronics</u>	3	0	0	3
2.		Elective - IV	3	0	0	3
3.		Elective – V	3	0	0	3
<b>PRACTICAL</b>						
4.	MT6811	<u>Project Work</u>	0	0	12	6
<b>TOTAL</b>			<b>9</b>	<b>0</b>	<b>12</b>	<b>15</b>

**TOTAL NUMBER OF CREDITS TO BE EARNED FOR AWARD OF THE DEGREE : 189**

### LIST OF ELECTIVES FOR B.E. MECHATRONICS ENGINEERING

#### SEMESTER VI Elective I

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	MT6001	<u>Advanced Manufacturing Technology</u>	3	0	0	3
2.	GE6757	<u>Total Quality Management</u>	3	0	0	3
3.	IT6502	<u>Digital Signal Processing</u>	3	1	0	4
4.	IE6011	<u>Product Design and Development</u>	3	0	0	3

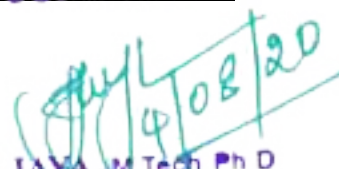
#### SEMESTER VII Elective II

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	MT6002	<u>Diagnostic Techniques</u>	3	0	0	3
2.	MG6072	<u>Marketing Management</u>	3	0	0	3
3.	MT6003	<u>Engineering Economics and Cost Analysis</u>	3	0	0	3
4.	GE6084	Human Rights	3	0	0	3

#### Elective III

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	MT6004	<u>Industrial Electronics and Applications</u>	3	0	0	3
2.	ME6501	<u>Computer Aided Design</u>	3	0	0	3
3.	IT6005	<u>Digital Image Processing</u>	3	0	0	3
4.	EE6007	<u>Micro Electro Mechanical Systems</u>	3	0	0	3

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**SEMESTER VIII**

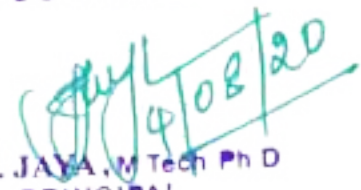
**Elective IV**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	MF6009	<u>Rapid Prototyping</u>	3	0	0	3
2.	MT6005	<u>Virtual Instrumentation</u>	3	0	0	3
3.	ME6015	<u>Operations Research</u>	3	0	0	3
4.	MG6071	<u>Entrepreneurship Development</u>	3	0	0	3

**Elective V**

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	GE6075	<u>Professional Ethics in Engineering</u>	3	0	0	3
2.	MG6088	<u>Software Project Management</u>	3	0	0	3
3.	CS6302	<u>Database Management Systems</u>	3	0	0	3
4.	CS6551	<u>Computer Networks</u>	3	0	0	3
5.	GE6083	<u>Disaster Management</u>	3	0	0	3

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

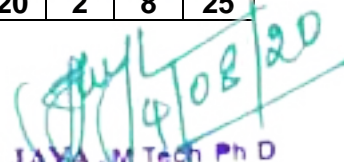
**SEMESTER I**

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
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
<b>PRACTICALS</b>								
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
<b>TOTAL</b>				<b>31</b>	<b>19</b>	<b>0</b>	<b>12</b>	<b>25</b>

**SEMESTER II**

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
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
<b>PRACTICALS</b>								
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
<b>TOTAL</b>				<b>30</b>	<b>20</b>	<b>2</b>	<b>8</b>	<b>25</b>

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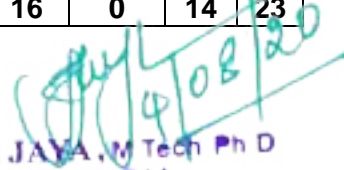
**SEMESTER III**

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
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
<b>PRACTICALS</b>								
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
<b>TOTAL</b>				<b>30</b>	<b>20</b>	<b>0</b>	<b>10</b>	<b>25</b>

**SEMESTER IV**

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
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
<b>PRACTICALS</b>								
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
<b>TOTAL</b>				<b>30</b>	<b>16</b>	<b>0</b>	<b>14</b>	<b>23</b>

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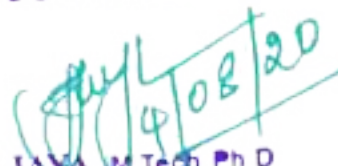
**SEMESTER V**

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
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
<b>PRACTICALS</b>								
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
<b>TOTAL</b>				<b>30</b>	<b>16</b>	<b>0</b>	<b>14</b>	<b>23</b>

**SEMESTER VI**

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
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
<b>PRACTICALS</b>								
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
<b>TOTAL</b>				<b>30</b>	<b>18</b>	<b>0</b>	<b>12</b>	<b>24</b>

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**SEMESTER VII**


SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
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
<b>PRACTICALS</b>								
7.	MT8711	Computer Aided Design and Manufacturing Laboratory	PC	4	0	0	4	2
8.	MT8781	Robotics Laboratory	PC	4	0	0	4	2
<b>TOTAL</b>				<b>27</b>	<b>17</b>	<b>0</b>	<b>10</b>	<b>22</b>

**SEMESTER VIII**

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
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
<b>PRACTICALS</b>								
4.	MT8811	Project Work	EEC	20	0	0	20	10
<b>TOTAL</b>				<b>29</b>	<b>9</b>	<b>0</b>	<b>20</b>	<b>19</b>

**TOTAL NO. OF CREDITS:186**

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### 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

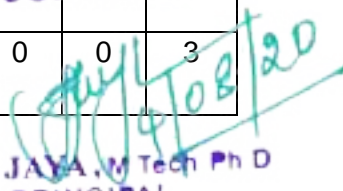
### BASIC SCIENCE (BS)

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

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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

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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

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*(Signature)*  
 4/08/20  
**Dr. J. JAYA, M Tech Ph D**  
**PRINCIPAL**  
 Akshaya College of Engineering and Technology  
 Kinathukadavu, Coimbatore - 642 109

**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

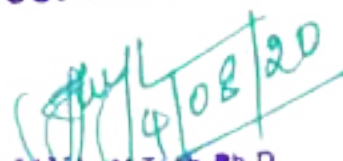
**SEMESTER VII, ELECTIVE III**

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.	GE8074	Human Rights	PE	3	3	0	0	3
6.	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

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**SEMESTER VIII, ELECTIVE V**

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CS8492	Database Management Systems	PE	3	3	0	0	3
2.	MG8892	Marketing Management	PE	3	3	0	0	3
3.	IM8071	Product Design and Development	PE	3	3	0	0	3
4.	GE8076	Professional Ethics in Engineering	PE	3	3	0	0	3

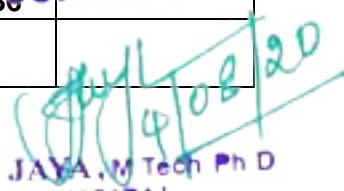
**EMPLOYABILITY ENHANCEMENT COURSES (EEC)**

SL. NO.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	HS8381	Interpersonal Skills/Listening & Speaking	EEC	2	0	0	2	1
2.	ME8682	Design and Fabrication Project	EEC	4	0	0	4	2
3.	HS8461	Reading and Writing Skills	EEC	2	0	0	2	1
4.	HS8581	Professional Communication	EEC	2	0	0	2	1
5.	MT8811	Project Work	EEC	20	0	0	20	10

**SUMMARY**

<b>B.E. MECHATRONICS ENGINEERING</b>													
	Subject Area	Credits Per Semester								Credits Total	Percentage %		
		Semester	I	II	III	IV	V	VI	VII			VIII	
1.	Humanities and Social Studies (HS)		4	7					3			14	8
2.	Basic Sciences (BS)		12	7	4	4						27	15
3.	Engineering Sciences (ES)		9	11	17		8					45	24
4.	Professional Core (PC)				3	18	11	16	13	3		64	34
5.	Professional Electives (PE)							3	6	6		15	8
6.	Open Electives (OE)						3		3			6	3
7.	Project Work (PR/EEC)				1	1	1	2		10		15	8
	<b>TOTAL</b>		<b>25</b>	<b>25</b>	<b>25</b>	<b>23</b>	<b>23</b>	<b>24</b>	<b>22</b>	<b>19</b>		<b>186</b>	
8.	<b>Non-Credit/ (Mandatory)</b>												

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### SEMESTER VIII

SL. No.	COURSE CODE.	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MT6801	Automotive Electronics	3	0	0	3
2.		Elective - IV	3	0	0	3
3.		Elective – V	3	0	0	3
<b>PRACTICAL</b>						
4.	MT6811	Project Work	0	0	12	6
<b>TOTAL</b>			<b>9</b>	<b>0</b>	<b>12</b>	<b>15</b>

**TOTAL NUMBER OF CREDITS TO BE EARNED FOR AWARD OF THE DEGREE : 189**

### LIST OF ELECTIVES FOR B.E. MECHATRONICS ENGINEERING

#### SEMESTER VI Elective I

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	MT6001	Advanced Manufacturing Technology	3	0	0	3
2.	GE6757	Total Quality Management	3	0	0	3
3.	IT6502	Digital Signal Processing	3	1	0	4
4.	IE6011	Product Design and Development	3	0	0	3

#### SEMESTER VII Elective II

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	MT6002	Diagnostic Techniques	3	0	0	3
2.	MG6072	Marketing Management	3	0	0	3
3.	MT6003	Engineering Economics and Cost Analysis	3	0	0	3

#### Elective III

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	MT6004	Industrial Electronics and Applications	3	0	0	3
2.	ME6501	Computer Aided Design	3	0	0	3
3.	IT6005	Digital Image Processing	3	0	0	3
4.	EE6007	Micro Electro Mechanical Systems	3	0	0	3

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**SEMESTER VIII**

**Elective IV**

<b>SL. No.</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
1.	MF6009	Rapid Prototyping	3	0	0	3
2.	MT6005	Virtual Instrumentation	3	0	0	3
3.	ME6015	Operations Research	3	0	0	3
4.	MG6071	Entrepreneurship Development	3	0	0	3

**Elective V**

<b>SL. No.</b>	<b>COURSE CODE</b>	<b>COURSE TITLE</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
1.	GE6075	Professional Ethics in Engineering	3	0	0	3
2.	MG6088	Software Project Management	3	0	0	3
3.	CS6302	Database Management Systems	3	0	0	3
4.	CS6551	Computer Networks	3	0	0	3

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4/08/20

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**Kinathukadavu, Coimbatore - 642 109**

M.E.  
COMPUTER SCIENCE AND  
ENGINEERING

**AFFILIATED INSTITUTIONS  
ANNA UNIVERSITY, CHENNAI  
REGULATIONS – 2013**

**M.E. COMPUTER SCIENCE AND ENGINEERING  
I TO IV SEMESTERS CURRICULA AND SYLLABI (FULL TIME)**

**SEMESTER I**

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MA7155	Applied Probability and Statistics	3	1	0	4
2.	CP7101	Design and Management of Computer Networks	3	0	0	3
3.	CP7102	Advanced Data Structures and Algorithms	3	0	0	3
4.	CP7103	Multicore Architectures	3	0	0	3
5.		Elective I	3	0	0	3
6.		Elective II	3	0	0	3
<b>PRACTICAL</b>						
7.	CP7111	Advanced Data Structures Laboratory	0	0	4	2
8.	CP7112	Case Study - Network Design (Team Work)	0	0	2	1
<b>TOTAL</b>			<b>18</b>	<b>1</b>	<b>6</b>	<b>22</b>

**SEMESTER II**

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	CP7201	Theoretical Foundations of Computer Science	3	1	0	4
2.	CP7202	Advanced Databases	3	0	0	3
3.	CP7203	Principles of Programming Languages	3	0	0	3
4.	CP7204	Advanced Operating Systems	3	0	0	3
5.		Elective III	3	0	0	3
6.		Elective IV	3	0	0	3
<b>PRACTICAL</b>						
7.	CP7211	Advanced Databases Laboratory	0	0	4	2
8.	CP7212	Case Study - Operating Systems Design (Team Work)	0	0	2	1
<b>TOTAL</b>			<b>18</b>	<b>1</b>	<b>6</b>	<b>22</b>

**SEMESTER III**

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	CP7301	Software Process and Project Management	3	1	0	4
2.		Elective V	3	0	0	3
3.		Elective VI	3	0	0	3
4.		Elective VII	3	0	0	3
<b>PRACTICAL</b>						
5.	CP7311	Project Work (Phase I)	0	0	2	6
<b>TOTAL</b>			<b>12</b>	<b>1</b>	<b>12</b>	<b>19</b>

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**SEMESTER IV**

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
<b>PRACTICAL</b>						
1.	CP7411	Project Work ( Phase II)	0	0	24	12
<b>TOTAL</b>			<b>0</b>	<b>0</b>	<b>24</b>	<b>12</b>

**TOTAL NO.OF CREDITS:75****LIST OF ELECTIVES****ELECTIVE I**

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	SE7103	Formal models of software systems	3	0	0	3
2.	CP7001	Performance Evaluation of Computer Systems	3	0	0	3
3.	CP7002	Probabilistic Reasoning Systems	3	0	0	3
4.	CP7003	Data Analysis and Business Intelligence	3	0	0	3
5.	CP7004	Image Processing and Analysis	3	0	0	3
6.	NE7001	Sensing Techniques and Sensors	3	0	0	3

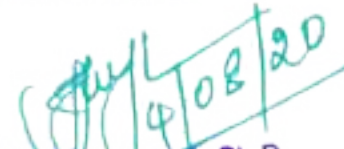
**ELECTIVE II**

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
1.	CP7005	Randomized Algorithms	3	0	0	3
2.	NE7002	Mobile and Pervasive Computing	3	0	0	3
3.	CP7006	Parallel Programming Paradigms	3	0	0	3
4.	CP7007	Software Requirements Engineering	3	0	0	3
5.	CP7008	Speech Processing and Synthesis	3	0	0	3
6.	CP7009	Machine Learning Techniques	3	0	0	3

**ELECTIVE III**

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	CP7010	Concurrency Models	3	0	0	3
2.	CP7011	Real Time Systems	3	0	0	3
3.	CP7012	Computer Vision	3	0	0	3
4.	NE7202	Network and Information Security	3	0	0	3
5.	CP7013	Design and Analysis of Parallel Algorithms	3	0	0	3
6.	CP7014	Software Architectures	3	0	0	3

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**ELECTIVE IV**

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
1.	CP7015	Model Checking and Program Verification	3	0	0	3
2.	CP7016	Embedded Software Development	3	0	0	3
3.	IF7202	Cloud Computing	3	0	0	3
4.	CP7017	Data Visualization Techniques	3	0	0	3
5.	NE7005	Protocols and Architecture for Wireless Sensor Networks	3	0	0	3
6.	CP7018	Language Technologies	3	0	0	3

**ELECTIVE V**

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
1.	NE7012	Social Network Analysis	3	0	0	3
2.	CP7019	Managing Big Data	3	0	0	3
3.	NE7011	Mobile Application Development	3	0	0	3
4.	CP7020	Bio-inspired Computing	3	0	0	3
5.	CP7021	Medical Image Processing	3	0	0	3
6.	CP7022	Software Design	3	0	0	3


**ELECTIVE VI**

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
1.	CP7023	Reconfigurable Computing	3	0	0	3
2.	IF7013	Energy Aware Computing	3	0	0	3
3.	CP7024	Information Retrieval Techniques	3	0	0	3
4.	CP7025	Data Mining Techniques	3	0	0	3
5.	IF7002	Bio Informatics	3	0	0	3
6.	CP7026	Software Quality Assurance	3	0	0	3

**ELECTIVE VII**

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
1.	CP7027	Multi Objective Optimization Techniques	3	0	0	3
2.	CP7028	Enterprise Application Integration	3	0	0	3
3.	CP7029	Information Storage Management	3	0	0	3
5.	CP7030	Robotics	3	0	0	3
6.	CP7031	Compiler Optimization Techniques	3	0	0	3

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**ANNA UNIVERSITY, CHENNAI**  
**AFFILIATED INSTITUTIONS**  
**M.E. COMPUTER SCIENCE AND ENGINEERING**  
**(With Specialization in Networks)**  
**REGULATIONS – 2017**  
**CHOICE BASED CREDIT SYSTEM**  
**CURRICULA AND SYLLABI**

**SEMESTER - I**

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	MA5160	Applied Probability and Statistics	FC	4	4	0	0	4
2.	CP5151	Advanced Data Structures and Algorithms	PC	4	4	0	0	4
3.	CP5152	Advanced Computer Architecture	PC	3	3	0	0	3
4.	CP5153	Operating System Internals	PC	3	3	0	0	3
5.	CP5154	Advanced Software Engineering	PC	3	3	0	0	3
6.	CP5191	Machine Learning Techniques	PC	3	3	0	0	3
<b>PRACTICALS</b>								
7.	CP5161	Data Structures Laboratory	PC	4	0	0	4	2
<b>TOTAL</b>				<b>24</b>	<b>20</b>	<b>0</b>	<b>4</b>	<b>22</b>

**SEMESTER II**

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	NE5291	Network Design and Programming	PC	3	3	0	0	3
2.	NE5201	Network Security	PC	3	3	0	0	3
3.	CP5292	Internet of Things	PC	3	3	0	0	3
4.	NE5202	Wireless Technologies	PC	3	3	0	0	3
5.		Professional Elective -I	PE	3	3	0	0	3
6.		Professional Elective -II	PE	3	3	0	0	3
<b>PRACTICALS</b>								
7.	NE5281	Network Design and Programming Laboratory	PC	4	0	0	4	2
8.	CP5281	Term Paper Writing and Seminar	EEC	2	0	0	2	1
<b>TOTAL</b>				<b>24</b>	<b>18</b>	<b>0</b>	<b>6</b>	<b>21</b>

**SEMESTER III**


SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.		Professional Elective -III	PE	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
<b>PRACTICALS</b>								
4.	NE5311	Project Work Phase - I	EEC	12	0	0	12	6
<b>TOTAL</b>				<b>21</b>	<b>9</b>	<b>0</b>	<b>12</b>	<b>15</b>

**SEMESTER IV**

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>PRACTICALS</b>								
1.	NE5411	Project Work Phase - II	EEC	24	0	0	24	12
<b>TOTAL</b>				<b>24</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>12</b>

TOTAL NO. OF CREDITS: 70

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### FOUNDATION COURSES (FC)

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	MA5160	Applied Probability and Statistics	FC	4	4	0	0	4


### PROFESSIONAL CORE (PC)

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CP5151	Advanced Data Structures and Algorithms	PC	4	4	0	0	4
2.	CP5152	Advanced Computer Architecture	PC	3	3	0	0	3
3.	CP5153	Operating System Internals	PC	3	3	0	0	3
4.	CP5154	Advanced Software Engineering	PC	3	3	0	0	3
5.	CP5191	Machine Learning Techniques	PC	3	3	0	0	3
6.	CP5161	Data Structures Laboratory	PC	4	0	0	4	2
7.	NE5291	Network Design and Programming	PC	3	3	0	0	3
8.	NE5201	Network Security	PC	3	3	0	0	3
9.	CP5292	Internet of Things	PC	3	3	0	0	3
10.	NE5202	Wireless Technologies	PC	3	3	0	0	3
11.	NE5281	Network Design and Programming Laboratory	PC	4	0	0	4	2

### 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.	CP5311	Project Work Phase – I	EEC	12	0	0	12	6
3.	CP5411	Project Work Phase – II	EEC	24	0	0	24	12

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**PROFESSIONAL ELECTIVES (PE)\*  
SEMESTER II  
ELECTIVE I**

SL. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CP5072	Software Architectures and Design	PE	3	3	0	0	3
2.	CP5071	Image Processing and Analysis	PE	3	3	0	0	3
3.	CP5097	Mobile Application Development	PE	3	3	0	0	3
4.	CP5092	Cloud Computing Technologies	PE	3	3	0	0	3

**SEMESTER II  
ELECTIVE II**

SL. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	MU5251	Multimedia Communication Networks	PE	3	3	0	0	3
2.	CP5093	Mobile and Pervasive Computing	PE	3	3	0	0	3
3.	NE5001	Simulation of Computer Systems and Networks	PE	3	3	0	0	3
4.	NE5002	High Speed Switching Architectures	PE	3	3	0	0	3

**SEMESTER III  
ELECTIVE III**

SL. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	NE5071	Network Management	PE	3	3	0	0	3
2.	NE5003	Network Performance Analysis	PE	3	3	0	0	3
3.	NE5004	Next Generation Networks	PE	3	3	0	0	3
4.	NE5005	Software Defined Networks and Network Function Virtualization (SDN and NFV)	PE	3	3	0	0	3

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**SEMESTER III  
ELECTIVE IV**

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CP5073	Embedded Software Development	PE	3	3	0	0	3
2.	NE5006	Protocols and Architectures for Wireless Sensor Networks	PE	3	3	0	0	3
3.	CP5076	Information Storage Management	PE	3	3	0	0	3
4.	CP5293	Big Data Analytics	PE	3	3	0	0	3

**SEMESTER III  
ELECTIVE V**

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	CP5074	Social Network Analysis	PE	3	3	0	0	3
2.	CP5091	Web Engineering	PE	3	3	0	0	3
3.	NE5007	Ethical Hacking	PE	3	3	0	0	3
4.	NE5008	Digital Forensics	PE	3	3	0	0	3

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# M.E. STRUCTURAL ENGINEERING

**AFFILIATED INSTITUTIONS**  
**ANNA UNIVERSITY :: CHENNAI 600 025**  
**REGULATIONS - 2013**  
**M.E. STRUCTURAL ENGINEERING**  
**I TO IV SEMESTERS (FULL TIME) CURRICULUM AND SYLLABUS**

**SEMESTER I**

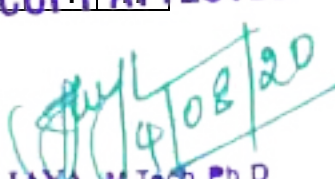
SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MA7154	Advanced Mathematical Methods	3	1	0	4
2.	ST7101	Concrete Structures	3	0	0	3
3.	ST7102	Structural Dynamics	3	0	0	3
4.	ST7103	Theory of Elasticity and Plasticity	3	0	0	3
5.		Elective I	3	0	0	3
6.		Elective II	3	0	0	3
<b>TOTAL</b>			<b>18</b>	<b>1</b>	<b>0</b>	<b>19</b>

**SEMESTER II**

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	ST7201	Finite Element Analysis	2	0	2	3
2.	ST7202	Experimental Techniques and Instrumentation	2	0	2	3
3.	ST7203	Steel Structures	3	0	0	3
4.	ST7204	Earthquake Analysis and Design of Structures	3	0	0	3
5.		Elective III	3	0	0	3
6.		Elective IV	3	0	0	3
<b>PRACTICAL</b>						
7.	ST7211	Advanced Structural Engineering Laboratory	0	0	4	2
<b>TOTAL</b>			<b>16</b>	<b>0</b>	<b>8</b>	<b>20</b>

**SEMESTER III**

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.		Elective V	3	0	0	3
2.		Elective VI	3	0	0	3
3.		Elective VII	3	0	0	3
<b>PRACTICAL</b>						
4.	ST7311	Seminar	0	0	2	1
5.	ST7312	Practical Training (4 Weeks)	-	-	-	1
6.	ST7313	Project Work (Phase I)	0	0	12	6
<b>TOTAL</b>			<b>9</b>	<b>0</b>	<b>14</b>	<b>11</b>

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**SEMESTER IV**

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
<b>PRACTICAL</b>						
1.	ST7411	Project Work (Phase – II)	0	0	24	12
<b>TOTAL</b>			<b>0</b>	<b>0</b>	<b>24</b>	<b>12</b>

**TOTAL CREDITS TO BE EARNED FOR THE AWARD OF THE DEGREE: 68**

**LIST OF ELECTIVES****SEMESTER – I (Elective – I & II)**

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
1.	ST7001	Analysis and Design of Tall Buildings	3	0	0	3
2.	ST7002	Maintenance and Rehabilitation of Structures	3	0	0	3
3.	ST7003	Offshore Structures	3	0	0	3
4.	ST7004	Optimization of Structures	3	0	0	3
5.	ST7005	Matrix Methods for Structural Analysis	3	0	0	3
6.	CN7001	Advanced Concrete Technology	3	0	0	3

**SEMESTER – II (Elective – III & IV)**

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
7.	ST7006	Design of Bridges	3	0	0	3
8.	ST7007	Mechanics of Composite Materials	3	0	0	3
9.	ST7008	Pre-stressed Concrete	3	0	0	3
10.	ST7009	Wind and Cyclone Effects on Structures	3	0	0	3
11.	ST7010	Design of Sub Structures	3	0	0	3
12.	ST7011	Computer Aided Analysis and Design	3	0	2	4

**SEMESTER –III (Elective – V, VI & VII)**

SL. NO.	COURSE CODE	COURSE TITLE	L	T	P	C
13.	ST7012	Design of Shell and Spatial Structures	2	0	2	3
14.	ST7013	Design of Steel Concrete Composite Structures	3	0	0	3
15.	ST7014	Industrial Structures	3	0	0	3
16.	ST7015	Nonlinear Analysis of Structures	3	0	0	3
17.	ST7016	Prefabricated Structures	3	0	0	3
18.	ST7017	Theory of Plates	3	0	0	3
19.	ST7018	Stability of Structures	3	0	0	3

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**CHOICE BASED CREDIT SYSTEM**  
**CURRICULA AND SYLLABI**

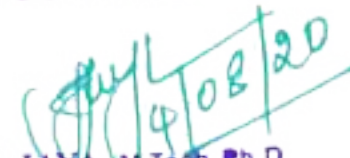
**SEMESTER I**

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	MA5151	<u>Advanced Mathematical Methods</u>	FC	4	4	0	0	4
2.	ST5101	<u>Advanced Concrete Structures</u>	PC	3	3	0	0	3
3.	ST5102	<u>Dynamics of Structures</u>	PC	3	3	0	0	3
4.	ST5103	<u>Theory of Elasticity and Plasticity</u>	PC	3	3	0	0	3
5.		Professional Elective I	PE	3	3	0	0	3
6.		Professional Elective II	PE	3	3	0	0	3
<b>TOTAL</b>				<b>19</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>19</b>

**SEMESTER II**

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	ST5201	Advanced Steel Structures	PC	3	3	0	0	3
2.	ST5202	Stability of Structures	PC	3	3	0	0	3
3.	ST5203	Experimental Techniques	PC	3	3	0	0	3
4.	ST5204	Finite Element Analysis of Structures	PC	3	3	0	0	3
5.		Professional Elective III	PE	3	3	0	0	3
6.		Professional Elective IV	PE	3	3	0	0	3
<b>PRACTICAL</b>								
7.	ST5211	<u>Advanced Structural Engineering Laboratory</u>	PC	4	0	0	4	2
8.	ST5212	<u>Practical Training I (2 weeks)</u>	EEC	0	0	0	0	1
<b>TOTAL</b>				<b>22</b>	<b>18</b>	<b>0</b>	<b>4</b>	<b>21</b>

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### SEMESTER III

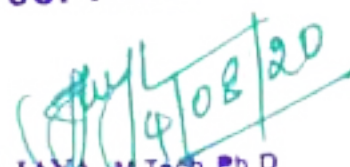
S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
1.	ST5301	<u>Earthquake Analysis and Design of Structures</u>	PC	3	3	0	0	3
2.		Professional Elective V	PE	3	3	0	0	3
3.		Professional Elective VI	PE	3	3	0	0	3
<b>PRACTICAL</b>								
4.	ST5311	<u>Practical Training II (2 weeks)</u>	EEC	0	0	0	0	1
5.	ST5312	<u>Seminar</u>	EEC	2	0	0	2	1
6.	ST5313	<u>Project Work (Phase I)</u>	EEC	12	0	0	12	6
<b>TOTAL</b>				<b>23</b>	<b>9</b>	<b>0</b>	<b>14</b>	<b>17</b>

### SEMESTER IV

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>PRACTICAL</b>								
1.	ST5411	<u>Practical Training III (2 weeks)</u>	EEC	0	0	0	0	1
2.	ST5412	<u>Project Work (Phase II)</u>	EEC	24	0	0	24	12
<b>TOTAL</b>				<b>24</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>13</b>

**TOTAL NO. OF CREDITS: 70**

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### FOUNDATION COURSES (FC)

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	MA5151	Advanced Mathematical Methods	FC	4	4	0	0	4

### PROFESSIONAL CORE (PC)

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ST5101	Advanced Concrete Structures	PC	3	3	0	0	3
2.	ST5102	Dynamics of Structures	PC	3	3	0	0	3
3.	ST5103	Theory of Elasticity and Plasticity	PC	3	3	0	0	3
4.	ST5201	Advanced Steel Structures	PC	3	3	0	0	3
5.	ST5202	Stability of Structures	PC	3	3	0	0	3
6.	ST5203	Experimental Techniques	PC	3	3	0	0	3
7.	ST5204	Finite Element Analysis of Structures	PC	3	3	0	0	3
8.	ST5211	Advanced Structural Engineering Laboratory	PC	4	0	0	4	2
9.	ST5301	Earthquake Analysis and Design of Structures	PC	3	3	0	0	3

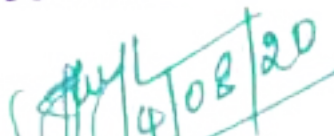
### PROFESSIONAL ELECTIVES

#### SEMESTER I

#### ELECTIVE I & II

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ST5001	Maintenance and Rehabilitation of Structures	PE	3	3	0	0	3
2.	ST5002	Prefabricated Structures	PE	3	3	0	0	3
3.	ST5003	Offshore Structures	PE	3	3	0	0	3
4.	ST5004	Matrix Methods for Structural Analysis	PE	3	3	0	0	3

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**SEMESTER II**  
**ELECTIVE III & IV**

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ST5005	<u>Theory of Plates</u>	PE	3	3	0	0	3
2.	ST5006	<u>Mechanics of Composite Materials</u>	PE	3	3	0	0	3
3.	ST5007	<u>Analysis and Design of Tall Buildings</u>	PE	3	3	0	0	3
4.	ST5008	<u>Industrial Structures</u>	PE	3	3	0	0	3
5.	ST5009	<u>Prestressed Concrete</u>	PE	3	3	0	0	3
6.	ST5010	<u>Wind and Cyclone Effects on Structures</u>	PE	3	3	0	0	3

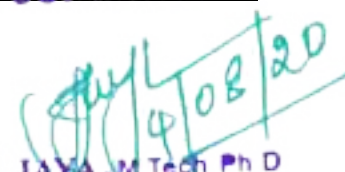
**SEMESTER III**  
**ELECTIVE V & VI**

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ST5011	<u>Nonlinear Analysis of Structures</u>	PE	3	3	0	0	3
2.	ST5012	<u>Design of Sub Structures</u>	PE	3	3	0	0	3
3.	ST5013	<u>Optimization of Structures</u>	PE	3	3	0	0	3
4.	ST5014	<u>Design of Steel Concrete Composite Structures</u>	PE	3	3	0	0	3
5.	ST5015	<u>Design of Bridges</u>	PE	3	3	0	0	3
6.	ST5016	<u>Design of Shell and Spatial Structures</u>	PE	3	3	0	0	3
7.	ST5017	<u>Computer Aided Analysis and Design</u>	PE	4	2	0	2	3

**EMPLOYABILITY ENHANCEMENT COURSES (EEC)**

S.No.	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
1.	ST5212	Practical Training I (2 weeks)	EEC	-	-	-	-	1
2.	ST5311	Practical Training II (2 weeks)	EEC	-	-	-	-	1
3.	ST5411	Practical Training III (2 weeks)	EEC	-	-	-	-	1
4.	ST5312	Seminar	EEC	2	0	0	2	1
5.	ST5313	Project Work (Phase I)	EEC	12	0	0	12	6
6.	ST5412	Project Work (Phase II)	EEC	24	0	0	24	12

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**REGULATIONS - 2013**

**M.E. VLSI DESIGN**

**I TO IV SEMESTERS CURRICULA AND SYLLABI (FULL TIME)**

**SEMESTER I**

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	MA7157	Applied Mathematics for Electronics Engineers	3	1	0	4
2.	VL7101	VLSI Signal Processing	3	0	0	3
3.	VL7102	VLSI Design Techniques	3	0	0	3
4.	VL7103	Solid State Device Modelling and Simulation	3	0	0	3
5.		Elective I	3	0	0	3
6.		Elective II	3	0	0	3
<b>PRACTICAL</b>						
7.	VL7111	VLSI Design Laboratory I	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>1</b>	<b>3</b>	<b>21</b>

**SEMESTER II**

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	AP7201	Analysis and Design of Analog Integrated Circuits	3	0	0	3
2.	VL7201	CAD for VLSI Circuits	3	0	0	3
3.	VL7202	Low Power VLSI Design	3	0	0	3
4.		Elective III	3	0	0	3
5.		Elective IV	3	0	0	3
6.		Elective V	3	0	0	3
<b>PRACTICAL</b>						
7.	VL7211	VLSI Design Laboratory II	0	0	3	2
<b>TOTAL</b>			<b>18</b>	<b>0</b>	<b>3</b>	<b>20</b>

**SEMESTER III**

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
<b>THEORY</b>						
1.	VL7301	Testing of VLSI Circuits	3	0	0	3
2.		Elective VI	3	0	0	3
3.		Elective VII	3	0	0	3
<b>PRACTICAL</b>						
1.	VL7311	Project Work (Phase I)	0	0	12	6
<b>TOTAL</b>			<b>9</b>	<b>0</b>	<b>12</b>	<b>15</b>

**SEMESTER IV**

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
<b>PRACTICAL</b>						
1.	VL7411	Project Work (Phase II)	0	0	24	12
<b>TOTAL</b>			<b>0</b>	<b>0</b>	<b>24</b>	<b>12</b>

TOTAL NO. OF CREDITS: 68

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**LIST OF ELECTIVES  
ELECTIVE I**

SL. NO	COURSE CODE	COURSE TITLE	L	T	P	C
1.	AP7008	DSP Integrated Circuits	3	0	0	3
2.	AP7001	Computer Architecture and Parallel Processing	3	0	0	3
3.	AP7202	ASIC and FPGA Design	3	0	0	3
4.	VL7001	Analog and Mixed Mode VLSI Design	3	0	0	3

**ELECTIVE II**

5.	VL7002	Security Solutions in VLSI	3	0	0	3
6.	VL7003	Genetic Algorithms and its Applications	3	0	0	3
7.	VL7004	Asynchronous System Design	3	0	0	3

**ELECTIVE III**

8.	CU7002	MEMS and NEMS	3	0	0	3
9.	VL7005	Physical Design of VLSI Circuits	3	0	0	3
10.	VL7006	Analog VLSI Design	3	0	0	3
11.	VL7007	Process and Device Simulation	3	0	0	3

**ELECTIVE IV**

12.	VL7008	Design of Semiconductor Memories	3	0	0	3
13.	AP7071	Hardware Software Co-Design	3	0	0	3
14.	CU7001	Real Time Embedded Systems	3	0	0	3
15.	VL7009	Nano Scale Transistors	3	0	0	3

**ELECTIVE V**

16.	AP7016	System on Chip design	3	0	0	3
17.	CP7023	Reconfigurable Computing	3	0	0	3
18.	VL7010	Submicron VLSI Design	3	0	0	3

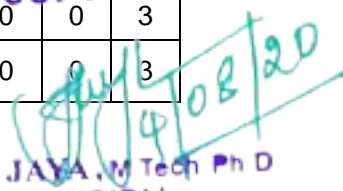
**ELECTIVE VI**

19.	AP7301	Electro Magnetic Interference and Compatibility	3	0	0	3
20.	VL7011	Signal Integrity for High Speed Devices	3	0	0	3
21.	VL7012	Mixed signal IC Test and Measurements	3	0	0	3

**ELECTIVE VII**

22.	AP7010	Data Converters	3	0	0	3
23.	VL7013	VLSI for Wireless Communication	3	0	0	3
24.	VL7014	IP Based VLSI Design	3	0	0	3
25.	VL7015	Nanoscale Devices and Circuit Design	3	0	0	3

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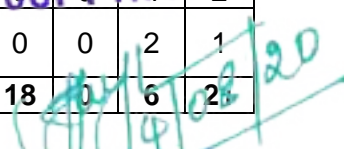
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**CURRICULA AND SYLLABI**

**SEMESTER I**

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
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
<b>PRACTICALS</b>								
7.	VL5111	VLSI Design Laboratory I	PC	4	0	0	4	2
<b>TOTAL</b>				<b>24</b>	<b>20</b>	<b>0</b>	<b>4</b>	<b>22</b>

**SEMESTER II**

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
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
<b>PRACTICALS</b>								
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
<b>TOTAL</b>				<b>24</b>	<b>18</b>	<b>0</b>	<b>6</b>	<b>21</b>

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**SEMESTER III**

SL. NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
<b>THEORY</b>								
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
<b>PRACTICALS</b>								
4.	VL5311	Project Work Phase-I	EEC	12	0	0	12	6
<b>TOTAL</b>				<b>21</b>	<b>9</b>	<b>0</b>	<b>12</b>	<b>15</b>

**SEMESTER IV**

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

**TOTAL NO. OF CREDITS:70**  
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**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


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**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

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PRINCIPAL  
Akshaya College of Engineering and Technology  
Kinathukadavu, Coimbatore - 642 109

**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

**TRUE COPY ATTESTED**  
  
**Dr. J. JAYA, M.Tech Ph.D**  
**PRINCIPAL**  
**Akshaya College of Engineering and Technology**  
**Kinathukadavu, Coimbatore - 642 109**

**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


**L - Total Lecture hours per week**

**T - Theory Lectures per week**

**P - Practical/lab sessions per week**

**C - Total Credits.**

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